

CERTIFICATE OF ANALYSIS

Work Order : **CG2201456**
Client : **Lotic Environmental Ltd.**
Contact : Mike Robinson
Address : 2193 Mazur Road
 Cranbrook BC Canada V1C 6V9
Telephone : 250 426 0528
Project : 21NORT01
PO : 15708
C-O-C number : ----
Sampler : ----
Site : 18CANA02
Quote number : CG20-NOCL100-0001
No. of samples received : 5
No. of samples analysed : 5

Page : 1 of 9
Laboratory : Calgary - Environmental
Account Manager : Patryk Wojciak
Address : 2559 29th Street NE
 Calgary AB Canada T1Y 7B5
Telephone : +1 403 407 1800
Date Samples Received : 09-Feb-2022 09:00
Date Analysis Commenced : 09-Feb-2022
Issue Date : 17-Feb-2022 09:58

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Erin Sanchez		Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Jeanie Mark	Laboratory Analyst	Organics, Calgary, Alberta
Maqsood Ul Hassan	Laboratory Analyst	Organics, Calgary, Alberta
Oscar Ruiz	Lab Assistant	Inorganics, Calgary, Alberta
Oscar Ruiz	Lab Assistant	Metals, Calgary, Alberta
Parker Sgarbossa	Laboratory Analyst	Inorganics, Calgary, Alberta
Ruifang Zheng	Analyst	Inorganics, Calgary, Alberta
Sara Niroomand		Inorganics, Calgary, Alberta
Sara Niroomand		Metals, Calgary, Alberta
Shirley Li		Metals, Calgary, Alberta



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

Unit	Description
-	No Unit
µg/L	micrograms per litre
µS/cm	Microsiemens per centimetre
CU	colour units (1 CU = 1 mg/L Pt)
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Surface Water

Client sample ID

(Matrix: Water)

					MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time					08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005
					Result	Result	Result	Result	Result
Physical Tests									
alkalinity, bicarbonate (as CaCO ₃)	----	E290	2.0	mg/L	161	185	138	163	<2.0
alkalinity, bicarbonate (as HCO ₃)	71-52-3	E290	2.0	mg/L	196	226	168	199	<2.0
alkalinity, carbonate (as CaCO ₃)	----	E290	2.0	mg/L	5.8	7.4	3.8	4.6	<2.0
alkalinity, carbonate (as CO ₃)	3812-32-6	E290	2.0	mg/L	3.5	4.4	2.3	2.8	<2.0
alkalinity, hydroxide (as CaCO ₃)	----	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0
alkalinity, hydroxide (as OH)	14280-30-9	E290	2.0	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0
alkalinity, phenolphthalein (as CaCO ₃)	----	E290	2.0	mg/L	2.9	3.7	<2.0	2.3	<2.0
alkalinity, total (as CaCO ₃)	----	E290	2.0	mg/L	166	193	142	168	<2.0
colour, true	----	E329	5.0	CU	<5.0	<5.0	<5.0	<5.0	<5.0
conductivity	----	E100	2.0	µS/cm	437	707	269	436	<2.0
hardness (as CaCO ₃), dissolved	----	EC100	0.60	mg/L	219	360	138	215	<0.60
hardness (as CaCO ₃), from total Ca/Mg	----	EC100A	0.60	mg/L	225	375	146	224	<0.60
pH	----	E108	0.10	pH units	8.34	8.35	8.31	8.31	5.59
solids, total dissolved [TDS]	----	E162	10	mg/L	266	528	149	285	<10
solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0
turbidity	----	E121	0.10	NTU	0.54	0.24	<0.10	0.42	<0.10
Anions and Nutrients									
ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0207	0.0155	0.0224	0.0325	0.0074 ^{RRV}
bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
chloride	16887-00-6	E235.Cl	0.50	mg/L	1.16	1.21	<0.50	1.20	<0.50
fluoride	16984-48-8	E235.F	0.020	mg/L	0.127	0.155	0.275	0.131	<0.020
Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.167	0.272	<0.050	0.090	<0.050
nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.270	1.00	0.134	0.267	<0.0050
nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0031	0.0022	<0.0010	0.0029	<0.0010
phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0054	0.0040	<0.0020	0.0105	<0.0020
sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L	88.7	216	17.8	88.4	<0.30
Organic / Inorganic Carbon									
carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.18	0.60	<0.50	1.16	<0.50
carbon, total organic [TOC]	----	E355-L	0.50	mg/L	1.12	0.69	<0.50	1.00	<0.50



Analytical Results

Sub-Matrix: Surface Water

(Matrix: Water)

					Client sample ID	MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time						08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005	
					Result	Result	Result	Result	Result	
Total Metals										
aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0152	0.0092	0.0033	0.0139	<0.0030	
antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	
arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00022	0.00023	0.00047	0.00022	<0.00010	
barium, total	7440-39-3	E420	0.00010	mg/L	0.144	0.0767	0.0233	0.140	<0.00010	
beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
boron, total	7440-42-8	E420	0.010	mg/L	0.011	0.023	<0.010	0.011	<0.010	
cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000251	0.0000210	0.0000090	0.0000271	<0.0000050	
calcium, total	7440-70-2	E420	0.050	mg/L	58.5	90.0	42.6	58.2	<0.050	
chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	
copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
iron, total	7439-89-6	E420	0.010	mg/L	0.021	0.013	<0.010	0.018	<0.010	
lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
lithium, total	7439-93-2	E420	0.0010	mg/L	0.0078	0.0135	0.0026	0.0073	<0.0010	
magnesium, total	7439-95-4	E420	0.100	mg/L	19.2	36.4	9.64	19.2	<0.100	
manganese, total	7439-96-5	E420	0.00010	mg/L	0.00082	0.00136	<0.00010	0.00073	<0.00010	
mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000744	0.000869	0.000846	0.000740	<0.000050	
nickel, total	7440-02-0	E420	0.00050	mg/L	0.00059	0.00405	<0.00050	0.00060	<0.00050	
phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
potassium, total	7440-09-7	E420	0.100	mg/L	0.645	0.942	0.232	0.642	<0.100	
selenium, total	7782-49-2	E420	0.000050	mg/L	0.00257	0.00568	0.00158	0.00253	<0.000050	
silicon, total	7440-21-3	E420	0.10	mg/L	2.27	2.05	1.58	2.32	<0.10	
silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
sodium, total	7440-23-5	E420	0.050	mg/L	5.46	11.0	0.903	5.45	<0.050	
strontium, total	7440-24-6	E420	0.00020	mg/L	0.194	0.322	0.159	0.189	<0.00020	
sulfur, total	7704-34-9	E420	0.50	mg/L	33.8	83.0	7.24	34.1	<0.50	
thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0.000037	<0.000010	<0.000010	
tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	



Analytical Results

Sub-Matrix: Surface Water

(Matrix: Water)

					Client sample ID	MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time						08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005	
					Result	Result	Result	Result	Result	
Total Metals										
uranium, total	7440-61-1	E420	0.000010	mg/L	0.000833	0.00184	0.000775	0.000816	<0.000010	
vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00054	<0.00050	0.00054	<0.00050	<0.00050	
zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	
zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Dissolved Metals										
aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0018	0.0011	<0.0010	0.0022	<0.0010	
antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	0.00010	<0.00010	<0.00010	<0.00010	
arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00015	0.00019	0.00044	0.00017	<0.00010	
barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.144	0.0762	0.0236	0.142	<0.00010	
beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
boron, dissolved	7440-42-8	E421	0.010	mg/L	0.010	0.021	<0.010	<0.010	<0.010	
cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000205	0.0000215	0.0000082	0.0000226	<0.0000050	
calcium, dissolved	7440-70-2	E421	0.050	mg/L	56.9	85.7	40.2	55.7	<0.050	
chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	0.011	<0.010	<0.010	<0.010	
lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0071	0.0129	0.0024	0.0067	<0.0010	
magnesium, dissolved	7439-95-4	E421	0.100	mg/L	18.6	35.6	9.09	18.4	<0.100	
manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00027	0.00097	<0.00010	0.00027	<0.00010	
mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000737	0.000852	0.000788	0.000713	<0.000050	
nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00056	0.00390	<0.00050	0.00054	<0.00050	
phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
potassium, dissolved	7440-09-7	E421	0.100	mg/L	0.633	0.930	0.225	0.643	<0.100	
selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.00270	0.00591	0.00172	0.00277	<0.000050	
silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.21	1.90	1.49	2.16	<0.050	
silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
sodium, dissolved	7440-23-5	E421	0.050	mg/L	5.16	10.3	0.828	5.10	<0.050	



Analytical Results

Sub-Matrix: Surface Water

Client sample ID

(Matrix: Water)

					MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time					08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005
					Result	Result	Result	Result	Result
Dissolved Metals									
strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.188	0.312	0.148	0.182	<0.00020
sulfur, dissolved	7704-34-9	E421	0.50	mg/L	30.7	75.1	6.30	30.4	<0.50
thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0.000035	<0.000010	<0.000010
tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000821	0.00186	0.000780	0.000819	<0.000010
vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	0.0011	0.0016	<0.0010	<0.0010
zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
dissolved mercury filtration location	----	EP509	-	-	Field	Field	Field	Field	Field
dissolved metals filtration location	----	EP421	-	-	Field	Field	Field	Field	Field
Aggregate Organics									
chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	<10	<10	<10	<10
Volatile Organic Compounds									
acetone	67-64-1	E611F	20	µg/L	<20	<20	<20	<20	<20
bromobenzene	108-86-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
bromochloromethane	74-97-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
bromomethane	74-83-9	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
butylbenzene, n-	104-51-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
butylbenzene, sec-	135-98-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
butylbenzene, tert-	98-06-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
carbon disulfide	75-15-0	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
chlorobenzene	108-90-7	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
chloromethane	74-87-3	E611F	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
chlorotoluene, 2-	95-49-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
chlorotoluene, 4-	106-43-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
cymene, p-	99-87-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dibromo-3-chloropropane, 1,2-	96-12-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dibromomethane	74-95-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,2-	95-50-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,3-	541-73-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50



Analytical Results

Sub-Matrix: Surface Water

Client sample ID

(Matrix: Water)

					MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time					08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005
					Result	Result	Result	Result	Result
Volatile Organic Compounds									
dichlorobenzene, 1,4-	106-46-7	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorodifluoromethane	75-71-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropane, 1,2-	78-87-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropane, 1,3-	142-28-9	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropane, 2,2-	594-20-7	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropylene, 1,1-	563-58-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropylene, cis+trans-1,3-	542-75-6	E611F	0.75	µg/L	<0.75	<0.75	<0.75	<0.75	<0.75
dichloropropylene, cis-1,3-	10061-01-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
hexachlorobutadiene	87-68-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
hexanone, 2-	591-78-6	E611F	20	µg/L	<20	<20	<20	<20	<20
methyl ethyl ketone [MEK]	78-93-3	E611F	20	µg/L	<20	<20	<20	<20	<20
methyl isobutyl ketone [MIBK]	108-10-1	E611F	20	µg/L	<20	<20	<20	<20	<20
propylbenzene, n-	103-65-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethane, 1,1,1,2-	630-20-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethane, 1,1,2,2-	79-34-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichlorobenzene, 1,2,3-	87-61-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichlorobenzene, 1,2,4-	120-82-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethane, 1,1,2-	79-00-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichlorofluoromethane	75-69-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichloropropane, 1,2,3-	96-18-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Volatile Organic Compounds [Drycleaning]									
carbon tetrachloride	56-23-5	E611F	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
chloroethane	75-00-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,1-	75-34-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,2-	107-06-2	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, 1,1-	75-35-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, cis-1,2-	156-59-2	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, trans-1,2-	156-60-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dichloromethane	75-09-2	E611F	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	1.5 ^{RRV}
dichloropropylene, trans-1,3-	10061-02-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	127-18-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50



Analytical Results

Sub-Matrix: Surface Water

Client sample ID

(Matrix: Water)

					MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
Client sampling date / time					08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit	CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005
					Result	Result	Result	Result	Result
Volatile Organic Compounds [Drycleaning]									
trichloroethane, 1,1,1-	71-55-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethylene	79-01-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
vinyl chloride	75-01-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Volatile Organic Compounds [Fuels]									
benzene	71-43-2	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dibromoethane, 1,2-	106-93-4	E611F	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
ethylbenzene	100-41-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
hexane, n-	110-54-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
isopropylbenzene	98-82-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
methyl-tert-butyl ether [MTBE]	1634-04-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
naphthalene	91-20-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
styrene	100-42-5	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
toluene	108-88-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trimethylbenzene, 1,2,4-	95-63-6	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
trimethylbenzene, 1,3,5-	108-67-8	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
xylene, m+p-	179601-23-1	E611F	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	<0.40
xylene, o-	95-47-6	E611F	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	<0.30
xylene, total	1330-20-7	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Volatile Organic Compounds [THMs]									
bromodichloromethane	75-27-4	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
bromoform	75-25-2	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
chloroform	67-66-3	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
dibromochloromethane	124-48-1	E611F	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Volatile Organic Compounds Surrogates									
bromofluorobenzene, 4-	460-00-4	E611F	1.0	%	92.0	90.1	92.9	85.2	85.9
difluorobenzene, 1,4-	540-36-3	E611F	1.0	%	102	101	101	99.9	102
Hydrocarbons									
EPH (C10-C19)	----	E601A	250	µg/L	<250	<250	<250	<250	<250
EPH (C10-C32)	----	E601A	400	µg/L	<400	<400	<400	<400	<400
EPH (C19-C32)	----	E601A	250	µg/L	<250	<250	<250	<250	<250
TEH (C10-C30), BC	----	E601A	250	µg/L	<250	<250	<250	<250	<250



Analytical Results

Sub-Matrix: Surface Water
(Matrix: Water)

					Client sample ID	MICH-13.0	MICH-33.8	AND1	DUPLICATE	FIELD BLANK
					Client sampling date / time	08-Feb-2022 16:00	08-Feb-2022 12:15	08-Feb-2022 14:30	08-Feb-2022 15:30	08-Feb-2022 09:00
Analyte	CAS Number	Method	LOR	Unit		CG2201456-001	CG2201456-002	CG2201456-003	CG2201456-004	CG2201456-005
						Result	Result	Result	Result	Result
Hydrocarbons Surrogates										
bromobenzotrifluoride, 2- (EPH surr)	392-83-6	E601A	1.0	%		92.9	91.6	92.1	90.7	90.6

Please refer to the General Comments section for an explanation of any qualifiers detected.



QUALITY CONTROL REPORT

Work Order : **CG2201456**

Page : 1 of 28

Client : Lotic Environmental Ltd.
Contact : Mike Robinson
Address : 652 F Sparwood Drive
Sparwood BC Canada V0B 2G0
Telephone : 250 426 0528
Project : 21NORT01
PO : 15708
C-O-C number : ----
Sampler : ----
Site : 18CANA02
Quote number : CG20-NOCL100-0001
No. of samples received : 5
No. of samples analysed : 5

Laboratory : Calgary - Environmental
Account Manager : Patryk Wojciak
Address : 2559 29th Street NE
Calgary, Alberta Canada T1Y 7B5
Telephone : +1 403 407 1800
Date Samples Received : 09-Feb-2022 09:00
Date Analysis Commenced : 09-Feb-2022
Issue Date : 17-Feb-2022 09:58

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits
- Reference Material (RM) Report; Recovery and Acceptance Limits
- Method Blank (MB) Report; Recovery and Acceptance Limits
- Laboratory Control Sample (LCS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Erin Sanchez		Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Jeanie Mark	Laboratory Analyst	Organics, Calgary, Alberta
Maqsood Ul Hassan	Laboratory Analyst	Organics, Calgary, Alberta
Oscar Ruiz	Lab Assistant	Inorganics, Calgary, Alberta
Oscar Ruiz	Lab Assistant	Metals, Calgary, Alberta
Parker Sgarbossa	Laboratory Analyst	Inorganics, Calgary, Alberta
Ruifang Zheng	Analyst	Inorganics, Calgary, Alberta
Sara Niroomand		Inorganics, Calgary, Alberta
Sara Niroomand		Metals, Calgary, Alberta
Shirley Li		Metals, Calgary, Alberta



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percentage Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 406417)											
CG2201456-001	MICH-13.0	colour, true	----	E329	5.0	CU	<5.0	<5.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 406971)											
CG2201443-003	Anonymous	turbidity	----	E121	0.10	NTU	16.4	16.5	0.609%	15%	----
Physical Tests (QC Lot: 407121)											
CG2201400-002	Anonymous	turbidity	----	E121	0.10	NTU	7.88	7.67	2.62%	15%	----
Physical Tests (QC Lot: 407156)											
CG2201427-001	Anonymous	pH	----	E108	0.10	pH units	8.15	8.16	0.123%	4%	----
Physical Tests (QC Lot: 407157)											
CG2201427-001	Anonymous	conductivity	----	E100	2.0	µS/cm	346	349	0.863%	10%	----
Physical Tests (QC Lot: 407158)											
CG2201427-001	Anonymous	alkalinity, bicarbonate (as CaCO3)	----	E290	1.0	mg/L	148	159	7.10%	20%	----
		alkalinity, carbonate (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		alkalinity, hydroxide (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		alkalinity, phenolphthalein (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	148	159	7.10%	20%	----
Physical Tests (QC Lot: 407159)											
CG2201456-004	DUPLICATE	alkalinity, bicarbonate (as CaCO3)	----	E290	2.0	mg/L	163	145	11.7%	20%	----
		alkalinity, carbonate (as CaCO3)	----	E290	2.0	mg/L	4.6	6.8	2.2	Diff <2x LOR	----
		alkalinity, hydroxide (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	----
		alkalinity, phenolphthalein (as CaCO3)	----	E290	2.0	mg/L	2.3	3.4	1.1	Diff <2x LOR	----
		alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	168	152	9.89%	20%	----
Physical Tests (QC Lot: 407160)											
CG2201456-004	DUPLICATE	conductivity	----	E100	2.0	µS/cm	436	435	0.230%	10%	----
Physical Tests (QC Lot: 407161)											
CG2201456-004	DUPLICATE	pH	----	E108	0.10	pH units	8.31	8.36	0.600%	4%	----
Physical Tests (QC Lot: 407299)											
CG2201431-001	Anonymous	turbidity	----	E121	0.10	NTU	127	121	4.51%	15%	----
Physical Tests (QC Lot: 408286)											
CG2201399-001	Anonymous	solids, total suspended [TSS]	----	E160	3.0	mg/L	10.2	11.0	0.8	Diff <2x LOR	----
Physical Tests (QC Lot: 408340)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 408340) - continued											
CG2201431-001	Anonymous	solids, total dissolved [TDS]	----	E162	20	mg/L	229	213	7.24%	20%	----
Anions and Nutrients (QC Lot: 406416)											
CG2201427-002	Anonymous	ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0509	0.0490	0.0019	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 406811)											
CG2201396-001	Anonymous	fluoride	16984-48-8	E235.F	0.020	mg/L	0.749	0.735	1.89%	20%	----
Anions and Nutrients (QC Lot: 406814)											
CG2201396-001	Anonymous	chloride	16887-00-6	E235.Cl	0.50	mg/L	2.87	2.86	0.01	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 406815)											
CG2201396-001	Anonymous	sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	36.7	36.7	0.0602%	20%	----
Anions and Nutrients (QC Lot: 406816)											
CG2201456-001	MICH-13.0	bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 406817)											
CG2201456-001	MICH-13.0	nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.270	0.269	0.297%	20%	----
Anions and Nutrients (QC Lot: 406818)											
CG2201456-001	MICH-13.0	nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 406918)											
CG2201454-001	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.500	mg/L	23.5	22.8	3.17%	20%	----
Anions and Nutrients (QC Lot: 407136)											
CG2201452-001	Anonymous	phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 407218)											
CG2201427-002	Anonymous	phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0103	0.0092	0.0011	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 407276)											
CG2201456-002	MICH-33.8	chloride	16887-00-6	E235.Cl	0.50	mg/L	1.21	1.18	0.03	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 407277)											
CG2201456-002	MICH-33.8	fluoride	16984-48-8	E235.F	0.020	mg/L	0.155	0.148	0.007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 407278)											
CG2201456-002	MICH-33.8	sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	216	215	0.426%	20%	----
Anions and Nutrients (QC Lot: 407279)											
CG2201456-002	MICH-33.8	bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 407280)											
CG2201456-002	MICH-33.8	nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	1.00	1.00	0.250%	20%	----
Anions and Nutrients (QC Lot: 407281)											
CG2201456-002	MICH-33.8	nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 406532)											
CG2201452-001	Anonymous	carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Organic / Inorganic Carbon (QC Lot: 406533)											
CG2201452-001	Anonymous	carbon, total organic [TOC]	----	E355-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Total Metals (QC Lot: 406359)											
CG2201456-005	FIELD BLANK	aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		barium, total	7440-39-3	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		calcium, total	7440-70-2	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		magnesium, total	7439-95-4	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		manganese, total	7439-96-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		molybdenum, total	7439-98-7	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		potassium, total	7440-09-7	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		silicon, total	7440-21-3	E420	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
		silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		sodium, total	7440-23-5	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		strontium, total	7440-24-6	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 406359) - continued											
CG2201456-005	FIELD BLANK	zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 411355)											
CG2201456-001	MICH-13.0	mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 409698)											
CG2201454-001	Anonymous	aluminum, dissolved	7429-90-5	E421	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		antimony, dissolved	7440-36-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		arsenic, dissolved	7440-38-2	E421	0.00050	mg/L	0.00076	0.00081	0.00005	Diff <2x LOR	----
		barium, dissolved	7440-39-3	E421	0.00050	mg/L	0.0778	0.0799	2.76%	20%	----
		beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		bismuth, dissolved	7440-69-9	E421	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		boron, dissolved	7440-42-8	E421	0.050	mg/L	0.242	0.261	0.018	Diff <2x LOR	----
		cadmium, dissolved	7440-43-9	E421	0.0000250	mg/L	<0.0000250	<0.0000250	0	Diff <2x LOR	----
		calcium, dissolved	7440-70-2	E421	0.250	mg/L	423	442	4.51%	20%	----
		chromium, dissolved	7440-47-3	E421	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		cobalt, dissolved	7440-48-4	E421	0.00050	mg/L	0.00695	0.00712	2.44%	20%	----
		copper, dissolved	7440-50-8	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		iron, dissolved	7439-89-6	E421	0.050	mg/L	0.092	0.094	0.002	Diff <2x LOR	----
		lead, dissolved	7439-92-1	E421	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		lithium, dissolved	7439-93-2	E421	0.0050	mg/L	0.168	0.170	1.62%	20%	----
		magnesium, dissolved	7439-95-4	E421	0.0250	mg/L	104	106	2.07%	20%	----
		manganese, dissolved	7439-96-5	E421	0.00050	mg/L	2.44	2.51	2.79%	20%	----
		molybdenum, dissolved	7439-98-7	E421	0.000250	mg/L	0.00258	0.00258	0.337%	20%	----
		nickel, dissolved	7440-02-0	E421	0.00250	mg/L	0.00438	0.00451	0.00014	Diff <2x LOR	----
		phosphorus, dissolved	7723-14-0	E421	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
		potassium, dissolved	7440-09-7	E421	0.250	mg/L	24.1	24.8	2.94%	20%	----
		selenium, dissolved	7782-49-2	E421	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		silicon, dissolved	7440-21-3	E421	0.250	mg/L	9.92	10.1	1.76%	20%	----
		silver, dissolved	7440-22-4	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		sodium, dissolved	7440-23-5	E421	0.250	mg/L	207	212	2.00%	20%	----
		strontium, dissolved	7440-24-6	E421	0.00100	mg/L	1.54	1.52	0.834%	20%	----
		sulfur, dissolved	7704-34-9	E421	2.50	mg/L	478	491	2.71%	20%	----
		thallium, dissolved	7440-28-0	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		tin, dissolved	7440-31-5	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		titanium, dissolved	7440-32-6	E421	0.00150	mg/L	<0.00150	<0.00150	0	Diff <2x LOR	----
		uranium, dissolved	7440-61-1	E421	0.000050	mg/L	0.0276	0.0285	2.97%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 409698) - continued											
CG2201454-001	Anonymous	vanadium, dissolved	7440-62-2	E421	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		zinc, dissolved	7440-66-6	E421	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		zirconium, dissolved	7440-67-7	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 411341)											
CG2201443-001	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 411342)											
CG2201456-005	FIELD BLANK	mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 407215)											
CG2201435-005	Anonymous	chemical oxygen demand [COD]	----	E559-L	10	mg/L	202	210	3.91%	20%	----
Volatile Organic Compounds (QC Lot: 409815)											
CG2201456-001	MICH-13.0	acetone	67-64-1	E611F	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromobenzene	108-86-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromochloromethane	74-97-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		butylbenzene, n-	104-51-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		butylbenzene, sec-	135-98-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		butylbenzene, tert-	98-06-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon disulfide	75-15-0	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611F	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroethane	75-00-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloromethane	74-87-3	E611F	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		chlorotoluene, 2-	95-49-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chlorotoluene, 4-	106-43-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		cymene, p-	99-87-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromo-3-chloropropane, 1,2-	96-12-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611F	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dibromomethane	74-95-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 409815) - continued											
CG2201456-001	MICH-13.0	dichlorobenzene, 1,4-	106-46-7	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611F	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropane, 1,3-	142-28-9	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropane, 2,2-	594-20-7	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, 1,1-	563-58-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexachlorobutadiene	87-68-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexanone, 2-	591-78-6	E611F	20	µg/L	<20	<20	0	Diff <2x LOR	----
		isopropylbenzene	98-82-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611F	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611F	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		naphthalene	91-20-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		propylbenzene, n-	103-65-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorobenzene, 1,2,3-	87-61-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorobenzene, 1,2,4-	120-82-1	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 409815) - continued											
CG2201456-001	MICH-13.0	trichloropropane, 1,2,3-	96-18-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trimethylbenzene, 1,2,4-	95-63-6	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trimethylbenzene, 1,3,5-	108-67-8	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611F	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611F	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611F	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 406417)						
colour, true	----	E329	5	CU	<5.0	----
Physical Tests (QCLot: 406971)						
turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 407121)						
turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 407157)						
conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 407158)						
alkalinity, bicarbonate (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, carbonate (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, hydroxide (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, phenolphthalein (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 407159)						
alkalinity, bicarbonate (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, carbonate (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, hydroxide (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, phenolphthalein (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 407160)						
conductivity	----	E100	1	µS/cm	1.1	----
Physical Tests (QCLot: 407299)						
turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 408286)						
solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 408340)						
solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 406416)						
ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 406811)						
fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 406814)						
chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 406815)						
sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 406816)						
bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 406817)						
nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 406818)						
nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 406918)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 407136)						
phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 407218)						
phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 407276)						
chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 407277)						
fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 407278)						
sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 407279)						
bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 407280)						
nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 407281)						
nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Organic / Inorganic Carbon (QCLot: 406532)						
carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 406533)						
carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 406359)						
aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 406359) - continued						
boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 411355)						
mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 409698)						
aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 409698) - continued						
bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 411341)						
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 411342)						
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Aggregate Organics (QCLot: 407215)						
chemical oxygen demand [COD]	----	E559-L	10	mg/L	<10	----
Volatile Organic Compounds (QCLot: 409815)						



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued						
acetone	67-64-1	E611F	20	µg/L	<20	----
benzene	71-43-2	E611F	0.5	µg/L	<0.50	----
bromobenzene	108-86-1	E611F	0.5	µg/L	<0.50	----
bromochloromethane	74-97-5	E611F	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611F	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611F	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611F	0.5	µg/L	<0.50	----
butylbenzene, n-	104-51-8	E611F	0.5	µg/L	<0.50	----
butylbenzene, sec-	135-98-8	E611F	0.5	µg/L	<0.50	----
butylbenzene, tert-	98-06-6	E611F	0.5	µg/L	<0.50	----
carbon disulfide	75-15-0	E611F	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611F	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611F	0.5	µg/L	<0.50	----
chloroethane	75-00-3	E611F	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611F	0.5	µg/L	<0.50	----
chloromethane	74-87-3	E611F	2	µg/L	<2.0	----
chlorotoluene, 2-	95-49-8	E611F	0.5	µg/L	<0.50	----
chlorotoluene, 4-	106-43-4	E611F	0.5	µg/L	<0.50	----
cymene, p-	99-87-6	E611F	0.5	µg/L	<0.50	----
dibromo-3-chloropropane, 1,2-	96-12-8	E611F	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611F	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611F	0.2	µg/L	<0.20	----
dibromomethane	74-95-3	E611F	0.5	µg/L	<0.50	----
dichlorobenzene, 1,2-	95-50-1	E611F	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611F	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611F	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611F	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611F	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611F	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611F	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611F	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611F	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611F	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611F	0.5	µg/L	<0.50	----
dichloropropane, 1,3-	142-28-9	E611F	0.5	µg/L	<0.50	----
dichloropropane, 2,2-	594-20-7	E611F	0.5	µg/L	<0.50	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued						
dichloropropylene, 1,1-	563-58-6	E611F	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611F	0.5	µg/L	<0.50	----
dichloropropylene, trans-1,3-	10061-02-6	E611F	0.5	µg/L	<0.50	----
ethylbenzene	100-41-4	E611F	0.5	µg/L	<0.50	----
hexachlorobutadiene	87-68-3	E611F	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611F	0.5	µg/L	<0.50	----
hexanone, 2-	591-78-6	E611F	20	µg/L	<20	----
isopropylbenzene	98-82-8	E611F	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611F	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611F	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611F	0.5	µg/L	<0.50	----
naphthalene	91-20-3	E611F	0.5	µg/L	<0.50	----
propylbenzene, n-	103-65-1	E611F	0.5	µg/L	<0.50	----
styrene	100-42-5	E611F	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611F	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611F	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611F	0.5	µg/L	<0.50	----
toluene	108-88-3	E611F	0.5	µg/L	<0.50	----
trichlorobenzene, 1,2,3-	87-61-6	E611F	0.5	µg/L	<0.50	----
trichlorobenzene, 1,2,4-	120-82-1	E611F	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611F	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611F	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611F	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611F	0.5	µg/L	<0.50	----
trichloropropane, 1,2,3-	96-18-4	E611F	0.5	µg/L	<0.50	----
trimethylbenzene, 1,2,4-	95-63-6	E611F	0.5	µg/L	<0.50	----
trimethylbenzene, 1,3,5-	108-67-8	E611F	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611F	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611F	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611F	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 408789)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
TEH (C10-C30), BC	----	E601A	250	µg/L	<250	----



A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 406417)									
colour, true	----	E329	5	CU	100 CU	97.0	85.0	115	----
Physical Tests (QCLot: 406971)									
turbidity	----	E121	0.1	NTU	200 NTU	107	85.0	115	----
Physical Tests (QCLot: 407121)									
turbidity	----	E121	0.1	NTU	200 NTU	108	85.0	115	----
Physical Tests (QCLot: 407156)									
pH	----	E108	----	pH units	7 pH units	99.6	98.6	101	----
Physical Tests (QCLot: 407157)									
conductivity	----	E100	1	µS/cm	146.9 µS/cm	102	90.0	110	----
Physical Tests (QCLot: 407158)									
alkalinity, phenolphthalein (as CaCO3)	----	E290	1	mg/L	229 mg/L	99.3	85.0	115	----
alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	107	85.0	115	----
Physical Tests (QCLot: 407159)									
alkalinity, phenolphthalein (as CaCO3)	----	E290	1	mg/L	229 mg/L	94.4	85.0	115	----
alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 407160)									
conductivity	----	E100	1	µS/cm	146.9 µS/cm	102	90.0	110	----
Physical Tests (QCLot: 407161)									
pH	----	E108	----	pH units	7 pH units	99.6	98.6	101	----
Physical Tests (QCLot: 407299)									
turbidity	----	E121	0.1	NTU	200 NTU	108	85.0	115	----
Physical Tests (QCLot: 408286)									
solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	92.7	85.0	115	----
Physical Tests (QCLot: 408340)									
solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	99.8	85.0	115	----
Anions and Nutrients (QCLot: 406416)									
ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 406811)									
fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 406814)									
chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100.0	90.0	110	----
Anions and Nutrients (QCLot: 406815)									



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 406815) - continued									
sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 406816)									
bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	95.5	85.0	115	----
Anions and Nutrients (QCLot: 406817)									
nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 406818)									
nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 406918)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 407136)									
phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.02 mg/L	91.6	80.0	120	----
Anions and Nutrients (QCLot: 407218)									
phosphorus, total	7723-14-0	E372-U	0.002	mg/L	8.02 mg/L	93.1	80.0	120	----
Anions and Nutrients (QCLot: 407276)									
chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 407277)									
fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 407278)									
sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 407279)									
bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	91.0	85.0	115	----
Anions and Nutrients (QCLot: 407280)									
nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 407281)									
nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	106	90.0	110	----
Organic / Inorganic Carbon (QCLot: 406532)									
carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Organic / Inorganic Carbon (QCLot: 406533)									
carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	104	80.0	120	----
Total Metals (QCLot: 406359)									
aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	97.8	80.0	120	----
antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	99.1	80.0	120	----
arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	95.5	80.0	120	----
barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	95.2	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 406359) - continued									
bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	96.6	80.0	120	----
boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	97.4	80.0	120	----
cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	98.0	80.0	120	----
calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	97.1	80.0	120	----
chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	98.2	80.0	120	----
copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	96.4	80.0	120	----
iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	110	80.0	120	----
lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.3	80.0	120	----
lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	98.8	80.0	120	----
magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	100	80.0	120	----
manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.1	80.0	120	----
molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.5	80.0	120	----
nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	96.6	80.0	120	----
phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	103	70.0	130	----
potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	98.1	80.0	120	----
selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	95.5	80.0	120	----
silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	101	60.0	140	----
silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	94.3	80.0	120	----
sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	97.9	80.0	120	----
strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	104	80.0	120	----
thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	94.3	80.0	120	----
tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.5	80.0	120	----
titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.7	80.0	120	----
uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	93.0	80.0	120	----
vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	98.9	80.0	120	----
zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	96.2	80.0	120	----
zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.4	80.0	120	----
Total Metals (QCLot: 411355)									
mercury, total	7439-97-6	E508	0.000005	mg/L	0.0001 mg/L	90.6	80.0	120	----
Dissolved Metals (QCLot: 409698)									
aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	95.5	80.0	120	----
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	99.7	80.0	120	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	95.8	80.0	120	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 409698) - continued									
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	92.4	80.0	120	----
bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	97.2	80.0	120	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	94.7	80.0	120	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	94.3	80.0	120	----
calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.1	80.0	120	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	95.8	80.0	120	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	96.1	80.0	120	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	93.4	80.0	120	----
iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	106	80.0	120	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	98.4	80.0	120	----
lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	102	80.0	120	----
magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	97.5	80.0	120	----
manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	94.9	80.0	120	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	94.5	80.0	120	----
phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	96.5	70.0	130	----
potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	98.3	80.0	120	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	91.6	80.0	120	----
silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	98.0	60.0	140	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	98.3	80.0	120	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	95.0	80.0	120	----
strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	92.3	80.0	120	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	94.8	80.0	120	----
tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	95.5	80.0	120	----
titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	92.5	80.0	120	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	94.0	80.0	120	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	95.2	80.0	120	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	95.7	80.0	120	----
zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.6	80.0	120	----
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	103	80.0	120	----
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	103	80.0	120	----
Aggregate Organics (QCLot: 407215)									
chemical oxygen demand [COD]	----	E559-L	10	mg/L	100 mg/L	101	85.0	115	----
Volatile Organic Compounds (QCLot: 409815)									
acetone	67-64-1	E611F	20	µg/L	2000 µg/L	101	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued									
benzene	71-43-2	E611F	0.5	µg/L	100 µg/L	97.4	70.0	130	----
bromobenzene	108-86-1	E611F	0.5	µg/L	100 µg/L	99.3	70.0	130	----
bromochloromethane	74-97-5	E611F	0.5	µg/L	100 µg/L	97.6	70.0	130	----
bromodichloromethane	75-27-4	E611F	0.5	µg/L	100 µg/L	93.6	70.0	130	----
bromoform	75-25-2	E611F	0.5	µg/L	100 µg/L	93.0	70.0	130	----
bromomethane	74-83-9	E611F	0.5	µg/L	100 µg/L	105	60.0	140	----
butylbenzene, n-	104-51-8	E611F	0.5	µg/L	100 µg/L	115	70.0	130	----
butylbenzene, sec-	135-98-8	E611F	0.5	µg/L	100 µg/L	106	70.0	130	----
butylbenzene, tert-	98-06-6	E611F	0.5	µg/L	100 µg/L	103	70.0	130	----
carbon disulfide	75-15-0	E611F	0.5	µg/L	140 µg/L	100	70.0	130	----
carbon tetrachloride	56-23-5	E611F	0.2	µg/L	100 µg/L	98.2	70.0	130	----
chlorobenzene	108-90-7	E611F	0.5	µg/L	100 µg/L	105	70.0	130	----
chloroethane	75-00-3	E611F	0.5	µg/L	100 µg/L	119	60.0	140	----
chloroform	67-66-3	E611F	0.5	µg/L	100 µg/L	96.5	70.0	130	----
chloromethane	74-87-3	E611F	2	µg/L	100 µg/L	126	60.0	140	----
chlorotoluene, 2-	95-49-8	E611F	0.5	µg/L	100 µg/L	104	70.0	130	----
chlorotoluene, 4-	106-43-4	E611F	0.5	µg/L	100 µg/L	99.4	70.0	130	----
cymene, p-	99-87-6	E611F	0.5	µg/L	100 µg/L	98.2	70.0	130	----
dibromo-3-chloropropane, 1,2-	96-12-8	E611F	0.5	µg/L	100 µg/L	99.5	70.0	130	----
dibromochloromethane	124-48-1	E611F	0.5	µg/L	100 µg/L	91.4	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611F	0.2	µg/L	100 µg/L	95.6	70.0	130	----
dibromomethane	74-95-3	E611F	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611F	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611F	0.5	µg/L	100 µg/L	105	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611F	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorodifluoromethane	75-71-8	E611F	0.5	µg/L	100 µg/L	122	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611F	0.5	µg/L	100 µg/L	98.7	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611F	0.5	µg/L	100 µg/L	93.4	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611F	0.5	µg/L	100 µg/L	103	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611F	0.5	µg/L	100 µg/L	101	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611F	0.5	µg/L	100 µg/L	102	70.0	130	----
dichloromethane	75-09-2	E611F	1	µg/L	100 µg/L	97.7	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611F	0.5	µg/L	100 µg/L	97.4	70.0	130	----
dichloropropane, 1,3-	142-28-9	E611F	0.5	µg/L	100 µg/L	94.1	70.0	130	----
dichloropropane, 2,2-	594-20-7	E611F	0.5	µg/L	100 µg/L	103	70.0	130	----
dichloropropylene, 1,1-	563-58-6	E611F	0.5	µg/L	100 µg/L	98.6	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611F	0.5	µg/L	100 µg/L	94.5	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611F	0.5	µg/L	100 µg/L	89.5	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued									
ethylbenzene	100-41-4	E611F	0.5	µg/L	100 µg/L	111	70.0	130	----
hexachlorobutadiene	87-68-3	E611F	0.5	µg/L	100 µg/L	111	70.0	130	----
hexane, n-	110-54-3	E611F	0.5	µg/L	100 µg/L	114	70.0	130	----
hexanone, 2-	591-78-6	E611F	20	µg/L	400.6 µg/L	97.0	70.0	130	----
isopropylbenzene	98-82-8	E611F	0.5	µg/L	100 µg/L	102	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611F	20	µg/L	2000 µg/L	99.1	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611F	20	µg/L	401.4 µg/L	106	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611F	0.5	µg/L	100 µg/L	103	70.0	130	----
naphthalene	91-20-3	E611F	0.5	µg/L	100 µg/L	121	70.0	130	----
propylbenzene, n-	103-65-1	E611F	0.5	µg/L	100 µg/L	109	70.0	130	----
styrene	100-42-5	E611F	0.5	µg/L	100 µg/L	89.5	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611F	0.5	µg/L	100 µg/L	97.0	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611F	0.5	µg/L	100 µg/L	102	70.0	130	----
tetrachloroethylene	127-18-4	E611F	0.5	µg/L	100 µg/L	106	70.0	130	----
toluene	108-88-3	E611F	0.5	µg/L	100 µg/L	96.2	70.0	130	----
trichlorobenzene, 1,2,3-	87-61-6	E611F	0.5	µg/L	100 µg/L	112	70.0	130	----
trichlorobenzene, 1,2,4-	120-82-1	E611F	0.5	µg/L	100 µg/L	109	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611F	0.5	µg/L	100 µg/L	103	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611F	0.5	µg/L	100 µg/L	97.3	70.0	130	----
trichloroethylene	79-01-6	E611F	0.5	µg/L	100 µg/L	106	70.0	130	----
trichlorofluoromethane	75-69-4	E611F	0.5	µg/L	100 µg/L	115	60.0	140	----
trichloropropane, 1,2,3-	96-18-4	E611F	0.5	µg/L	100 µg/L	98.4	70.0	130	----
trimethylbenzene, 1,2,4-	95-63-6	E611F	0.5	µg/L	100 µg/L	102	70.0	130	----
trimethylbenzene, 1,3,5-	108-67-8	E611F	0.5	µg/L	100 µg/L	101	70.0	130	----
vinyl chloride	75-01-4	E611F	0.5	µg/L	100 µg/L	118	60.0	140	----
xylene, m+p-	179601-23-1	E611F	0.4	µg/L	200 µg/L	103	70.0	130	----
xylene, o-	95-47-6	E611F	0.3	µg/L	100 µg/L	97.1	70.0	130	----
Hydrocarbons (QCLot: 408789)									
EPH (C10-C19)	----	E601A	250	µg/L	7719.3 µg/L	94.6	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3536.8 µg/L	91.4	70.0	130	----
TEH (C10-C30), BC	----	E601A	250	µg/L	10414 µg/L	94.2	70.0	130	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 406416)										
CG2201427-003	Anonymous	ammonia, total (as N)	7664-41-7	E298	0.0901 mg/L	0.1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 406811)										
CG2201398-001	Anonymous	fluoride	16984-48-8	E235.F	0.929 mg/L	1 mg/L	92.9	75.0	125	----
Anions and Nutrients (QCLot: 406814)										
CG2201398-001	Anonymous	chloride	16887-00-6	E235.Cl	96.6 mg/L	100 mg/L	96.6	75.0	125	----
Anions and Nutrients (QCLot: 406815)										
CG2201398-001	Anonymous	sulfate (as SO4)	14808-79-8	E235.SO4	95.6 mg/L	100 mg/L	95.6	75.0	125	----
Anions and Nutrients (QCLot: 406816)										
CG2201456-003	AND1	bromide	24959-67-9	E235.Br-L	0.460 mg/L	0.5 mg/L	92.1	75.0	125	----
Anions and Nutrients (QCLot: 406817)										
CG2201456-003	AND1	nitrate (as N)	14797-55-8	E235.NO3-L	2.58 mg/L	2.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 406818)										
CG2201456-003	AND1	nitrite (as N)	14797-65-0	E235.NO2-L	0.487 mg/L	0.5 mg/L	97.4	75.0	125	----
Anions and Nutrients (QCLot: 406918)										
CG2201454-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	ND mg/L	2.5 mg/L	ND	70.0	130	----
Anions and Nutrients (QCLot: 407136)										
CG2201452-002	Anonymous	phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0480 mg/L	0.05 mg/L	96.0	70.0	130	----
Anions and Nutrients (QCLot: 407218)										
CG2201427-003	Anonymous	phosphorus, total	7723-14-0	E372-U	0.0605 mg/L	0.0676 mg/L	89.5	70.0	130	----
Anions and Nutrients (QCLot: 407276)										
CG2201456-005	FIELD BLANK	chloride	16887-00-6	E235.Cl	95.3 mg/L	100 mg/L	95.3	75.0	125	----
Anions and Nutrients (QCLot: 407277)										
CG2201456-005	FIELD BLANK	fluoride	16984-48-8	E235.F	0.940 mg/L	1 mg/L	94.0	75.0	125	----
Anions and Nutrients (QCLot: 407278)										
CG2201456-005	FIELD BLANK	sulfate (as SO4)	14808-79-8	E235.SO4	93.8 mg/L	100 mg/L	93.8	75.0	125	----
Anions and Nutrients (QCLot: 407279)										
CG2201456-005	FIELD BLANK	bromide	24959-67-9	E235.Br-L	0.452 mg/L	0.5 mg/L	90.3	75.0	125	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 407280)										
CG2201456-005	FIELD BLANK	nitrate (as N)	14797-55-8	E235.NO3-L	2.30 mg/L	2.5 mg/L	92.1	75.0	125	----
Anions and Nutrients (QCLot: 407281)										
CG2201456-005	FIELD BLANK	nitrite (as N)	14797-65-0	E235.NO2-L	0.451 mg/L	0.5 mg/L	90.2	75.0	125	----
Organic / Inorganic Carbon (QCLot: 406532)										
CG2201452-001	Anonymous	carbon, dissolved organic [DOC]	----	E358-L	5.33 mg/L	5 mg/L	107	70.0	130	----
Organic / Inorganic Carbon (QCLot: 406533)										
CG2201452-001	Anonymous	carbon, total organic [TOC]	----	E355-L	5.17 mg/L	5 mg/L	103	70.0	130	----
Total Metals (QCLot: 406359)										
CG2201456-005	FIELD BLANK	aluminum, total	7429-90-5	E420	1.90 mg/L	2 mg/L	95.2	70.0	130	----
		antimony, total	7440-36-0	E420	0.179 mg/L	0.2 mg/L	89.4	70.0	130	----
		arsenic, total	7440-38-2	E420	0.185 mg/L	0.2 mg/L	92.6	70.0	130	----
		barium, total	7440-39-3	E420	0.197 mg/L	0.2 mg/L	98.5	70.0	130	----
		beryllium, total	7440-41-7	E420	0.374 mg/L	0.4 mg/L	93.6	70.0	130	----
		bismuth, total	7440-69-9	E420	0.0968 mg/L	0.1 mg/L	96.8	70.0	130	----
		boron, total	7440-42-8	E420	0.991 mg/L	1 mg/L	99.1	70.0	130	----
		cadmium, total	7440-43-9	E420	0.0385 mg/L	0.04 mg/L	96.3	70.0	130	----
		calcium, total	7440-70-2	E420	37.6 mg/L	40 mg/L	94.0	70.0	130	----
		chromium, total	7440-47-3	E420	0.380 mg/L	0.4 mg/L	95.1	70.0	130	----
		cobalt, total	7440-48-4	E420	0.189 mg/L	0.2 mg/L	94.5	70.0	130	----
		copper, total	7440-50-8	E420	0.191 mg/L	0.2 mg/L	95.7	70.0	130	----
		iron, total	7439-89-6	E420	18.9 mg/L	20 mg/L	94.5	70.0	130	----
		lead, total	7439-92-1	E420	0.192 mg/L	0.2 mg/L	96.2	70.0	130	----
		lithium, total	7439-93-2	E420	0.971 mg/L	1 mg/L	97.1	70.0	130	----
		magnesium, total	7439-95-4	E420	9.33 mg/L	10 mg/L	93.3	70.0	130	----
		manganese, total	7439-96-5	E420	0.191 mg/L	0.2 mg/L	95.6	70.0	130	----
		molybdenum, total	7439-98-7	E420	0.185 mg/L	0.2 mg/L	92.7	70.0	130	----
		nickel, total	7440-02-0	E420	0.375 mg/L	0.4 mg/L	93.7	70.0	130	----
		phosphorus, total	7723-14-0	E420	92.6 mg/L	100 mg/L	92.6	70.0	130	----
		potassium, total	7440-09-7	E420	37.5 mg/L	40 mg/L	93.9	70.0	130	----
		selenium, total	7782-49-2	E420	0.386 mg/L	0.4 mg/L	96.6	70.0	130	----
		silicon, total	7440-21-3	E420	90.7 mg/L	100 mg/L	90.7	70.0	130	----
		silver, total	7440-22-4	E420	0.0372 mg/L	0.04 mg/L	93.0	70.0	130	----
		sodium, total	7440-23-5	E420	19.7 mg/L	20 mg/L	98.4	70.0	130	----
		strontium, total	7440-24-6	E420	0.199 mg/L	0.2 mg/L	99.7	70.0	130	----
		sulfur, total	7704-34-9	E420	202 mg/L	200 mg/L	101	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 406359) - continued										
CG2201456-005	FIELD BLANK	thallium, total	7440-28-0	E420	0.0364 mg/L	0.04 mg/L	91.0	70.0	130	----
		tin, total	7440-31-5	E420	0.177 mg/L	0.2 mg/L	88.3	70.0	130	----
		titanium, total	7440-32-6	E420	0.382 mg/L	0.4 mg/L	95.4	70.0	130	----
		uranium, total	7440-61-1	E420	0.0361 mg/L	0.04 mg/L	90.3	70.0	130	----
		vanadium, total	7440-62-2	E420	0.948 mg/L	1 mg/L	94.8	70.0	130	----
		zinc, total	7440-66-6	E420	3.90 mg/L	4 mg/L	97.6	70.0	130	----
		zirconium, total	7440-67-7	E420	0.384 mg/L	0.4 mg/L	96.0	70.0	130	----
Total Metals (QCLot: 411355)										
CG2201456-002	MICH-33.8	mercury, total	7439-97-6	E508	0.0000944 mg/L	0.0001 mg/L	94.4	70.0	130	----
Dissolved Metals (QCLot: 409698)										
CG2201456-005	FIELD BLANK	aluminum, dissolved	7429-90-5	E421	1.84 mg/L	2 mg/L	91.9	70.0	130	----
		antimony, dissolved	7440-36-0	E421	0.179 mg/L	0.2 mg/L	89.7	70.0	130	----
		arsenic, dissolved	7440-38-2	E421	0.180 mg/L	0.2 mg/L	90.1	70.0	130	----
		barium, dissolved	7440-39-3	E421	0.193 mg/L	0.2 mg/L	96.7	70.0	130	----
		beryllium, dissolved	7440-41-7	E421	0.362 mg/L	0.4 mg/L	90.6	70.0	130	----
		bismuth, dissolved	7440-69-9	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		boron, dissolved	7440-42-8	E421	1.00 mg/L	1 mg/L	100	70.0	130	----
		cadmium, dissolved	7440-43-9	E421	0.0373 mg/L	0.04 mg/L	93.4	70.0	130	----
		calcium, dissolved	7440-70-2	E421	37.1 mg/L	40 mg/L	92.8	70.0	130	----
		chromium, dissolved	7440-47-3	E421	0.374 mg/L	0.4 mg/L	93.6	70.0	130	----
		cobalt, dissolved	7440-48-4	E421	0.186 mg/L	0.2 mg/L	92.8	70.0	130	----
		copper, dissolved	7440-50-8	E421	0.186 mg/L	0.2 mg/L	92.9	70.0	130	----
		iron, dissolved	7439-89-6	E421	18.7 mg/L	20 mg/L	93.5	70.0	130	----
		lead, dissolved	7439-92-1	E421	0.195 mg/L	0.2 mg/L	97.6	70.0	130	----
		lithium, dissolved	7439-93-2	E421	0.970 mg/L	1 mg/L	97.0	70.0	130	----
		magnesium, dissolved	7439-95-4	E421	9.21 mg/L	10 mg/L	92.1	70.0	130	----
		manganese, dissolved	7439-96-5	E421	0.183 mg/L	0.2 mg/L	91.6	70.0	130	----
		molybdenum, dissolved	7439-98-7	E421	0.185 mg/L	0.2 mg/L	92.5	70.0	130	----
		nickel, dissolved	7440-02-0	E421	0.371 mg/L	0.4 mg/L	92.7	70.0	130	----
		phosphorus, dissolved	7723-14-0	E421	95.2 mg/L	100 mg/L	95.2	70.0	130	----
		potassium, dissolved	7440-09-7	E421	37.6 mg/L	40 mg/L	94.0	70.0	130	----
		selenium, dissolved	7782-49-2	E421	0.368 mg/L	0.4 mg/L	92.0	70.0	130	----
		silicon, dissolved	7440-21-3	E421	85.4 mg/L	100 mg/L	85.4	70.0	130	----
		silver, dissolved	7440-22-4	E421	0.0375 mg/L	0.04 mg/L	93.7	70.0	130	----
		sodium, dissolved	7440-23-5	E421	18.8 mg/L	20 mg/L	94.0	70.0	130	----
		strontium, dissolved	7440-24-6	E421	0.197 mg/L	0.2 mg/L	98.3	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 409698) - continued										
CG2201456-005	FIELD BLANK	sulfur, dissolved	7704-34-9	E421	177 mg/L	200 mg/L	88.4	70.0	130	----
		thallium, dissolved	7440-28-0	E421	0.0363 mg/L	0.04 mg/L	90.7	70.0	130	----
		tin, dissolved	7440-31-5	E421	0.180 mg/L	0.2 mg/L	90.3	70.0	130	----
		titanium, dissolved	7440-32-6	E421	0.362 mg/L	0.4 mg/L	90.5	70.0	130	----
		uranium, dissolved	7440-61-1	E421	0.0375 mg/L	0.04 mg/L	93.6	70.0	130	----
		vanadium, dissolved	7440-62-2	E421	0.915 mg/L	1 mg/L	91.5	70.0	130	----
		zinc, dissolved	7440-66-6	E421	3.91 mg/L	4 mg/L	97.7	70.0	130	----
		zirconium, dissolved	7440-67-7	E421	0.381 mg/L	0.4 mg/L	95.3	70.0	130	----
Dissolved Metals (QCLot: 411341)										
CG2201443-002	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000998 mg/L	0.0001 mg/L	99.8	70.0	130	----
Dissolved Metals (QCLot: 411342)										
CG2201470-001	Anonymous	mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0.0001 mg/L	101	70.0	130	----
Aggregate Organics (QCLot: 407215)										
CG2201436-001	Anonymous	chemical oxygen demand [COD]	----	E559-L	97 mg/L	100 mg/L	97.2	75.0	125	----
Volatile Organic Compounds (QCLot: 409815)										
CG2201456-001	MICH-13.0	acetone	67-64-1	E611F	2180 µg/L	2000 µg/L	109	70.0	130	----
		benzene	71-43-2	E611F	98.4 µg/L	100 µg/L	98.4	70.0	130	----
		bromobenzene	108-86-1	E611F	103 µg/L	100 µg/L	103	70.0	130	----
		bromochloromethane	74-97-5	E611F	102 µg/L	100 µg/L	102	70.0	130	----
		bromodichloromethane	75-27-4	E611F	94.0 µg/L	100 µg/L	94.0	70.0	130	----
		bromoform	75-25-2	E611F	98.5 µg/L	100 µg/L	98.5	70.0	130	----
		bromomethane	74-83-9	E611F	105 µg/L	100 µg/L	105	60.0	140	----
		butylbenzene, n-	104-51-8	E611F	117 µg/L	100 µg/L	117	70.0	130	----
		butylbenzene, sec-	135-98-8	E611F	105 µg/L	100 µg/L	105	70.0	130	----
		butylbenzene, tert-	98-06-6	E611F	103 µg/L	100 µg/L	103	70.0	130	----
		carbon disulfide	75-15-0	E611F	138 µg/L	140 µg/L	98.7	70.0	130	----
		carbon tetrachloride	56-23-5	E611F	96.4 µg/L	100 µg/L	96.4	70.0	130	----
		chlorobenzene	108-90-7	E611F	106 µg/L	100 µg/L	106	70.0	130	----
		chloroethane	75-00-3	E611F	116 µg/L	100 µg/L	116	60.0	140	----
		chloroform	67-66-3	E611F	97.6 µg/L	100 µg/L	97.6	70.0	130	----
		chloromethane	74-87-3	E611F	123 µg/L	100 µg/L	123	60.0	140	----
		chlorotoluene, 2-	95-49-8	E611F	105 µg/L	100 µg/L	105	70.0	130	----
		chlorotoluene, 4-	106-43-4	E611F	101 µg/L	100 µg/L	101	70.0	130	----
		cymene, p-	99-87-6	E611F	98.9 µg/L	100 µg/L	98.9	70.0	130	----
		dibromo-3-chloropropane, 1,2-	96-12-8	E611F	99.6 µg/L	100 µg/L	99.6	70.0	130	----



Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued										
CG2201456-001	MICH-13.0	dibromochloromethane	124-48-1	E611F	95.7 µg/L	100 µg/L	95.7	70.0	130	----
		dibromoethane, 1,2-	106-93-4	E611F	100 µg/L	100 µg/L	100	70.0	130	----
		dibromomethane	74-95-3	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		dichlorobenzene, 1,2-	95-50-1	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		dichlorobenzene, 1,3-	541-73-1	E611F	106 µg/L	100 µg/L	106	70.0	130	----
		dichlorobenzene, 1,4-	106-46-7	E611F	109 µg/L	100 µg/L	109	70.0	130	----
		dichlorodifluoromethane	75-71-8	E611F	124 µg/L	100 µg/L	124	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611F	99.3 µg/L	100 µg/L	99.3	70.0	130	----
		dichloroethane, 1,2-	107-06-2	E611F	98.6 µg/L	100 µg/L	98.6	70.0	130	----
		dichloroethylene, 1,1-	75-35-4	E611F	101 µg/L	100 µg/L	101	70.0	130	----
		dichloroethylene, cis-1,2-	156-59-2	E611F	103 µg/L	100 µg/L	103	70.0	130	----
		dichloroethylene, trans-1,2-	156-60-5	E611F	100 µg/L	100 µg/L	100	70.0	130	----
		dichloromethane	75-09-2	E611F	99.4 µg/L	100 µg/L	99.4	70.0	130	----
		dichloropropane, 1,2-	78-87-5	E611F	98.2 µg/L	100 µg/L	98.2	70.0	130	----
		dichloropropane, 1,3-	142-28-9	E611F	99.5 µg/L	100 µg/L	99.5	70.0	130	----
		dichloropropane, 2,2-	594-20-7	E611F	106 µg/L	100 µg/L	106	70.0	130	----
		dichloropropylene, 1,1-	563-58-6	E611F	97.8 µg/L	100 µg/L	97.8	70.0	130	----
		dichloropropylene, cis-1,3-	10061-01-5	E611F	93.1 µg/L	100 µg/L	93.1	70.0	130	----
		dichloropropylene, trans-1,3-	10061-02-6	E611F	93.2 µg/L	100 µg/L	93.2	70.0	130	----
		ethylbenzene	100-41-4	E611F	110 µg/L	100 µg/L	110	70.0	130	----
		hexachlorobutadiene	87-68-3	E611F	110 µg/L	100 µg/L	110	70.0	130	----
		hexane, n-	110-54-3	E611F	111 µg/L	100 µg/L	111	70.0	130	----
		hexanone, 2-	591-78-6	E611F	416 µg/L	400.6 µg/L	104	70.0	130	----
		isopropylbenzene	98-82-8	E611F	102 µg/L	100 µg/L	102	70.0	130	----
		methyl ethyl ketone [MEK]	78-93-3	E611F	2170 µg/L	2000 µg/L	109	70.0	130	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611F	445 µg/L	401.4 µg/L	111	70.0	130	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		naphthalene	91-20-3	E611F	109 µg/L	100 µg/L	109	70.0	130	----
		propylbenzene, n-	103-65-1	E611F	110 µg/L	100 µg/L	110	70.0	130	----
		styrene	100-42-5	E611F	91.2 µg/L	100 µg/L	91.2	70.0	130	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611F	102 µg/L	100 µg/L	102	70.0	130	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611F	106 µg/L	100 µg/L	106	70.0	130	----
		tetrachloroethylene	127-18-4	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		toluene	108-88-3	E611F	96.3 µg/L	100 µg/L	96.3	70.0	130	----
		trichlorobenzene, 1,2,3-	87-61-6	E611F	110 µg/L	100 µg/L	110	70.0	130	----
		trichlorobenzene, 1,2,4-	120-82-1	E611F	107 µg/L	100 µg/L	107	70.0	130	----
		trichloroethane, 1,1,1-	71-55-6	E611F	102 µg/L	100 µg/L	102	70.0	130	----



Sub-Matrix: **Water**

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 409815) - continued										
CG2201456-001	MICH-13.0	trichloroethane, 1,1,2-	79-00-5	E611F	100.0 µg/L	100 µg/L	100.0	70.0	130	----
		trichloroethylene	79-01-6	E611F	103 µg/L	100 µg/L	103	70.0	130	----
		trichlorofluoromethane	75-69-4	E611F	112 µg/L	100 µg/L	112	60.0	140	----
		trichloropropane, 1,2,3-	96-18-4	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		trimethylbenzene, 1,2,4-	95-63-6	E611F	104 µg/L	100 µg/L	104	70.0	130	----
		trimethylbenzene, 1,3,5-	108-67-8	E611F	100 µg/L	100 µg/L	100	70.0	130	----
		vinyl chloride	75-01-4	E611F	126 µg/L	100 µg/L	126	60.0	140	----
		xylene, m+p-	179601-23-1	E611F	203 µg/L	200 µg/L	102	70.0	130	----
	xylene, o-	95-47-6	E611F	97.6 µg/L	100 µg/L	97.6	70.0	130	----	

NA-EM-03264 v07 Front / 19 August 20