

**REPORTED TO** Allterra Construction  
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**ATTENTION** Rahim Gaidhar

**WORK ORDER** 6101423

**PO NUMBER** P15-06 SIRM  
**PROJECT** SIRM 460 Stebbings  
**PROJECT INFO**

**RECEIVED / TEMP** 2016-10-20 16:30 / 11°C  
**REPORTED** 2016-10-26  
**COC NUMBER** B33070

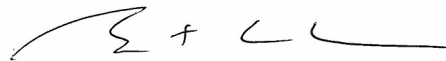
**General Comments:**

CARO Analytical Services employs methods which are conducted according to procedures accepted by appropriate regulatory agencies, and/or are conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts, except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the Chain of Custody or Sample Requisition document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

**Work Order Comments:**

This is a revised report. Refer to Appendix 3 for details



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**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

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<b>Analysis Information</b> Analysis Descriptions, Method References, Glossary of Terms	Page 3
<b>Sample Analytical Data</b> Test Results, Reporting Limits, Analysis Dates, Sample & Analysis Notes	Page 4
<b>Quality Control Data</b> Method Blanks, Duplicates, Spikes, Reference Materials	Appendix 1
<b>Analytical Summary</b> Tabulated data in condensed format to assist with comparisons	Appendix 2
<b>Revision History</b> List of changes made to the current report since the original report was issued	Appendix 3
<b>Chain of Custody Document</b> Analysis instructions provided by client	Appendix 5

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**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analysis Description	Method Reference	Technique	Location
Alkalinity in Water	APHA 2320 B*	Titration with H2SO4	Kelowna
Anions by IC in Water	APHA 4110 B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	Kelowna
Chromium, Hexavalent (Total) in Water	APHA 3500-Cr B	Colorimetry	Richmond
Colour, True in Water	APHA 2120 C	Spectrophotometry (456 nm)	Kelowna
Conductivity in Water	APHA 2510 B	Conductivity Meter	Kelowna
Dissolved Metals by ICPMS in Water	APHA 3030 B / APHA 3125 B	0.45 µm Filtration / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Glycols in Water	EPA 8015B*	Gas Chromatography (GC-FID)	Richmond
Hardness (as CaCO3) in Water	APHA 2340 B	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	N/A
Hardness (as CaCO3) in Water	APHA 2340 B*	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Estimated)	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, dissolved by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total by CVAFS in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
pH in Water	APHA 4500-H+ B	Electrometry	Kelowna
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MS (SIM)	Richmond
Solids, Total Dissolved in Water	APHA 2540 C*	Gravimetry (Dried at 103-105C)	Kelowna
Solids, Total Suspended in Water	APHA 2540 D*	Gravimetry (Dried at 103-105C)	Kelowna
Total Metals by ICPMS in Water	APHA 3030E* / APHA 3125 B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	Richmond
Turbidity in Water	APHA 2130 B	Nephelometry	Kelowna
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260B	Purge&Trap / GC-MS (SIM)	Richmond

**Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method**

**Method Reference Descriptions:**

APHA Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association/American Water Works Association/Water Environment Federation  
 BCMOE British Columbia Environmental Laboratory Manual, 2013, British Columbia Ministry of Environment  
 EPA United States Environmental Protection Agency Test Methods

**Glossary of Terms:**

MRL Method Reporting Limit  
 < Less than the Reported Detection Limit (RDL) - the RDL may be higher than the MRL due to various factors such as dilutions, limited sample volume, high moisture, or interferences  
 CU Colour Units (referenced against a platinum cobalt standard)  
 mg/L Milligrams per litre  
 NTU Nephelometric Turbidity Units  
 pH units pH < 7 = acidic, pH > 7 = basic  
 µg/L Micrograms per litre  
 µS/cm Microsiemens per centimetre

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SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result / Recovery	Estimate of Uncertainty	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: Weir (1) (6101423-01) [Water] Sampled: 2016-10-20 07:45**

**Anions**

Chloride	74.1	± 3.4	0.10	mg/L	N/A	2016-10-23	
Fluoride	< 0.10		0.10	mg/L	N/A	2016-10-23	
Nitrate (as N)	0.418	± 0.052	0.010	mg/L	N/A	2016-10-23	
Nitrite (as N)	< 0.010		0.010	mg/L	N/A	2016-10-23	
Sulfate	97.1	± 11.5	1.0	mg/L	N/A	2016-10-23	

**General Parameters**

Alkalinity, Total (as CaCO3)	39	± 2	1	mg/L	N/A	2016-10-23	
Alkalinity, Phenolphthalein (as CaCO3)	< 1		1	mg/L	N/A	2016-10-23	
Alkalinity, Bicarbonate (as CaCO3)	39	± 2	1	mg/L	N/A	2016-10-23	
Alkalinity, Carbonate (as CaCO3)	< 1		1	mg/L	N/A	2016-10-23	
Alkalinity, Hydroxide (as CaCO3)	< 1		1	mg/L	N/A	2016-10-23	
Chromium, Hexavalent	< 0.001		0.001	mg/L	N/A	2016-10-21	
Colour, True	< 5		5	CU	N/A	2016-10-24	HT1
Conductivity (EC)	647	± 10	2	µS/cm	N/A	2016-10-23	
pH	7.58	± 0.02	0.01	pH units	N/A	2016-10-23	HT2
Solids, Total Dissolved	409	± 38	10	mg/L	N/A	2016-10-25	
Solids, Total Suspended	43	± 4	2	mg/L	N/A	2016-10-25	
Turbidity	82.7	± 3.8	0.10	NTU	N/A	2016-10-24	HT2

**Calculated Parameters**

Chromium, Trivalent	0.010		0.001	mg/L	N/A	N/A	
Hardness, Total (as CaCO3)	193		0.50	mg/L	N/A	N/A	

**Dissolved Metals**

Aluminum, dissolved	0.007	± 0.002	0.005	mg/L	N/A	2016-10-25	
Antimony, dissolved	0.0004	± 0.0001	0.0001	mg/L	N/A	2016-10-25	
Arsenic, dissolved	< 0.0005		0.0005	mg/L	N/A	2016-10-25	
Barium, dissolved	0.016	± 0.002	0.005	mg/L	N/A	2016-10-25	
Beryllium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Bismuth, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Boron, dissolved	0.053	± 0.010	0.004	mg/L	N/A	2016-10-25	
Cadmium, dissolved	< 0.00001		0.00001	mg/L	N/A	2016-10-25	
Calcium, dissolved	56.9	± 9.7	0.2	mg/L	N/A	2016-10-25	
Chromium, dissolved	0.0007	± 0.0002	0.0005	mg/L	N/A	2016-10-25	
Cobalt, dissolved	0.00020	± 0.00002	0.00005	mg/L	N/A	2016-10-25	
Copper, dissolved	0.0010	± 0.0004	0.0002	mg/L	N/A	2016-10-25	
Iron, dissolved	< 0.010		0.010	mg/L	N/A	2016-10-25	
Lead, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Lithium, dissolved	0.0002	± 0.0001	0.0001	mg/L	N/A	2016-10-25	
Magnesium, dissolved	12.4	± 2.2	0.01	mg/L	N/A	2016-10-25	
Manganese, dissolved	0.137	± 0.017	0.0002	mg/L	N/A	2016-10-25	
Mercury, dissolved	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-25	
Molybdenum, dissolved	0.0010	± 0.0001	0.0001	mg/L	N/A	2016-10-25	
Nickel, dissolved	0.0016	± 0.0003	0.0002	mg/L	N/A	2016-10-25	
Phosphorus, dissolved	< 0.02		0.02	mg/L	N/A	2016-10-25	

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2016-10-26

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**Sample ID: Weir (1) (6101423-01) [Water] Sampled: 2016-10-20 07:45, Continued**

***Dissolved Metals, Continued***

Potassium, dissolved	1.75	± 0.27	0.02	mg/L	N/A	2016-10-25	
Selenium, dissolved	< 0.0005		0.0005	mg/L	N/A	2016-10-25	
Silicon, dissolved	2.4	± 1.2	0.5	mg/L	N/A	2016-10-25	
Silver, dissolved	< 0.00005		0.00005	mg/L	N/A	2016-10-25	
Sodium, dissolved	44.5	± 7.6	0.02	mg/L	N/A	2016-10-25	
Strontium, dissolved	0.281	± 0.032	0.001	mg/L	N/A	2016-10-25	
Sulfur, dissolved	47	± 126	1	mg/L	N/A	2016-10-25	
Tellurium, dissolved	< 0.0002		0.0002	mg/L	N/A	2016-10-25	
Thallium, dissolved	< 0.00002		0.00002	mg/L	N/A	2016-10-25	
Thorium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Tin, dissolved	< 0.0002		0.0002	mg/L	N/A	2016-10-25	
Titanium, dissolved	< 0.005		0.005	mg/L	N/A	2016-10-25	
Uranium, dissolved	0.00047	± 0.00007	0.00002	mg/L	N/A	2016-10-25	
Vanadium, dissolved	< 0.001		0.001	mg/L	N/A	2016-10-25	
Zinc, dissolved	< 0.004		0.004	mg/L	N/A	2016-10-25	
Zirconium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	

***Total Metals***

Aluminum, total	4.57	± 0.92	0.005	mg/L	2016-10-25	2016-10-25	
Antimony, total	0.0005	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Arsenic, total	0.0010	± 0.0002	0.0005	mg/L	2016-10-25	2016-10-25	
Barium, total	0.041	± 0.007	0.005	mg/L	2016-10-25	2016-10-25	
Beryllium, total	< 0.0001		0.0001	mg/L	2016-10-25	2016-10-25	
Bismuth, total	< 0.0001		0.0001	mg/L	2016-10-25	2016-10-25	
Boron, total	0.055	± 0.011	0.004	mg/L	2016-10-25	2016-10-25	
Cadmium, total	0.00002	± 0.00002	0.00001	mg/L	2016-10-25	2016-10-25	
Calcium, total	58.6	± 7.9	0.2	mg/L	2016-10-25	2016-10-25	
Chromium, total	0.0097	± 0.0015	0.0005	mg/L	2016-10-25	2016-10-25	
Cobalt, total	0.00246	± 0.00025	0.00005	mg/L	2016-10-25	2016-10-25	
Copper, total	0.0090	± 0.0012	0.0002	mg/L	2016-10-25	2016-10-25	
Iron, total	4.68	± 1.02	0.01	mg/L	2016-10-25	2016-10-25	
Lead, total	0.0021	± 0.0002	0.0001	mg/L	2016-10-25	2016-10-25	
Lithium, total	0.0022	± 0.0004	0.0001	mg/L	2016-10-25	2016-10-25	
Magnesium, total	13.8	± 2.3	0.01	mg/L	2016-10-25	2016-10-25	
Manganese, total	0.214	± 0.021	0.0002	mg/L	2016-10-25	2016-10-25	
Mercury, total	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-26	
Molybdenum, total	0.0010	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Nickel, total	0.0084	± 0.0009	0.0002	mg/L	2016-10-25	2016-10-25	
Phosphorus, total	0.10	± 6.12	0.02	mg/L	2016-10-25	2016-10-25	
Potassium, total	2.21	± 0.28	0.02	mg/L	2016-10-25	2016-10-25	
Selenium, total	< 0.0005		0.0005	mg/L	2016-10-25	2016-10-25	
Silicon, total	10.9	± 4.4	0.5	mg/L	2016-10-25	2016-10-25	
Silver, total	< 0.00005		0.00005	mg/L	2016-10-25	2016-10-25	
Sodium, total	44.7	± 7.3	0.02	mg/L	2016-10-25	2016-10-25	
Strontium, total	0.293	± 0.030	0.001	mg/L	2016-10-25	2016-10-25	
Sulfur, total	47	± 1470	1	mg/L	2016-10-25	2016-10-25	

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SIRM 460 Stebbings

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2016-10-26

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**Sample ID: Weir (1) (6101423-01) [Water] Sampled: 2016-10-20 07:45, Continued**

**Total Metals, Continued**

Tellurium, total	< 0.0002		0.0002	mg/L	2016-10-25	2016-10-25	
Thallium, total	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-25	
Thorium, total	<b>0.0002</b>		0.0001	mg/L	2016-10-25	2016-10-25	
Tin, total	< 0.0002		0.0002	mg/L	2016-10-25	2016-10-25	
Titanium, total	<b>0.238</b>	± 0.035	0.005	mg/L	2016-10-25	2016-10-25	
Uranium, total	<b>0.00060</b>	± 0.00004	0.00002	mg/L	2016-10-25	2016-10-25	
Vanadium, total	<b>0.012</b>	± 0.002	0.001	mg/L	2016-10-25	2016-10-25	
Zinc, total	<b>0.014</b>	± 0.003	0.004	mg/L	2016-10-25	2016-10-25	
Zirconium, total	<b>0.0021</b>	± 0.0005	0.0001	mg/L	2016-10-25	2016-10-25	

**BCMEOE Aggregate Hydrocarbons**

EPHw10-19	< 250		250	µg/L	2016-10-22	2016-10-23	
EPHw19-32	< 250		250	µg/L	2016-10-22	2016-10-23	
LEPHw	< 250		250	µg/L	N/A	N/A	
HEPHw	< 250		250	µg/L	N/A	N/A	
<i>Surrogate: 2-Methylnonane</i>	85		60-140	%	2016-10-22	2016-10-23	

**Glycols**

Propylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Ethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Diethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Triethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
<i>Surrogate: Tetramethylene Glycol</i>	105		66-125	%	N/A	2016-10-21	

**Polycyclic Aromatic Hydrocarbons (PAH)**

Acenaphthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Acenaphthylene	< 0.20		0.20	µg/L	2016-10-22	2016-10-24	
Acridine	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
Anthracene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benz (a) anthracene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benzo (a) pyrene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benzo (b) fluoranthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Benzo (g,h,i) perylene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Benzo (k) fluoranthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Chrysene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Dibenz (a,h) anthracene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Fluoranthene	< 0.03		0.03	µg/L	2016-10-22	2016-10-24	
Fluorene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Indeno (1,2,3-cd) pyrene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Naphthalene	< 0.20		0.20	µg/L	2016-10-22	2016-10-24	
Phenanthrene	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
Pyrene	< 0.02		0.02	µg/L	2016-10-22	2016-10-24	
Quinoline	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
<i>Surrogate: Acridine-d9</i>	72		60-130	%	2016-10-22	2016-10-24	
<i>Surrogate: Naphthalene-d8</i>	110		60-130	%	2016-10-22	2016-10-24	
<i>Surrogate: Perylene-d12</i>	119		60-130	%	2016-10-22	2016-10-24	

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**Sample ID: Weir (1) (6101423-01) [Water] Sampled: 2016-10-20 07:45, Continued**

**Volatile Organic Compounds (VOC)**

Benzene	< 0.5		0.5	µg/L	N/A	2016-10-24	
Bromodichloromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Bromoform	< 1.0		1.0	µg/L	N/A	2016-10-24	
Bromomethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Carbon tetrachloride	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chloroethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Chloroform	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chloromethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Dibromochloromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dibromoethane	< 0.3		0.3	µg/L	N/A	2016-10-24	
Dibromomethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichlorobenzene	< 0.5		0.5	µg/L	N/A	2016-10-24	
1,3-Dichlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,4-Dichlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1-Dichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
cis-1,2-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
trans-1,2-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichloropropane	< 1.0		1.0	µg/L	N/A	2016-10-24	
cis-1,3-Dichloropropene	< 1.0		1.0	µg/L	N/A	2016-10-24	
trans-1,3-Dichloropropene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Ethylbenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Methyl tert-butyl ether	< 1.0		1.0	µg/L	N/A	2016-10-24	
Methylene chloride	< 3.0		3.0	µg/L	N/A	2016-10-24	
Styrene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,1,2-Tetrachloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,2,2-Tetrachloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Tetrachloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Toluene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,1-Trichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,2-Trichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Trichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Trichlorofluoromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Vinyl chloride	< 2.0		2.0	µg/L	N/A	2016-10-24	
Xylenes (total)	< 2.0		2.0	µg/L	N/A	2016-10-24	
Surrogate: Toluene-d8	97		70-130	%	N/A	2016-10-24	
Surrogate: 4-Bromofluorobenzene	87		70-130	%	N/A	2016-10-24	
Surrogate: 1,4-Dichlorobenzene-d4	98		70-130	%	N/A	2016-10-24	

**Sample ID: SW-1 (2) (6101423-02) [Water] Sampled: 2016-10-20 08:00**

**Anions**

Chloride	96.2 ± 4.4		0.10	mg/L	N/A	2016-10-23	
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**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result / Recovery	Estimate of Uncertainty	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: SW-1 (2) (6101423-02) [Water] Sampled: 2016-10-20 08:00, Continued**

**Anions, Continued**

Fluoride	< 0.10		0.10	mg/L	N/A	2016-10-23	
Nitrate (as N)	<b>1.07</b>	± 0.13	0.010	mg/L	N/A	2016-10-23	
Nitrite (as N)	< 0.010		0.010	mg/L	N/A	2016-10-23	
Sulfate	<b>173</b>	± 21	1.0	mg/L	N/A	2016-10-23	

**General Parameters**

Alkalinity, Total (as CaCO <sub>3</sub> )	<b>63</b>	± 4	1	mg/L	N/A	2016-10-23	
Alkalinity, Phenolphthalein (as CaCO <sub>3</sub> )	< 1		1	mg/L	N/A	2016-10-23	
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	<b>63</b>	± 3	1	mg/L	N/A	2016-10-23	
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	< 1		1	mg/L	N/A	2016-10-23	
Alkalinity, Hydroxide (as CaCO <sub>3</sub> )	< 1		1	mg/L	N/A	2016-10-23	
Colour, True	< 5		5	CU	N/A	2016-10-24	HT1
Conductivity (EC)	<b>819</b>	± 13	2	µS/cm	N/A	2016-10-23	
pH	<b>7.62</b>	± 0.02	0.01	pH units	N/A	2016-10-23	HT2
Solids, Total Dissolved	<b>540</b>	± 49	10	mg/L	N/A	2016-10-25	
Solids, Total Suspended	<b>11</b>	± 1	2	mg/L	N/A	2016-10-25	
Turbidity	<b>11.9</b>	± 0.6	0.10	NTU	N/A	2016-10-24	HT2

**Calculated Parameters**

Hardness, Total (as CaCO <sub>3</sub> )	<b>281</b>		0.50	mg/L	N/A	N/A	
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**Dissolved Metals**

Aluminum, dissolved	<b>0.007</b>	± 0.002	0.005	mg/L	N/A	2016-10-25	
Antimony, dissolved	<b>0.0003</b>	± 0.0001	0.0001	mg/L	N/A	2016-10-25	
Arsenic, dissolved	< 0.0005		0.0005	mg/L	N/A	2016-10-25	
Barium, dissolved	<b>0.030</b>	± 0.004	0.005	mg/L	N/A	2016-10-25	
Beryllium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Bismuth, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Boron, dissolved	<b>0.047</b>	± 0.009	0.004	mg/L	N/A	2016-10-25	
Cadmium, dissolved	<b>0.00001</b>	± 0.00001	0.00001	mg/L	N/A	2016-10-25	
Calcium, dissolved	<b>85.2</b>	± 14.6	0.2	mg/L	N/A	2016-10-25	
Chromium, dissolved	<b>0.0006</b>	± 0.0002	0.0005	mg/L	N/A	2016-10-25	
Cobalt, dissolved	<b>0.00030</b>	± 0.00003	0.00005	mg/L	N/A	2016-10-25	
Copper, dissolved	<b>0.0015</b>	± 0.0004	0.0002	mg/L	N/A	2016-10-25	
Iron, dissolved	< 0.010		0.010	mg/L	N/A	2016-10-25	
Lead, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Lithium, dissolved	<b>0.0003</b>	± 0.0001	0.0001	mg/L	N/A	2016-10-25	
Magnesium, dissolved	<b>16.6</b>	± 3.0	0.01	mg/L	N/A	2016-10-25	
Manganese, dissolved	<b>0.0578</b>	± 0.0073	0.0002	mg/L	N/A	2016-10-25	
Mercury, dissolved	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-25	
Molybdenum, dissolved	<b>0.0016</b>	± 0.0002	0.0001	mg/L	N/A	2016-10-25	
Nickel, dissolved	<b>0.0016</b>	± 0.0003	0.0002	mg/L	N/A	2016-10-25	
Phosphorus, dissolved	< 0.02		0.02	mg/L	N/A	2016-10-25	
Potassium, dissolved	<b>2.32</b>	± 0.35	0.02	mg/L	N/A	2016-10-25	
Selenium, dissolved	<b>0.0005</b>	± 0.0002	0.0005	mg/L	N/A	2016-10-25	
Silicon, dissolved	<b>4.3</b>	± 2.1	0.5	mg/L	N/A	2016-10-25	



**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result / Recovery	Estimate of Uncertainty	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: SW-1 (2) (6101423-02) [Water] Sampled: 2016-10-20 08:00, Continued**

***Dissolved Metals, Continued***

Silver, dissolved	< 0.00005		0.00005	mg/L	N/A	2016-10-25	
Sodium, dissolved	<b>46.4</b>	± 7.9	0.02	mg/L	N/A	2016-10-25	
Strontium, dissolved	<b>0.374</b>	± 0.042	0.001	mg/L	N/A	2016-10-25	
Sulfur, dissolved	<b>66</b>	± 179	1	mg/L	N/A	2016-10-25	
Tellurium, dissolved	< 0.0002		0.0002	mg/L	N/A	2016-10-25	
Thallium, dissolved	< 0.00002		0.00002	mg/L	N/A	2016-10-25	
Thorium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	
Tin, dissolved	< 0.0002		0.0002	mg/L	N/A	2016-10-25	
Titanium, dissolved	< 0.005		0.005	mg/L	N/A	2016-10-25	
Uranium, dissolved	<b>0.00091</b>	± 0.00013	0.00002	mg/L	N/A	2016-10-25	
Vanadium, dissolved	< 0.001		0.001	mg/L	N/A	2016-10-25	
Zinc, dissolved	< 0.004		0.004	mg/L	N/A	2016-10-25	
Zirconium, dissolved	< 0.0001		0.0001	mg/L	N/A	2016-10-25	

***Total Metals***

Aluminum, total	<b>0.534</b>	± 0.108	0.005	mg/L	2016-10-25	2016-10-25	
Antimony, total	<b>0.0003</b>	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Arsenic, total	< 0.0005		0.0005	mg/L	2016-10-25	2016-10-25	
Barium, total	<b>0.033</b>	± 0.006	0.005	mg/L	2016-10-25	2016-10-25	
Beryllium, total	< 0.0001		0.0001	mg/L	2016-10-25	2016-10-25	
Bismuth, total	< 0.0001		0.0001	mg/L	2016-10-25	2016-10-25	
Boron, total	<b>0.052</b>	± 0.011	0.004	mg/L	2016-10-25	2016-10-25	
Cadmium, total	<b>0.00002</b>	± 0.00002	0.00001	mg/L	2016-10-25	2016-10-25	
Calcium, total	<b>85.5</b>	± 11.6	0.2	mg/L	2016-10-25	2016-10-25	
Chromium, total	<b>0.0018</b>	± 0.0003	0.0005	mg/L	2016-10-25	2016-10-25	
Cobalt, total	<b>0.00078</b>	± 0.00008	0.00005	mg/L	2016-10-25	2016-10-25	
Copper, total	<b>0.0028</b>	± 0.0004	0.0002	mg/L	2016-10-25	2016-10-25	
Iron, total	<b>0.57</b>	± 0.12	0.01	mg/L	2016-10-25	2016-10-25	
Lead, total	<b>0.0004</b>	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Lithium, total	<b>0.0005</b>	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Magnesium, total	<b>16.1</b>	± 2.7	0.01	mg/L	2016-10-25	2016-10-25	
Manganese, total	<b>0.0689</b>	± 0.0069	0.0002	mg/L	2016-10-25	2016-10-25	
Mercury, total	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-26	
Molybdenum, total	<b>0.0016</b>	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	
Nickel, total	<b>0.0024</b>	± 0.0003	0.0002	mg/L	2016-10-25	2016-10-25	
Phosphorus, total	<b>0.02</b>	± 1.48	0.02	mg/L	2016-10-25	2016-10-25	
Potassium, total	<b>2.29</b>	± 0.29	0.02	mg/L	2016-10-25	2016-10-25	
Selenium, total	< 0.0005		0.0005	mg/L	2016-10-25	2016-10-25	
Silicon, total	<b>4.9</b>	± 2.0	0.5	mg/L	2016-10-25	2016-10-25	
Silver, total	< 0.00005		0.00005	mg/L	2016-10-25	2016-10-25	
Sodium, total	<b>44.6</b>	± 7.3	0.02	mg/L	2016-10-25	2016-10-25	
Strontium, total	<b>0.366</b>	± 0.038	0.001	mg/L	2016-10-25	2016-10-25	
Sulfur, total	<b>65</b>	± 2040	1	mg/L	2016-10-25	2016-10-25	
Tellurium, total	< 0.0002		0.0002	mg/L	2016-10-25	2016-10-25	
Thallium, total	< 0.00002		0.00002	mg/L	2016-10-25	2016-10-25	
Thorium, total	< 0.0001		0.0001	mg/L	2016-10-25	2016-10-25	

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result / Estimate of Recovery	Uncertainty	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: SW-1 (2) (6101423-02) [Water] Sampled: 2016-10-20 08:00, Continued**

**Total Metals, Continued**

Tin, total	< 0.0002		0.0002	mg/L	2016-10-25	2016-10-25	
Titanium, total	<b>0.028</b>	± 0.004	0.005	mg/L	2016-10-25	2016-10-25	
Uranium, total	<b>0.00094</b>	± 0.00006	0.00002	mg/L	2016-10-25	2016-10-25	
Vanadium, total	<b>0.002</b>		0.001	mg/L	2016-10-25	2016-10-25	
Zinc, total	<b>0.004</b>	± 0.002	0.004	mg/L	2016-10-25	2016-10-25	
Zirconium, total	<b>0.0003</b>	± 0.0001	0.0001	mg/L	2016-10-25	2016-10-25	

**BCMOE Aggregate Hydrocarbons**

EPHw10-19	< 250		250	µg/L	2016-10-22	2016-10-23	
EPHw19-32	< 250		250	µg/L	2016-10-22	2016-10-23	
LEPHw	< 250		250	µg/L	N/A	N/A	
HEPHw	< 250		250	µg/L	N/A	N/A	
Surrogate: 2-Methylnonane	92		60-140	%	2016-10-22	2016-10-23	

**Glycols**

Propylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Ethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Diethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Triethylene glycol	< 5		5	mg/L	N/A	2016-10-21	
Surrogate: Tetramethylene Glycol	100		66-125	%	N/A	2016-10-21	

**Polycyclic Aromatic Hydrocarbons (PAH)**

Acenaphthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Acenaphthylene	< 0.20		0.20	µg/L	2016-10-22	2016-10-24	
Acridine	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
Anthracene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benz (a) anthracene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benzo (a) pyrene	< 0.01		0.01	µg/L	2016-10-22	2016-10-24	
Benzo (b) fluoranthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Benzo (g,h,i) perylene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Benzo (k) fluoranthene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Chrysene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Dibenz (a,h) anthracene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Fluoranthene	< 0.03		0.03	µg/L	2016-10-22	2016-10-24	
Fluorene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Indeno (1,2,3-cd) pyrene	< 0.05		0.05	µg/L	2016-10-22	2016-10-24	
Naphthalene	< 0.20		0.20	µg/L	2016-10-22	2016-10-24	
Phenanthrene	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
Pyrene	< 0.02		0.02	µg/L	2016-10-22	2016-10-24	
Quinoline	< 0.10		0.10	µg/L	2016-10-22	2016-10-24	
Surrogate: Acridine-d9	71		60-130	%	2016-10-22	2016-10-24	
Surrogate: Naphthalene-d8	107		60-130	%	2016-10-22	2016-10-24	
Surrogate: Perylene-d12	119		60-130	%	2016-10-22	2016-10-24	

**Volatile Organic Compounds (VOC)**

Benzene	< 0.5		0.5	µg/L	N/A	2016-10-24	
Bromodichloromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result / Recovery	Estimate of Uncertainty	MRL / Limits	Units	Prepared	Analyzed	Notes
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**Sample ID: SW-1 (2) (6101423-02) [Water] Sampled: 2016-10-20 08:00, Continued**

***Volatile Organic Compounds (VOC), Continued***

Bromoform	< 1.0		1.0	µg/L	N/A	2016-10-24	
Bromomethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Carbon tetrachloride	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chloroethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Chloroform	< 1.0		1.0	µg/L	N/A	2016-10-24	
Chloromethane	< 2.0		2.0	µg/L	N/A	2016-10-24	
Dibromochloromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dibromoethane	< 0.3		0.3	µg/L	N/A	2016-10-24	
Dibromomethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichlorobenzene	< 0.5		0.5	µg/L	N/A	2016-10-24	
1,3-Dichlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,4-Dichlorobenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1-Dichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
cis-1,2-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
trans-1,2-Dichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,2-Dichloropropane	< 1.0		1.0	µg/L	N/A	2016-10-24	
cis-1,3-Dichloropropene	< 1.0		1.0	µg/L	N/A	2016-10-24	
trans-1,3-Dichloropropene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Ethylbenzene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Methyl tert-butyl ether	< 1.0		1.0	µg/L	N/A	2016-10-24	
Methylene chloride	< 3.0		3.0	µg/L	N/A	2016-10-24	
Styrene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,1,2-Tetrachloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,2,2-Tetrachloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Tetrachloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Toluene	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,1-Trichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
1,1,2-Trichloroethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Trichloroethene	< 1.0		1.0	µg/L	N/A	2016-10-24	
Trichlorofluoromethane	< 1.0		1.0	µg/L	N/A	2016-10-24	
Vinyl chloride	< 2.0		2.0	µg/L	N/A	2016-10-24	
Xylenes (total)	< 2.0		2.0	µg/L	N/A	2016-10-24	
Surrogate: Toluene-d8	97		70-130	%	N/A	2016-10-24	
Surrogate: 4-Bromofluorobenzene	85		70-130	%	N/A	2016-10-24	
Surrogate: 1,4-Dichlorobenzene-d4	98		70-130	%	N/A	2016-10-24	

**Sample / Analysis Qualifiers:**

HT1 The sample was prepared and/or analyzed past the recommended holding time.  
HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk):** Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment
- **Duplicate (Dup):** Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.
- **Blank Spike (BS):** A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).
- **Standard Reference Material (SRM):** A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>Anions, Batch B6J1436</b>									
<b>Blank (B6J1436-BLK1)</b> Prepared: 2016-10-23, Analyzed: 2016-10-23									
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							
<b>Blank (B6J1436-BLK2)</b> Prepared: 2016-10-23, Analyzed: 2016-10-23									
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							
<b>LCS (B6J1436-BS1)</b> Prepared: 2016-10-23, Analyzed: 2016-10-23									
Chloride	16.1	0.10 mg/L	16.0		101	90-110			
Fluoride	4.00	0.10 mg/L	4.00		100	88-108			
Nitrate (as N)	4.19	0.010 mg/L	4.00		105	93-108			
Nitrite (as N)	1.98	0.010 mg/L	2.00		99	83-110			
Sulfate	15.9	1.0 mg/L	16.0		99	91-109			
<b>LCS (B6J1436-BS2)</b> Prepared: 2016-10-23, Analyzed: 2016-10-23									
Chloride	16.2	0.10 mg/L	16.0		101	90-110			
Fluoride	3.97	0.10 mg/L	4.00		99	88-108			
Nitrate (as N)	4.11	0.010 mg/L	4.00		103	93-108			
Nitrite (as N)	1.99	0.010 mg/L	2.00		100	83-110			
Sulfate	16.0	1.0 mg/L	16.0		100	91-109			
<b>BCMOE Aggregate Hydrocarbons, Batch B6J1368</b>									
<b>Blank (B6J1368-BLK1)</b> Prepared: 2016-10-22, Analyzed: 2016-10-23									
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**BCMOE Aggregate Hydrocarbons, Batch B6J1368, Continued**

**Blank (B6J1368-BLK1), Continued**

Prepared: 2016-10-22, Analyzed: 2016-10-23

Surrogate: 2-Methylnonane	330	µg/L	441		75	60-140			
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**LCS (B6J1368-BS2)**

Prepared: 2016-10-22, Analyzed: 2016-10-23

EPHw10-19	14300	250 µg/L	15500		92	70-130			
EPHw19-32	16800	250 µg/L	22200		76	70-130			
Surrogate: 2-Methylnonane	443	µg/L	444		100	60-140			

**Dissolved Metals, Batch B6J1616**

**Blank (B6J1616-BLK1)**

Prepared: 2016-10-25, Analyzed: 2016-10-25

Aluminum, dissolved	< 0.005	0.005 mg/L							
Antimony, dissolved	< 0.0001	0.0001 mg/L							
Arsenic, dissolved	< 0.0005	0.0005 mg/L							
Barium, dissolved	< 0.005	0.005 mg/L							
Beryllium, dissolved	< 0.0001	0.0001 mg/L							
Bismuth, dissolved	< 0.0001	0.0001 mg/L							
Boron, dissolved	< 0.004	0.004 mg/L							
Cadmium, dissolved	< 0.00001	0.00001 mg/L							
Calcium, dissolved	< 0.2	0.2 mg/L							
Chromium, dissolved	< 0.0005	0.0005 mg/L							
Cobalt, dissolved	< 0.00005	0.00005 mg/L							
Copper, dissolved	< 0.0002	0.0002 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.0001	0.0001 mg/L							
Lithium, dissolved	< 0.0001	0.0001 mg/L							
Magnesium, dissolved	< 0.01	0.01 mg/L							
Manganese, dissolved	< 0.0002	0.0002 mg/L							
Molybdenum, dissolved	< 0.0001	0.0001 mg/L							
Nickel, dissolved	< 0.0002	0.0002 mg/L							
Phosphorus, dissolved	< 0.02	0.02 mg/L							
Potassium, dissolved	< 0.02	0.02 mg/L							
Selenium, dissolved	< 0.0005	0.0005 mg/L							
Silicon, dissolved	< 0.5	0.5 mg/L							
Silver, dissolved	< 0.00005	0.00005 mg/L							
Sodium, dissolved	< 0.02	0.02 mg/L							
Strontium, dissolved	< 0.001	0.001 mg/L							
Sulfur, dissolved	< 1	1 mg/L							
Tellurium, dissolved	< 0.0002	0.0002 mg/L							
Thallium, dissolved	< 0.00002	0.00002 mg/L							
Thorium, dissolved	< 0.0001	0.0001 mg/L							
Tin, dissolved	< 0.0002	0.0002 mg/L							
Titanium, dissolved	< 0.005	0.005 mg/L							
Uranium, dissolved	< 0.00002	0.00002 mg/L							
Vanadium, dissolved	< 0.001	0.001 mg/L							
Zinc, dissolved	< 0.004	0.004 mg/L							
Zirconium, dissolved	< 0.0001	0.0001 mg/L							

**Duplicate (B6J1616-DUP1)**

Source: 6101423-02

Prepared: 2016-10-25, Analyzed: 2016-10-25

Aluminum, dissolved	0.005	0.005 mg/L		0.007				11	
Antimony, dissolved	0.0004	0.0001 mg/L		0.0003				44	
Arsenic, dissolved	< 0.0005	0.0005 mg/L		< 0.0005				8	
Barium, dissolved	0.031	0.005 mg/L		0.030			1	7	
Beryllium, dissolved	< 0.0001	0.0001 mg/L		< 0.0001				14	
Bismuth, dissolved	< 0.0001	0.0001 mg/L		< 0.0001				20	
Boron, dissolved	0.043	0.004 mg/L		0.047			9	13	
Cadmium, dissolved	0.00002	0.00001 mg/L		0.00001				27	

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>Dissolved Metals, Batch B6J1616, Continued</b>									
<b>Duplicate (B6J1616-DUP1), Continued</b>		<b>Source: 6101423-02</b>		<b>Prepared: 2016-10-25, Analyzed: 2016-10-25</b>					
Calcium, dissolved	84.8	0.2 mg/L		85.2			< 1	8	
Chromium, dissolved	0.0005	0.0005 mg/L		0.0006				14	
Cobalt, dissolved	0.00030	0.00005 mg/L		0.00030			1	10	
Copper, dissolved	0.0016	0.0002 mg/L		0.0015			1	28	
Iron, dissolved	< 0.010	0.010 mg/L		< 0.010				14	
Lead, dissolved	< 0.0001	0.0001 mg/L		< 0.0001				26	
Lithium, dissolved	0.0003	0.0001 mg/L		0.0003				14	
Magnesium, dissolved	16.6	0.01 mg/L		16.6			< 1	6	
Manganese, dissolved	0.0576	0.0002 mg/L		0.0578			< 1	9	
Molybdenum, dissolved	0.0017	0.0001 mg/L		0.0016			7	19	
Nickel, dissolved	0.0016	0.0002 mg/L		0.0016			1	21	
Phosphorus, dissolved	< 0.02	0.02 mg/L		< 0.02				14	
Potassium, dissolved	2.30	0.02 mg/L		2.32			< 1	8	
Selenium, dissolved	< 0.0005	0.0005 mg/L		0.0005				36	
Silicon, dissolved	4.3	0.5 mg/L		4.3			< 1	12	
Silver, dissolved	< 0.00005	0.00005 mg/L		< 0.00005				20	
Sodium, dissolved	46.3	0.02 mg/L		46.4			< 1	6	
Strontium, dissolved	0.374	0.001 mg/L		0.374			< 1	6	
Sulfur, dissolved	66	1 mg/L		66			1	26	
Tellurium, dissolved	< 0.0002	0.0002 mg/L		< 0.0002				20	
Thallium, dissolved	< 0.00002	0.00002 mg/L		< 0.00002				13	
Thorium, dissolved	< 0.0001	0.0001 mg/L		< 0.0001				30	
Tin, dissolved	< 0.0002	0.0002 mg/L		< 0.0002				6	
Titanium, dissolved	< 0.005	0.005 mg/L		< 0.005				20	
Uranium, dissolved	0.00089	0.00002 mg/L		0.00091			2	14	
Vanadium, dissolved	0.001	0.001 mg/L		0.001				20	
Zinc, dissolved	< 0.004	0.004 mg/L		< 0.004				11	
Zirconium, dissolved	< 0.0001	0.0001 mg/L		< 0.0001				36	
<b>Matrix Spike (B6J1616-MS1)</b>		<b>Source: 6101423-01</b>		<b>Prepared: 2016-10-25, Analyzed: 2016-10-25</b>					
Antimony, dissolved	0.358	0.0001 mg/L		0.400	0.0004	89	76-114		
Arsenic, dissolved	0.203	0.0005 mg/L		0.200	< 0.0005	101	81-115		
Barium, dissolved	1.01	0.005 mg/L		1.00	0.016	99	80-113		
Beryllium, dissolved	0.0833	0.0001 mg/L		0.100	< 0.0001	83	69-109		
Cadmium, dissolved	0.0987	0.00001 mg/L		0.100	< 0.00001	99	83-110		
Chromium, dissolved	0.400	0.0005 mg/L		0.400	0.0007	100	85-115		
Cobalt, dissolved	0.399	0.00005 mg/L		0.400	0.00020	100	86-114		
Copper, dissolved	0.402	0.0002 mg/L		0.400	0.0010	100	82-119		
Iron, dissolved	2.06	0.010 mg/L		2.00	< 0.010	103	80-116		
Lead, dissolved	0.184	0.0001 mg/L		0.200	< 0.0001	92	83-112		
Manganese, dissolved	0.523	0.0002 mg/L		0.400	0.137	96	62-131		
Nickel, dissolved	0.404	0.0002 mg/L		0.400	0.0016	101	81-115		
Selenium, dissolved	0.0882	0.0005 mg/L		0.100	< 0.0005	88	79-115		
Silver, dissolved	0.118	0.00005 mg/L		0.100	< 0.00005	118	69-121		
Thallium, dissolved	0.0921	0.00002 mg/L		0.100	< 0.00002	92	84-115		
Vanadium, dissolved	0.383	0.001 mg/L		0.400	< 0.001	96	83-113		
Zinc, dissolved	0.989	0.004 mg/L		1.00	< 0.004	99	82-115		
<b>Reference (B6J1616-SRM1)</b>		<b>Prepared: 2016-10-25, Analyzed: 2016-10-25</b>							
Aluminum, dissolved	0.254	0.005 mg/L		0.233		109	58-142		
Antimony, dissolved	0.0462	0.0001 mg/L		0.0430		107	75-125		
Arsenic, dissolved	0.475	0.0005 mg/L		0.438		108	81-119		
Barium, dissolved	3.63	0.005 mg/L		3.35		108	83-117		
Beryllium, dissolved	0.200	0.0001 mg/L		0.213		94	80-120		
Boron, dissolved	1.52	0.004 mg/L		1.74		88	74-117		
Cadmium, dissolved	0.241	0.00001 mg/L		0.224		107	83-117		
Calcium, dissolved	7.6	0.2 mg/L		7.69		98	76-124		

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>Dissolved Metals, Batch B6J1616, Continued</b>									
<b>Reference (B6J1616-SRM1), Continued</b>					Prepared: 2016-10-25, Analyzed: 2016-10-25				
Chromium, dissolved	0.474	0.0005 mg/L	0.437		108	81-119			
Cobalt, dissolved	0.141	0.00005 mg/L	0.128		110	76-124			
Copper, dissolved	0.925	0.0002 mg/L	0.844		110	84-116			
Iron, dissolved	1.43	0.010 mg/L	1.29		111	74-126			
Lead, dissolved	0.109	0.0001 mg/L	0.112		97	72-128			
Lithium, dissolved	0.0975	0.0001 mg/L	0.104		94	60-140			
Magnesium, dissolved	7.51	0.01 mg/L	6.92		108	81-119			
Manganese, dissolved	0.376	0.0002 mg/L	0.345		109	84-116			
Molybdenum, dissolved	0.428	0.0001 mg/L	0.426		100	83-117			
Nickel, dissolved	0.926	0.0002 mg/L	0.840		110	74-126			
Phosphorus, dissolved	0.55	0.02 mg/L	0.495		112	68-132			
Potassium, dissolved	3.24	0.02 mg/L	3.19		102	74-126			
Selenium, dissolved	0.0319	0.0005 mg/L	0.0331		96	70-130			
Sodium, dissolved	19.9	0.02 mg/L	19.1		104	72-128			
Strontium, dissolved	0.969	0.001 mg/L	0.916		106	84-113			
Thallium, dissolved	0.0383	0.00002 mg/L	0.0393		97	57-143			
Uranium, dissolved	0.255	0.00002 mg/L	0.266		96	85-115			
Vanadium, dissolved	0.917	0.001 mg/L	0.869		105	87-113			
Zinc, dissolved	0.953	0.004 mg/L	0.881		108	72-128			

**Dissolved Metals, Batch B6J1635**

<b>Blank (B6J1635-BLK1)</b>					Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	< 0.00002	0.00002 mg/L							
<b>Blank (B6J1635-BLK2)</b>					Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	< 0.00002	0.00002 mg/L							
<b>Duplicate (B6J1635-DUP2)</b>			<b>Source: 6101423-01</b>		Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	< 0.00002	0.00002 mg/L		< 0.00002					20
<b>Matrix Spike (B6J1635-MS2)</b>			<b>Source: 6101423-02</b>		Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	0.00022	0.00002 mg/L	0.000250	< 0.00002	87	70-130			
<b>Reference (B6J1635-SRM1)</b>					Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	0.00486	0.00002 mg/L	0.00486		96	50-150			
<b>Reference (B6J1635-SRM2)</b>					Prepared: 2016-10-25, Analyzed: 2016-10-25				
Mercury, dissolved	0.00447	0.00002 mg/L	0.00486		92	50-150			

**General Parameters, Batch B6J1367**

<b>Blank (B6J1367-BLK1)</b>					Prepared: 2016-10-21, Analyzed: 2016-10-21				
Chromium, Hexavalent	< 0.001	0.001 mg/L							
<b>LCS (B6J1367-BS1)</b>					Prepared: 2016-10-21, Analyzed: 2016-10-21				
Chromium, Hexavalent	0.104	0.001 mg/L	0.100		104	90-111			
<b>Matrix Spike (B6J1367-MS1)</b>			<b>Source: 6101423-01</b>		Prepared: 2016-10-21, Analyzed: 2016-10-21				
Chromium, Hexavalent	0.096	0.001 mg/L	0.100	< 0.001	96	70-116			

**General Parameters, Batch B6J1435**

<b>Blank (B6J1435-BLK1)</b>					Prepared: 2016-10-24, Analyzed: 2016-10-24				
Turbidity	< 0.10	0.10 NTU							



## APPENDIX 1: QUALITY CONTROL DATA

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SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>General Parameters, Batch B6J1435, Continued</b>									
<b>Blank (B6J1435-BLK2)</b>			Prepared: 2016-10-24, Analyzed: 2016-10-24						
Turbidity	< 0.10	0.10 NTU							
<b>Blank (B6J1435-BLK3)</b>			Prepared: 2016-10-24, Analyzed: 2016-10-24						
Turbidity	< 0.10	0.10 NTU							
<b>LCS (B6J1435-BS1)</b>			Prepared: 2016-10-24, Analyzed: 2016-10-24						
Turbidity	40.2	0.10 NTU	40.0		100	90-110			
<b>LCS (B6J1435-BS2)</b>			Prepared: 2016-10-24, Analyzed: 2016-10-24						
Turbidity	40.1	0.10 NTU	40.0		100	90-110			
<b>LCS (B6J1435-BS3)</b>			Prepared: 2016-10-24, Analyzed: 2016-10-24						
Turbidity	40.3	0.10 NTU	40.0		101	90-110			
<b>General Parameters, Batch B6J1441</b>									
<b>Blank (B6J1441-BLK1)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Alkalinity, Total (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Phenolphthalein (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Hydroxide (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Conductivity (EC)	< 2	2 µS/cm							
<b>Blank (B6J1441-BLK2)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Alkalinity, Total (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Phenolphthalein (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Hydroxide (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Conductivity (EC)	< 2	2 µS/cm							
<b>Blank (B6J1441-BLK3)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Alkalinity, Total (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Phenolphthalein (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Carbonate (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Alkalinity, Hydroxide (as CaCO <sub>3</sub> )	< 1	1 mg/L							
Conductivity (EC)	< 2	2 µS/cm							
<b>LCS (B6J1441-BS1)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Alkalinity, Total (as CaCO <sub>3</sub> )	101	1 mg/L	100		101	96-108			
<b>LCS (B6J1441-BS2)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Alkalinity, Total (as CaCO <sub>3</sub> )	101	1 mg/L	100		101	96-108			
<b>LCS (B6J1441-BS3)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Alkalinity, Total (as CaCO <sub>3</sub> )	101	1 mg/L	100		101	96-108			
<b>LCS (B6J1441-BS4)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Conductivity (EC)	1400	2 µS/cm	1410		99	95-104			
<b>LCS (B6J1441-BS5)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
Conductivity (EC)	1400	2 µS/cm	1410		99	95-104			
<b>LCS (B6J1441-BS6)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Conductivity (EC)	1420	2 µS/cm	1410		101	95-104			



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**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>General Parameters, Batch B6J1441, Continued</b>									
<b>Reference (B6J1441-SRM1)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
pH	6.96	0.01 pH units	7.00		99	98-102			
<b>Reference (B6J1441-SRM2)</b>			Prepared: 2016-10-22, Analyzed: 2016-10-22						
pH	6.97	0.01 pH units	7.00		100	98-102			
<b>Reference (B6J1441-SRM3)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
pH	6.97	0.01 pH units	7.00		100	98-102			
<b>General Parameters, Batch B6J1446</b>									
<b>Blank (B6J1446-BLK1)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Colour, True	< 5	5 CU							
<b>Blank (B6J1446-BLK2)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Colour, True	< 5	5 CU							
<b>LCS (B6J1446-BS1)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Colour, True	10	5 CU	10.0		100	85-115			
<b>LCS (B6J1446-BS2)</b>			Prepared: 2016-10-23, Analyzed: 2016-10-23						
Colour, True	10	5 CU	10.0		100	85-115			
<b>General Parameters, Batch B6J1559</b>									
<b>Blank (B6J1559-BLK1)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Suspended	< 0.5	2 mg/L							
<b>Blank (B6J1559-BLK2)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Suspended	< 0.5	2 mg/L							
<b>LCS (B6J1559-BS1)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Suspended	51	2 mg/L	50.0		101	85-110			
<b>LCS (B6J1559-BS2)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Suspended	50	2 mg/L	50.0		100	85-110			
<b>General Parameters, Batch B6J1638</b>									
<b>Blank (B6J1638-BLK1)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Dissolved	< 10	10 mg/L							
<b>LCS (B6J1638-BS1)</b>			Prepared: 2016-10-25, Analyzed: 2016-10-25						
Solids, Total Dissolved	233	10 mg/L	240		97	80-120			
<b>Glycols, Batch B6J1214</b>									
<b>Blank (B6J1214-BLK1)</b>			Prepared: 2016-10-20, Analyzed: 2016-10-20						
Propylene glycol	< 5	5 mg/L							
Ethylene glycol	< 5	5 mg/L							
Diethylene glycol	< 5	5 mg/L							
Triethylene glycol	< 5	5 mg/L							
Surrogate: Tetramethylene Glycol	109	mg/L	95.6		114	66-125			
<b>LCS (B6J1214-BS1)</b>			Prepared: 2016-10-20, Analyzed: 2016-10-20						
Propylene glycol	47	5 mg/L	50.0		95	71-114			
Ethylene glycol	46	5 mg/L	49.9		93	82-124			

**APPENDIX 1: QUALITY CONTROL DATA**

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SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Glycols, Batch B6J1214, Continued**

**LCS (B6J1214-BS1), Continued**

Prepared: 2016-10-20, Analyzed: 2016-10-20

Diethylene glycol	47	5 mg/L	50.0		95	80-116			
Triethylene glycol	46	5 mg/L	49.8		92	73-120			
Surrogate: Tetramethylene Glycol	93.8	mg/L	95.6		98	66-125			

**LCS Dup (B6J1214-BS1)**

Prepared: 2016-10-20, Analyzed: 2016-10-20

Propylene glycol	50	5 mg/L	50.0		99	71-114	5	20	
Ethylene glycol	50	5 mg/L	49.9		101	82-124	8	20	
Diethylene glycol	54	5 mg/L	50.0		108	80-116	13	20	
Triethylene glycol	55	5 mg/L	49.8		111	73-120	18	20	
Surrogate: Tetramethylene Glycol	101	mg/L	95.6		106	66-125			

**Polycyclic Aromatic Hydrocarbons (PAH), Batch B6J1368**

**Blank (B6J1368-BLK1)**

Prepared: 2016-10-22, Analyzed: 2016-10-24

Acenaphthene	< 0.05	0.05 µg/L							
Acenaphthylene	< 0.20	0.20 µg/L							
Acridine	< 0.10	0.10 µg/L							
Anthracene	< 0.01	0.01 µg/L							
Benz (a) anthracene	< 0.01	0.01 µg/L							
Benzo (a) pyrene	< 0.01	0.01 µg/L							
Benzo (b) fluoranthene	< 0.05	0.05 µg/L							
Benzo (g,h,i) perylene	< 0.05	0.05 µg/L							
Benzo (k) fluoranthene	< 0.05	0.05 µg/L							
Chrysene	< 0.05	0.05 µg/L							
Dibenz (a,h) anthracene	< 0.05	0.05 µg/L							
Fluoranthene	< 0.03	0.03 µg/L							
Fluorene	< 0.05	0.05 µg/L							
Indeno (1,2,3-cd) pyrene	< 0.05	0.05 µg/L							
Naphthalene	< 0.20	0.20 µg/L							
Phenanthrene	< 0.10	0.10 µg/L							
Pyrene	< 0.02	0.02 µg/L							
Quinoline	< 0.10	0.10 µg/L							
Surrogate: Acridine-d9	2.81	µg/L	4.41		64	60-130			
Surrogate: Naphthalene-d8	4.20	µg/L	4.41		95	60-130			
Surrogate: Perylene-d12	5.20	µg/L	4.41		118	60-130			

**LCS (B6J1368-BS1)**

Prepared: 2016-10-22, Analyzed: 2016-10-24

Acenaphthene	4.60	0.05 µg/L	4.44		104	70-130			
Acenaphthylene	4.66	0.20 µg/L	4.44		105	70-130			
Acridine	4.13	0.10 µg/L	4.44		93	60-130			
Anthracene	4.54	0.01 µg/L	4.44		102	70-130			
Benz (a) anthracene	5.21	0.01 µg/L	4.44		117	70-130			
Benzo (a) pyrene	5.07	0.01 µg/L	4.44		114	70-130			
Benzo (b) fluoranthene	5.09	0.05 µg/L	4.44		115	70-130			
Benzo (g,h,i) perylene	5.19	0.05 µg/L	4.44		117	70-130			
Benzo (k) fluoranthene	5.06	0.05 µg/L	4.44		114	70-130			
Chrysene	5.08	0.05 µg/L	4.44		114	70-130			
Dibenz (a,h) anthracene	5.22	0.05 µg/L	4.44		117	70-130			
Fluoranthene	4.96	0.03 µg/L	4.44		112	70-130			
Fluorene	4.36	0.05 µg/L	4.44		98	70-130			
Indeno (1,2,3-cd) pyrene	4.89	0.05 µg/L	4.44		110	70-130			
Naphthalene	4.66	0.20 µg/L	4.44		105	70-130			
Phenanthrene	4.83	0.10 µg/L	4.44		109	70-130			
Pyrene	5.04	0.02 µg/L	4.44		113	70-130			
Quinoline	5.31	0.10 µg/L	4.44		119	70-130			
Surrogate: Acridine-d9	2.92	µg/L	4.44		66	60-130			

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Polycyclic Aromatic Hydrocarbons (PAH), Batch B6J1368, Continued**

**LCS (B6J1368-BS1), Continued**

Prepared: 2016-10-22, Analyzed: 2016-10-24

Surrogate: Naphthalene-d8	4.65	µg/L	4.44		105	60-130			
Surrogate: Perylene-d12	5.26	µg/L	4.44		118	60-130			

**LCS Dup (B6J1368-BSD1)**

Prepared: 2016-10-22, Analyzed: 2016-10-24

Acenaphthene	4.72	0.05 µg/L	4.44		106	70-130	3	20	
Acenaphthylene	4.75	0.20 µg/L	4.44		107	70-130	2	20	
Acridine	4.38	0.10 µg/L	4.44		99	60-130	6	20	
Anthracene	4.68	0.01 µg/L	4.44		105	70-130	3	20	
Benz (a) anthracene	5.11	0.01 µg/L	4.44		115	70-130	2	20	
Benzo (a) pyrene	5.24	0.01 µg/L	4.44		118	70-130	3	20	
Benzo (b) fluoranthene	5.04	0.05 µg/L	4.44		113	70-130	1	20	
Benzo (g,h,i) perylene	5.09	0.05 µg/L	4.44		114	70-130	2	20	
Benzo (k) fluoranthene	5.25	0.05 µg/L	4.44		118	70-130	4	20	
Chrysene	5.25	0.05 µg/L	4.44		118	70-130	3	20	
Dibenz (a,h) anthracene	4.78	0.05 µg/L	4.44		108	70-130	9	20	
Fluoranthene	5.31	0.03 µg/L	4.44		120	70-130	7	20	
Fluorene	4.47	0.05 µg/L	4.44		101	70-130	3	20	
Indeno (1,2,3-cd) pyrene	5.33	0.05 µg/L	4.44		120	70-130	9	20	
Naphthalene	4.75	0.20 µg/L	4.44		107	70-130	2	20	
Phenanthrene	5.00	0.10 µg/L	4.44		112	70-130	3	20	
Pyrene	5.04	0.02 µg/L	4.44		113	70-130	< 1	20	
Quinoline	5.15	0.10 µg/L	4.44		116	70-130	3	20	
Surrogate: Acridine-d9	3.05	µg/L	4.44		69	60-130			
Surrogate: Naphthalene-d8	4.64	µg/L	4.44		104	60-130			
Surrogate: Perylene-d12	5.30	µg/L	4.44		119	60-130			

**Total Metals, Batch B6J1564**

**Blank (B6J1564-BLK1)**

Prepared: 2016-10-25, Analyzed: 2016-10-25

Aluminum, total	< 0.005	0.005 mg/L							
Antimony, total	< 0.0001	0.0001 mg/L							
Arsenic, total	< 0.0005	0.0005 mg/L							
Barium, total	< 0.005	0.005 mg/L							
Beryllium, total	< 0.0001	0.0001 mg/L							
Bismuth, total	< 0.0001	0.0001 mg/L							
Boron, total	< 0.004	0.004 mg/L							
Cadmium, total	< 0.00001	0.00001 mg/L							
Calcium, total	< 0.2	0.2 mg/L							
Chromium, total	< 0.0005	0.0005 mg/L							
Cobalt, total	< 0.00005	0.00005 mg/L							
Copper, total	< 0.0002	0.0002 mg/L							
Iron, total	< 0.01	0.01 mg/L							
Lead, total	< 0.0001	0.0001 mg/L							
Lithium, total	< 0.0001	0.0001 mg/L							
Magnesium, total	< 0.01	0.01 mg/L							
Manganese, total	< 0.0002	0.0002 mg/L							
Molybdenum, total	< 0.0001	0.0001 mg/L							
Nickel, total	< 0.0002	0.0002 mg/L							
Phosphorus, total	< 0.02	0.02 mg/L							
Potassium, total	< 0.02	0.02 mg/L							
Selenium, total	< 0.0005	0.0005 mg/L							
Silicon, total	< 0.5	0.5 mg/L							
Silver, total	< 0.00005	0.00005 mg/L							
Sodium, total	< 0.02	0.02 mg/L							
Strontium, total	< 0.001	0.001 mg/L							
Sulfur, total	< 1	1 mg/L							

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Total Metals, Batch B6J1564, Continued**

**Blank (B6J1564-BLK1), Continued**

Prepared: 2016-10-25, Analyzed: 2016-10-25

Tellurium, total	< 0.0002	0.0002 mg/L							
Thallium, total	< 0.00002	0.00002 mg/L							
Thorium, total	< 0.0001	0.0001 mg/L							
Tin, total	< 0.0002	0.0002 mg/L							
Titanium, total	< 0.005	0.005 mg/L							
Uranium, total	< 0.00002	0.00002 mg/L							
Vanadium, total	< 0.001	0.001 mg/L							
Zinc, total	< 0.004	0.004 mg/L							
Zirconium, total	< 0.0001	0.0001 mg/L							

**Duplicate (B6J1564-DUP1)**

Source: 6101423-01

Prepared: 2016-10-25, Analyzed: 2016-10-25

Aluminum, total	4.53	0.005 mg/L		4.57			1	29	
Antimony, total	0.0005	0.0001 mg/L		0.0005			12	31	
Arsenic, total	0.0010	0.0005 mg/L		0.0010				15	
Barium, total	0.043	0.005 mg/L		0.041			5	9	
Beryllium, total	< 0.0001	0.0001 mg/L		< 0.0001				16	
Bismuth, total	< 0.0001	0.0001 mg/L		< 0.0001				20	
Boron, total	0.045	0.004 mg/L		0.055			20	29	
Cadmium, total	0.00003	0.00001 mg/L		0.00002				33	
Calcium, total	58.7	0.2 mg/L		58.6			< 1	12	
Chromium, total	0.0091	0.0005 mg/L		0.0097			7	12	
Cobalt, total	0.00244	0.00005 mg/L		0.00246			< 1	13	
Copper, total	0.0089	0.0002 mg/L		0.0090			< 1	37	
Iron, total	4.67	0.01 mg/L		4.68			< 1	18	
Lead, total	0.0021	0.0001 mg/L		0.0021			< 1	23	
Lithium, total	0.0022	0.0001 mg/L		0.0022			< 1	19	
Magnesium, total	13.5	0.01 mg/L		13.8			2	10	
Manganese, total	0.209	0.0002 mg/L		0.214			2	13	
Molybdenum, total	0.0010	0.0001 mg/L		0.0010			3	20	
Nickel, total	0.0081	0.0002 mg/L		0.0084			3	28	
Phosphorus, total	0.07	0.02 mg/L		0.10			39	24	
Potassium, total	2.23	0.02 mg/L		2.21			1	13	
Selenium, total	< 0.0005	0.0005 mg/L		< 0.0005				24	
Silicon, total	10.5	0.5 mg/L		10.9			4	11	
Silver, total	< 0.00005	0.00005 mg/L		< 0.00005				18	
Sodium, total	44.2	0.02 mg/L		44.7			1	10	
Strontium, total	0.288	0.001 mg/L		0.293			1	9	
Sulfur, total	41	1 mg/L		47			13	24	
Tellurium, total	< 0.0002	0.0002 mg/L		< 0.0002				20	
Thallium, total	< 0.00002	0.00002 mg/L		< 0.00002				24	
Thorium, total	0.0002	0.0001 mg/L		0.0002				18	
Tin, total	< 0.0002	0.0002 mg/L		< 0.0002				18	
Titanium, total	0.245	0.005 mg/L		0.238			3	32	
Uranium, total	0.00060	0.00002 mg/L		0.00060			< 1	14	
Vanadium, total	0.013	0.001 mg/L		0.012			2	17	
Zinc, total	0.013	0.004 mg/L		0.014				8	
Zirconium, total	0.0014	0.0001 mg/L		0.0021			38	60	

**Matrix Spike (B6J1564-MS1)**

Source: 6101423-02

Prepared: 2016-10-25, Analyzed: 2016-10-25

Antimony, total	0.419	0.0001 mg/L	0.400	0.0003	105	84-125			
Arsenic, total	0.216	0.0005 mg/L	0.200	< 0.0005	108	85-116			
Barium, total	1.11	0.005 mg/L	1.00	0.033	108	87-114			
Beryllium, total	0.0887	0.0001 mg/L	0.100	< 0.0001	89	72-116			
Cadmium, total	0.106	0.00001 mg/L	0.100	0.00002	106	90-112			
Chromium, total	0.430	0.0005 mg/L	0.400	0.0018	107	89-120			
Cobalt, total	0.426	0.00005 mg/L	0.400	0.00078	106	88-120			
Copper, total	0.431	0.0002 mg/L	0.400	0.0028	107	88-125			

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SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Total Metals, Batch B6J1564, Continued**

Matrix Spike (B6J1564-MS1), Continued	Source: 6101423-02		Prepared: 2016-10-25, Analyzed: 2016-10-25						
Iron, total	2.78	0.01 mg/L	2.00	0.57	111	88-119			
Lead, total	0.193	0.0001 mg/L	0.200	0.0004	96	89-118			
Manganese, total	0.495	0.0002 mg/L	0.400	0.0689	107	84-120			
Nickel, total	0.428	0.0002 mg/L	0.400	0.0024	106	87-119			
Selenium, total	0.0969	0.0005 mg/L	0.100	0.0005	96	85-113			
Silver, total	0.110	0.00005 mg/L	0.100	< 0.00005	110	89-119			
Thallium, total	0.0950	0.00002 mg/L	0.100	< 0.00002	95	92-119			
Vanadium, total	0.418	0.001 mg/L	0.400	0.002	104	87-117			
Zinc, total	1.05	0.004 mg/L	1.00	0.004	105	85-116			

Reference (B6J1564-SRM1)	Prepared: 2016-10-25, Analyzed: 2016-10-25								
Aluminum, total	0.325	0.005 mg/L	0.303		107	81-129			
Antimony, total	0.0497	0.0001 mg/L	0.0511		97	88-114			
Arsenic, total	0.122	0.0005 mg/L	0.118		104	88-114			
Barium, total	0.814	0.005 mg/L	0.823		99	72-104			
Beryllium, total	0.0451	0.0001 mg/L	0.0496		91	76-131			
Boron, total	3.32	0.004 mg/L	3.45		96	75-121			
Cadmium, total	0.0508	0.00001 mg/L	0.0495		103	89-111			
Calcium, total	10.5	0.2 mg/L	11.6		90	86-121			
Chromium, total	0.259	0.0005 mg/L	0.250		104	89-114			
Cobalt, total	0.0406	0.00005 mg/L	0.0377		108	91-113			
Copper, total	0.522	0.0002 mg/L	0.486		107	91-115			
Iron, total	0.53	0.01 mg/L	0.488		109	77-124			
Lead, total	0.191	0.0001 mg/L	0.204		94	92-113			
Lithium, total	0.357	0.0001 mg/L	0.403		89	85-115			
Magnesium, total	4.04	0.01 mg/L	3.79		107	78-120			
Manganese, total	0.112	0.0002 mg/L	0.109		103	90-114			
Molybdenum, total	0.191	0.0001 mg/L	0.198		96	90-111			
Nickel, total	0.261	0.0002 mg/L	0.249		105	90-111			
Phosphorus, total	0.25	0.02 mg/L	0.227		110	85-115			
Potassium, total	7.40	0.02 mg/L	7.21		103	84-113			
Selenium, total	0.114	0.0005 mg/L	0.121		94	85-115			
Sodium, total	7.69	0.02 mg/L	7.54		102	82-123			
Strontium, total	0.384	0.001 mg/L	0.375		102	88-112			
Thallium, total	0.0779	0.00002 mg/L	0.0805		97	91-114			
Uranium, total	0.0304	0.00002 mg/L	0.0306		99	85-120			
Vanadium, total	0.392	0.001 mg/L	0.386		101	86-111			
Zinc, total	2.59	0.004 mg/L	2.49		104	85-111			

**Total Metals, Batch B6J1664**

Blank (B6J1664-BLK1)	Prepared: 2016-10-25, Analyzed: 2016-10-26								
Mercury, total	< 0.00002	0.00002 mg/L							

Reference (B6J1664-SRM1)	Prepared: 2016-10-25, Analyzed: 2016-10-26								
Mercury, total	0.00431	0.00002 mg/L	0.00486		89	50-150			

**Volatile Organic Compounds (VOC), Batch B6J1531**

Blank (B6J1531-BLK1)	Prepared: 2016-10-24, Analyzed: 2016-10-24								
Benzene	< 0.5	0.5 µg/L							
Bromodichloromethane	< 1.0	1.0 µg/L							
Bromoform	< 1.0	1.0 µg/L							
Bromomethane	< 2.0	2.0 µg/L							
Carbon tetrachloride	< 1.0	1.0 µg/L							
Chlorobenzene	< 1.0	1.0 µg/L							

**APPENDIX 1: QUALITY CONTROL DATA**

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
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**Volatile Organic Compounds (VOC), Batch B6J1531, Continued**

**Blank (B6J1531-BLK1), Continued**

Prepared: 2016-10-24, Analyzed: 2016-10-24

Chloroethane	< 2.0	2.0 µg/L							
Chloroform	< 1.0	1.0 µg/L							
Chloromethane	< 2.0	2.0 µg/L							
Dibromochloromethane	< 1.0	1.0 µg/L							
1,2-Dibromoethane	< 0.3	0.3 µg/L							
Dibromomethane	< 1.0	1.0 µg/L							
1,2-Dichlorobenzene	< 0.5	0.5 µg/L							
1,3-Dichlorobenzene	< 1.0	1.0 µg/L							
1,4-Dichlorobenzene	< 1.0	1.0 µg/L							
1,1-Dichloroethane	< 1.0	1.0 µg/L							
1,2-Dichloroethane	< 1.0	1.0 µg/L							
1,1-Dichloroethene	< 1.0	1.0 µg/L							
cis-1,2-Dichloroethene	< 1.0	1.0 µg/L							
trans-1,2-Dichloroethene	< 1.0	1.0 µg/L							
1,2-Dichloropropane	< 1.0	1.0 µg/L							
cis-1,3-Dichloropropene	< 1.0	1.0 µg/L							
trans-1,3-Dichloropropene	< 1.0	1.0 µg/L							
Ethylbenzene	< 1.0	1.0 µg/L							
Methyl tert-butyl ether	< 1.0	1.0 µg/L							
Methylene chloride	< 3.0	3.0 µg/L							
Styrene	< 1.0	1.0 µg/L							
1,1,1,2-Tetrachloroethane	< 1.0	1.0 µg/L							
1,1,2,2-Tetrachloroethane	< 1.0	1.0 µg/L							
Tetrachloroethene	< 1.0	1.0 µg/L							
Toluene	< 1.0	1.0 µg/L							
1,1,1-Trichloroethane	< 1.0	1.0 µg/L							
1,1,2-Trichloroethane	< 1.0	1.0 µg/L							
Trichloroethene	< 1.0	1.0 µg/L							
Trichlorofluoromethane	< 1.0	1.0 µg/L							
Vinyl chloride	< 2.0	2.0 µg/L							
Xylenes (total)	< 2.0	2.0 µg/L							
Surrogate: Toluene-d8	23.5	µg/L	25.0		94	70-130			
Surrogate: 4-Bromofluorobenzene	21.3	µg/L	25.0		85	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	24.5	µg/L	25.0		98	70-130			

**LCS (B6J1531-BS1)**

Prepared: 2016-10-24, Analyzed: 2016-10-24

Benzene	24.0	0.5 µg/L	20.0		120	70-130			
Bromodichloromethane	22.6	1.0 µg/L	20.0		113	70-130			
Bromoform	24.9	1.0 µg/L	20.0		125	70-130			
Bromomethane	16.1	2.0 µg/L	20.0		81	70-130			
Carbon tetrachloride	22.8	1.0 µg/L	20.0		114	70-130			
Chlorobenzene	24.7	1.0 µg/L	20.0		124	70-130			
Chloroethane	17.3	2.0 µg/L	20.0		86	70-130			
Chloroform	23.3	1.0 µg/L	20.0		116	70-130			
Chloromethane	17.8	2.0 µg/L	20.0		89	70-130			
Dibromochloromethane	22.6	1.0 µg/L	20.0		113	70-130			
1,2-Dibromoethane	23.4	0.3 µg/L	20.0		117	70-130			
Dibromomethane	24.4	1.0 µg/L	20.0		122	70-130			
1,2-Dichlorobenzene	26.6	0.5 µg/L	20.0		133	70-130			SPK
1,3-Dichlorobenzene	24.7	1.0 µg/L	20.0		124	70-130			
1,4-Dichlorobenzene	25.8	1.0 µg/L	20.0		129	70-130			
1,1-Dichloroethane	23.1	1.0 µg/L	20.0		115	70-130			
1,2-Dichloroethane	22.9	1.0 µg/L	20.0		114	70-130			
1,1-Dichloroethene	21.4	1.0 µg/L	20.0		107	70-130			
cis-1,2-Dichloroethene	23.0	1.0 µg/L	20.0		115	70-130			
trans-1,2-Dichloroethene	22.9	1.0 µg/L	20.0		114	70-130			

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SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Analyte	Result	MRL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Notes
<b>Volatile Organic Compounds (VOC), Batch B6J1531, Continued</b>									
<b>LCS (B6J1531-BS1), Continued</b>					Prepared: 2016-10-24, Analyzed: 2016-10-24				
1,2-Dichloropropane	22.9	1.0 µg/L	20.0		114	70-130			
cis-1,3-Dichloropropene	21.6	1.0 µg/L	20.0		108	70-130			
trans-1,3-Dichloropropene	20.2	1.0 µg/L	20.0		101	70-130			
Ethylbenzene	21.0	1.0 µg/L	20.0		105	70-130			
Methyl tert-butyl ether	22.4	1.0 µg/L	20.0		112	70-130			
Methylene chloride	22.9	3.0 µg/L	20.0		115	70-130			
Styrene	22.0	1.0 µg/L	20.0		110	70-130			
1,1,1,2-Tetrachloroethane	22.3	1.0 µg/L	20.0		111	70-130			
1,1,2,2-Tetrachloroethane	24.3	1.0 µg/L	20.0		121	70-130			
Tetrachloroethene	21.2	1.0 µg/L	20.0		106	70-130			
Toluene	24.0	1.0 µg/L	20.0		120	70-130			
1,1,1-Trichloroethane	23.4	1.0 µg/L	20.0		117	70-130			
1,1,2-Trichloroethane	24.4	1.0 µg/L	20.0		122	70-130			
Trichloroethene	24.5	1.0 µg/L	20.0		123	70-130			
Trichlorofluoromethane	20.8	1.0 µg/L	20.0		104	70-130			
Vinyl chloride	18.9	2.0 µg/L	20.0		94	70-130			
Xylenes (total)	67.3	2.0 µg/L	60.0		112	70-130			
Surrogate: Toluene-d8	23.9	µg/L	25.0		96	70-130			
Surrogate: 4-Bromofluorobenzene	21.6	µg/L	25.0		87	70-130			
Surrogate: 1,4-Dichlorobenzene-d4	28.1	µg/L	25.0		112	70-130			

**QC Qualifiers:**

SPK The recovery of this analyte was outside of established control limits.

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

		6101423-01	6101423-02
		Water	Water
		2016-10-20	2016-10-20
		Weir (1)	SW-1 (2)
Anions	Chloride (mg/L)	74.1	96.2
	Fluoride (mg/L)	< 0.10	< 0.10
	Nitrate (as N) (mg/L)	0.418	1.07
	Nitrite (as N) (mg/L)	< 0.010	< 0.010
	Sulfate (mg/L)	97.1	173
General Parameters	Alkalinity, Total (as CaCO3) (mg/L)	39	63
	Alkalinity, Phenolphthalein (as CaCO3) (mg/	< 1	< 1
	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	39	63
	Alkalinity, Carbonate (as CaCO3) (mg/L)	< 1	< 1
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	< 1	< 1
	Chromium, Hexavalent (mg/L)	< 0.001	
	Colour, True (CU)	< 5	< 5
	Conductivity (EC) (uS/cm)	647	819
	pH (pH units)	7.58	7.62
	Solids, Total Dissolved (mg/L)	409	540
	Solids, Total Suspended (mg/L)	43	11
	Turbidity (NTU)	82.7	11.9
Calculated Parameters	Chromium, Trivalent (mg/L)	0.010	
	Hardness, Total (as CaCO3) (mg/L)	193	281
Dissolved Metals	Aluminum, dissolved (mg/L)	0.007	0.007
	Antimony, dissolved (mg/L)	0.0004	0.0003
	Arsenic, dissolved (mg/L)	< 0.0005	< 0.0005
	Barium, dissolved (mg/L)	0.016	0.030
	Beryllium, dissolved (mg/L)	< 0.0001	< 0.0001
	Bismuth, dissolved (mg/L)	< 0.0001	< 0.0001
	Boron, dissolved (mg/L)	0.053	0.047
	Cadmium, dissolved (mg/L)	< 0.00001	0.00001
	Calcium, dissolved (mg/L)	56.9	85.2
	Chromium, dissolved (mg/L)	0.0007	0.0006
	Cobalt, dissolved (mg/L)	0.00020	0.00030
	Copper, dissolved (mg/L)	0.0010	0.0015
	Iron, dissolved (mg/L)	< 0.010	< 0.010
	Lead, dissolved (mg/L)	< 0.0001	< 0.0001
	Lithium, dissolved (mg/L)	0.0002	0.0003
	Magnesium, dissolved (mg/L)	12.4	16.6
	Manganese, dissolved (mg/L)	0.137	0.0578
	Mercury, dissolved (mg/L)	< 0.00002	< 0.00002
	Molybdenum, dissolved (mg/L)	0.0010	0.0016
	Nickel, dissolved (mg/L)	0.0016	0.0016
	Phosphorus, dissolved (mg/L)	< 0.02	< 0.02
	Potassium, dissolved (mg/L)	1.75	2.32
	Selenium, dissolved (mg/L)	< 0.0005	0.0005
	Silicon, dissolved (mg/L)	2.4	4.3
	Silver, dissolved (mg/L)	< 0.00005	< 0.00005



**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

		6101423-01	6101423-02
		Water	Water
		2016-10-20	2016-10-20
		Weir (1)	SW-1 (2)
Dissolved Metals	Sodium, dissolved (mg/L)	44.5	46.4
	Strontium, dissolved (mg/L)	0.281	0.374
	Sulfur, dissolved (mg/L)	47	66
	Tellurium, dissolved (mg/L)	< 0.0002	< 0.0002
	Thallium, dissolved (mg/L)	< 0.00002	< 0.00002
	Thorium, dissolved (mg/L)	< 0.0001	< 0.0001
	Tin, dissolved (mg/L)	< 0.0002	< 0.0002
	Titanium, dissolved (mg/L)	< 0.005	< 0.005
	Uranium, dissolved (mg/L)	0.00047	0.00091
	Vanadium, dissolved (mg/L)	< 0.001	< 0.001
	Zinc, dissolved (mg/L)	< 0.004	< 0.004
	Zirconium, dissolved (mg/L)	< 0.0001	< 0.0001
	Total Metals	Aluminum, total (mg/L)	4.57
Antimony, total (mg/L)		0.0005	0.0003
Arsenic, total (mg/L)		0.0010	< 0.0005
Barium, total (mg/L)		0.041	0.033
Beryllium, total (mg/L)		< 0.0001	< 0.0001
Bismuth, total (mg/L)		< 0.0001	< 0.0001
Boron, total (mg/L)		0.055	0.052
Cadmium, total (mg/L)		0.00002	0.00002
Calcium, total (mg/L)		58.6	85.5
Chromium, total (mg/L)		0.0097	0.0018
Cobalt, total (mg/L)		0.00246	0.00078
Copper, total (mg/L)		0.0090	0.0028
Iron, total (mg/L)		4.68	0.57
Lead, total (mg/L)		0.0021	0.0004
Lithium, total (mg/L)		0.0022	0.0005
Magnesium, total (mg/L)		13.8	16.1
Manganese, total (mg/L)		0.214	0.0689
Mercury, total (mg/L)		< 0.00002	< 0.00002
Molybdenum, total (mg/L)		0.0010	0.0016
Nickel, total (mg/L)		0.0084	0.0024
Phosphorus, total (mg/L)		0.10	0.02
Potassium, total (mg/L)		2.21	2.29
Selenium, total (mg/L)		< 0.0005	< 0.0005
Silicon, total (mg/L)		10.9	4.9
Silver, total (mg/L)		< 0.00005	< 0.00005
Sodium, total (mg/L)		44.7	44.6
Strontium, total (mg/L)		0.293	0.366
Sulfur, total (mg/L)		47	65
Tellurium, total (mg/L)		< 0.0002	< 0.0002
Thallium, total (mg/L)		< 0.00002	< 0.00002
Thorium, total (mg/L)		0.0002	< 0.0001
Tin, total (mg/L)		< 0.0002	< 0.0002
Titanium, total (mg/L)		0.238	0.028

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

		6101423-01	6101423-02
		Water	Water
		2016-10-20	2016-10-20
		Weir (1)	SW-1 (2)
Total Metals	Uranium, total (mg/L)	0.00060	0.00094
	Vanadium, total (mg/L)	0.012	0.002
	Zinc, total (mg/L)	0.014	0.004
	Zirconium, total (mg/L)	0.0021	0.0003
BCMOE Aggregate Hydrocarbons	EPHw10-19 (ug/L)	< 250	< 250
	EPHw19-32 (ug/L)	< 250	< 250
	LEPHw (ug/L)	< 250	< 250
	HEPHw (ug/L)	< 250	< 250
	Sur: 2-Methylnonane (%)	85	92
Glycols	Propylene glycol (mg/L)	< 5	< 5
	Ethylene glycol (mg/L)	< 5	< 5
	Diethylene glycol (mg/L)	< 5	< 5
	Triethylene glycol (mg/L)	< 5	< 5
	Sur: Tetramethylene Glycol (%)	105	100
Polycyclic Aromatic Hydrocarbons (PAH)	Acenaphthene (ug/L)	< 0.05	< 0.05
	Acenaphthylene (ug/L)	< 0.20	< 0.20
	Acridine (ug/L)	< 0.10	< 0.10
	Anthracene (ug/L)	< 0.01	< 0.01
	Benz (a) anthracene (ug/L)	< 0.01	< 0.01
	Benzo (a) pyrene (ug/L)	< 0.01	< 0.01
	Benzo (b) fluoranthene (ug/L)	< 0.05	< 0.05
	Benzo (g,h,i) perylene (ug/L)	< 0.05	< 0.05
	Benzo (k) fluoranthene (ug/L)	< 0.05	< 0.05
	Chrysene (ug/L)	< 0.05	< 0.05
	Dibenz (a,h) anthracene (ug/L)	< 0.05	< 0.05
	Fluoranthene (ug/L)	< 0.03	< 0.03
	Fluorene (ug/L)	< 0.05	< 0.05
	Indeno (1,2,3-cd) pyrene (ug/L)	< 0.05	< 0.05
	Naphthalene (ug/L)	< 0.20	< 0.20
	Phenanthrene (ug/L)	< 0.10	< 0.10
	Pyrene (ug/L)	< 0.02	< 0.02
	Quinoline (ug/L)	< 0.10	< 0.10
	Sur: Acridine-d9 (%)	72	71
	Sur: Naphthalene-d8 (%)	110	107
Sur: Perylene-d12 (%)	119	119	
Volatile Organic Compounds (VOC)	Benzene (ug/L)	< 0.5	< 0.5
	Bromodichloromethane (ug/L)	< 1.0	< 1.0
	Bromoform (ug/L)	< 1.0	< 1.0
	Bromomethane (ug/L)	< 2.0	< 2.0
	Carbon tetrachloride (ug/L)	< 1.0	< 1.0
	Chlorobenzene (ug/L)	< 1.0	< 1.0
	Chloroethane (ug/L)	< 2.0	< 2.0
	Chloroform (ug/L)	< 1.0	< 1.0
	Chloromethane (ug/L)	< 2.0	< 2.0
	Dibromochloromethane (ug/L)	< 1.0	< 1.0

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

		6101423-01	6101423-02
		Water	Water
		2016-10-20	2016-10-20
		Weir (1)	SW-1 (2)
Volatile Organic Compounds (VOC)	1,2-Dibromoethane (ug/L)	< 0.3	< 0.3
	Dibromomethane (ug/L)	< 1.0	< 1.0
	1,2-Dichlorobenzene (ug/L)	< 0.5	< 0.5
	1,3-Dichlorobenzene (ug/L)	< 1.0	< 1.0
	1,4-Dichlorobenzene (ug/L)	< 1.0	< 1.0
	1,1-Dichloroethane (ug/L)	< 1.0	< 1.0
	1,2-Dichloroethane (ug/L)	< 1.0	< 1.0
	1,1-Dichloroethene (ug/L)	< 1.0	< 1.0
	cis-1,2-Dichloroethene (ug/L)	< 1.0	< 1.0
	trans-1,2-Dichloroethene (ug/L)	< 1.0	< 1.0
	1,2-Dichloropropane (ug/L)	< 1.0	< 1.0
	cis-1,3-Dichloropropene (ug/L)	< 1.0	< 1.0
	trans-1,3-Dichloropropene (ug/L)	< 1.0	< 1.0
	Ethylbenzene (ug/L)	< 1.0	< 1.0
	Methyl tert-butyl ether (ug/L)	< 1.0	< 1.0
	Methylene chloride (ug/L)	< 3.0	< 3.0
	Styrene (ug/L)	< 1.0	< 1.0
	1,1,1,2-Tetrachloroethane (ug/L)	< 1.0	< 1.0
	1,1,2,2-Tetrachloroethane (ug/L)	< 1.0	< 1.0
	Tetrachloroethene (ug/L)	< 1.0	< 1.0
	Toluene (ug/L)	< 1.0	< 1.0
	1,1,1-Trichloroethane (ug/L)	< 1.0	< 1.0
	1,1,2-Trichloroethane (ug/L)	< 1.0	< 1.0
	Trichloroethene (ug/L)	< 1.0	< 1.0
	Trichlorofluoromethane (ug/L)	< 1.0	< 1.0
	Vinyl chloride (ug/L)	< 2.0	< 2.0
	Xylenes (total) (ug/L)	< 2.0	< 2.0
	Sur: Toluene-d8 (%)	97	97
	Sur: 4-Bromofluorobenzene (%)	87	85
	Sur: 1,4-Dichlorobenzene-d4 (%)	98	98

**REPORTED TO PROJECT** Allterra Construction  
SIRM 460 Stebbings

**WORK ORDER REPORTED** 6101423  
2016-10-26

Sample ID	Changed	Change	Analysis	Analyte(s)
6101423-02	2016-10-26	Added	Chromium, total by ICPMS	

Client Information	Project Information	Laboratory Information	COC Information
Allterra Construction 2158 Millstream Road Victoria BC V9B 6H4 Phone: (250) 508-0726	SIRM 460 Stebbings Number: [none] Sample count: 2 TAT: 3	CARO Analytical Services #110 - 4011 Viking Way Richmond BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: B33070 Shipped via: Harbour Air

#	Sample Information	Analyses	Containers
#1	1 (Template: 01) 10/20/2016 07:45 Grab / Water <i>Wet</i>	<b>Analyses</b> Alkalinity, all (KEL) TAT: 3 Anions in Water by IC, 5 Analytes (KEL) TAT: 3 Colour, True - 456 nm (KEL) TAT: 3 Conductivity in Water (KEL) TAT: 3 Glycols in Water (RMD) TAT: 3 L/HEPH in Water (RMD) TAT: 3 Mercury, diss CVAFS Reg & Low (RMD) TAT: 3 Mercury, total CVAFS Reg & Low (RMD) TAT: 3 Metals, dissolved, All, Low (RMD) TAT: 3 Metals, total, All, Low (RMD) TAT: 3 Comments: Chromium Speciation Requested pH in Water (KEL) TAT: 3 Solids, Total Dissolved (KEL) TAT: 3 Solids, Total Suspended (KEL) TAT: 3 Turbidity (KEL) TAT: 3 VOC in Water (RMD) TAT: 3	<b>Containers</b> C03_250 mL Glass (EPH/PAH) C04_40 mL Vial (VOC Water) C05_125 mL Plastic (Metals) C06_40 mL Vial (Mercury) C10_125 mL Plastic (H2SO4) C11_1 L Plastic (General) C19_40 mL Vial (General CG) S05_125 mL Plastic (Metals-F) S06_40 mL Vial (Mercury-F) S08_250 mL Plastic (NaOH)
#2	2 (Template: 01) 10/20/2016 08:00 Grab / Water <i>Sw-1</i>	<b>Analyses</b> Alkalinity, all (KEL) TAT: 3 Anions in Water by IC, 5 Analytes (KEL) TAT: 3 Colour, True - 456 nm (KEL) TAT: 3 Conductivity in Water (KEL) TAT: 3 Glycols in Water (RMD) TAT: 3 L/HEPH in Water (RMD) TAT: 3 Mercury, diss CVAFS Reg & Low (RMD) TAT: 3 Mercury, total CVAFS Reg & Low (RMD) TAT: 3 Metals, dissolved, All, Low (RMD) TAT: 3 Metals, total, All, Low (RMD) TAT: 3 pH in Water (KEL) TAT: 3 Solids, Total Dissolved (KEL) TAT: 3 Solids, Total Suspended (KEL) TAT: 3 Turbidity (KEL) TAT: 3 VOC in Water (RMD) TAT: 3	<b>Containers</b> C03_250 mL Glass (EPH/PAH) C04_40 mL Vial (VOC Water) C05_125 mL Plastic (Metals) C06_40 mL Vial (Mercury) C10_125 mL Plastic (H2SO4) C11_1 L Plastic (General) C19_40 mL Vial (General CG) S05_125 mL Plastic (Metals-F) S06_40 mL Vial (Mercury-F)



#	Accepted by	Date/Time
	NOVEX TC	10/20
	10.62	16:30