

From: SPOMO1701@outlook.com
To: Environmental.Compliance ENV:EX; marty@chholdings.ca
Subject: SPO MO1701-Status Update November 30, 2018
Date: Friday, November 30, 2018 9:28:24 PM
Attachments: [Nov 30, 2018 CHH Progress Report.pdf](#)
[CHH-October 2018 COA.pdf](#)
[CHH-October 2018 COA.xlsx](#)
[CHH_November 2018 COA.xlsx](#)
[CHH-November 2018 COA.pdf](#)
[OCT-Nov 2018-CHH SUBMITTAL-Surface Water Quality DATA-CLOSURE PLAN.pdf](#)
[OCT-Nov 2018-CHH SUBMITTAL-Ground Water Quality DATA-CLOSURE PLAN.pdf](#)

- ***Please find information regarding the Leachate reporting requirements for the November 30, 2018 reporting period as per SPILL PREVENTION ORDER : MO1701 Section 1d***

Total Leachate Collected= 4.88 m³

Total Leachate Stored= 48.98 m³

Total Leachate Transported= 0 m³

- ***Sampling was conducted on November 14, 2018 as per Section 6biii of File 311372 August 11, 2017 letter. Tabulated laboratory results and COA's for October 2018 and November 2018 are attached.***

Sampling Summary:

1. *SHA-SW1*
2. *SHA-SW2*
3. *MW6*
4. *MW3*
5. *MW2*
6. *SHA-LE-1*
7. *SHA-LD-1 (Dry)*
8. *SB-1*
9. *SB-2*
10. *SB-3*

- ***Attached is the QP Progress Report for November 30, 2018 as per File 311372 August 11, 2017 letter.***

Thank you



FIELD REVIEW REPORT		DATE: Nov 30, 2018	ISLANDER PROJECT No.: 2087
REPORT No: 33	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Cloud 7°C	PAGE: 1 of 3
PROJECT: Cobble Hill Landfill 2017 Minor Construction Works			
TO: CHH	ATTENTION: Marty Block		
CC:			

The field review included the inspection of the following items included in the detailed summary of works section of the *Cobble Hill Landfill — 2017 Minor Construction Works, Detailed Construction Plan (Sperling Hansen Associates, September 13, 2017)*:

- **PEA**
 - Liner appears to be in good condition, with no noticeable changes since the date of our last inspection
- **Leachate and Leak Detention facility**
 - Total leachate collected: = 4.88 m³
 - Total leachate stored = 48.98 m³
 - Total leachate transported = 0 m³
- **Soil Management Area (SMA)**
 - All works are in good condition and no noticeable changes since the date of our last inspection
- **Contact Water Containment Pond**
 - All works are in good condition and no noticeable changes since the date of our last inspection
- **cut-off ditch upland of PEA**
 - All works are in good condition, ditch still performing well.

ISLANDER ENGINEERING LTD.

Mike Achtem, P.Eng



FIELD REVIEW REPORT		DATE: Nov 30, 2018	ISLANDER PROJECT No.: 2087
REPORT No: 33	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Cloud 7°C	PAGE: 2 of 3



SMA - looking south



SMA – looking north



Contact water containment Pond



Leak and leachate detection works



FIELD REVIEW REPORT		DATE: Nov 30, 2018	ISLANDER PROJECT No.: 2087
REPORT No: 33	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Cloud 7°C	PAGE: 3 of 3



PEA – liner near NE corner



PEA– NW corner



Cut-off ditch upland of PEA



PEA north face

Table 1: Analytical Results for Nutrients			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1	SHA-SW-2
Laboratory ID			8102642-08	8111294-08	8111294-09	8102642-09	8111294-10
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	Leachate Post Treatment	Leachate Post Treatment	SW1	SW1	SW2
Date Sampled/Time			2018-10-29	2018-11-14	2018-11-14	2018-10-29	2018-11-14
Physical Tests							
Colour, True (Colour Units)	15 TCU	15 ⁽¹⁾ units absolute, or 5 units above background (30-day average)	5.3	<5.0	<5.0	<5.0	11
Total Dissolved Solids (mg/L)	-	-	-	-	-	-	-
Total Suspended Solids (mg/L)	-	25 mg/L above background (24-hr during clear flow)	2	4.4	3	<2.0	<2.0
pH	7-10.5	6.5-9	6.83	6.9	7.45	7.61	6.36
Conductivity (uS/cm)	-	-	13000	12500	314	476	33.5
Hardness (as CaCO3)	-	-	3210	2930	134	202	10.3
Turbidity (NTU)	Δ1 NTU	8 NTU above background (24-hr during clear flow)	1.9	0.5	8.13	1.69	2.26
Anions and Nutrients mg/L							
Alkalinity Total (as CaCO3)	<10 high sensitivity to acid inputs 10-20 moderate sensitivity to acid inputs >20 low sensitivity to acid inputs		25	29.6	66.8	71.9	5.6
Acid Sensitivity			Low	Low	Low	Low	Low
Chloride (Cl)	250 mg/L	600 mg/L (instant max), 150 mg/L (30-day average)	3460	3260	7.58	11.7	1.66
Fluoride (F)	1.5 mg/L (instant max) 1.0 mg/L (30-day average)	0.4 (Hardness <10mg/L)	<1.00	<0.10	<0.10	<0.10	<0.10
		Hardness-Dependent AW (Hardness is >10mg/L) ⁽³⁾	0.26	0.26	0.29	0.30	0.23
Nitrate (as N)	45 mg/L	32.8 mg/L (instant maximum) 3.0 mg/L (30-day average)	1.9	1.78	0.395	0.556	0.034
Nitrite (as N) ⁽²⁾	3 mg/L	Cl > 10 mg/L 0.6 mg/L (MAX), 0.2 mg/L (30-day average)	<0.100	<0.010	<0.010	<0.010	<0.010
Sulfate (SO4) H 0-30 mg/L	500 mg/L	128 mg/L 30-day average)					5.9
H 31 - 75 mg/L		218 mg/L (30-day average)					
H 76 - 180 mg/L		309 mg/L (30-day average)			91.6		
H 181 - 250 mg/L		429 mg/L (30-day average)				136	
H > 250 mg/L		TBD		1820	1870		

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1	SHA-SW-2
Laboratory ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	8102642-08	8111294-08	8111294-09	8102642-09	8111294-10
Sample ID			Leachate Post Treatment	Leachate Post Treatment	SW1	SW1	SW2
Date Sampled/Time			2018-10-29	2018-11-14	2018-11-14	2018-10-29	2018-11-14
Physical Tests							
Hardness (as CaCO3) (mg/L)	-	-	3210	2930	134	202	10.3
pH	7-10.5	6.5-9	6.83	6.9	7.45	7.61	6.36
Total Metals (mg/L)							
Aluminum (Al)-Total	0.2	-	0.0332	0.0189	0.196	0.0472	0.176
Antimony (Sb)-Total	-	-	<0.00020	0.00032	0.00021	0.00024	<0.00020
Arsenic (As)-Total	0.01	0.005	0.00052	0.00056	<0.00050	<0.00050	<0.00050
Barium (Ba)-Total	-	-	0.0379	0.0363	0.0095	0.013	0.0051
Beryllium (Be)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth, total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Total	5	1.2	0.307	0.254	0.0142	0.0199	<0.0050
Cadmium (Cd)-Total	-	-	0.000325	0.000348	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	-	-	926	877	46.3	70.1	3.27
Chromium (Cr)-Total Chromium	-	-	0.00068	0.00066	0.00058	<0.00050	<0.00050
Chromium (Cr(III))	-	-	-	-	<0.00100	<0.00100	<0.00150
Chromium (Cr(VI))	-	-	-	-	<0.0010	<0.0010	<0.0015
Cobalt (Co)-Total	-	0.110 (Short Term), 0.004 (Long Term Average)	0.00106	0.00133	0.00018	<0.00010	0.00012
Copper (Cu)-Total	0.5	Hardness-Dependent ⁽¹⁾	0.00163	0.00202	0.00216	0.00143	0.00123
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (instant)	0.3037	0.2774	0.0146	0.0210	0.0030
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (30-d average)	0.1284	0.1172	0.0054	0.0081	0.0020
Iron (Fe)-Total	-	1	0.024	<0.010	0.224	0.047	0.087
Lead (Pb)-Total	0.01	Hardness-Dependent ⁽¹⁾	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (instant max)	6.7563	6.0152	0.1185	0.1998	0.0045
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (30-d average)	0.2669	0.2379	0.0079	0.0111	0.0035
Lithium (Li)-Total	-	-	0.0004	0.00025	0.00021	0.0003	<0.00010
Magnesium (Mg)-Total	-	-	253	241	6.54	9.28	0.764
Manganese (Mn)-Total	-	Hardness-Dependent ⁽¹⁾	6.38	7.67	0.00697	0.00386	0.00385
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (instant max)	35.9	32.8	2.0	2.8	0.7
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (30-d average)	14.7	13.5	1.2	1.5	0.7
Mercury (Hg)-Total	0.001	0.00002	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	0.25	≤1 (instant max) 2 (30-d average)	0.00024	0.00028	0.00083	0.00096	<0.00010
Nickel (Ni)-Total	-	0.025 (Hardness-Dependent ⁽¹⁾ BCAWQG to protect AW H=60mg/l)	0.00496	0.00525	0.00082	0.00067	0.00056
		Calculated Hardness-Dependent ⁽¹⁾ BCAWQG to protect AW 60SHS180 mg/L CaCO3	1.333	1.244	0.119	0.163	0.025
Phosphorus(P)-Total	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	-	-	33.4	32.2	0.74	0.77	0.29
Selenium (Se)-Total	0.01	0.002	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)-Total	-	-	5	5.8	5.1	4.7	3
Silver (Ag)-Total	-	HARDNESS <100mg/L 0.0001 (SHORT TERM), 0.00005 (LONG TERM), HARDNESS >100mg/L 0.003 (SHORT TERM), 0.0015 (LONG TERM)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Total	-	-	1800	1720	6.87	8.85	1.46
Strontium (Sr)-Total	-	-	4.74	4.36	0.126	0.177	0.0146
Sulfur (S)-Total	-	-	717	674	33.2	48.7	5.2
Tellurium (Te)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Total	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Thorium (Th)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	-	-	0.00164	0.00242	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	-	-	<0.0050	<0.0050	0.0086	<0.0050	<0.0050
Uranium (U)-Total	-	-	0.000045	0.000054	0.000542	0.000752	<0.000020
Vanadium (V)-Total	-	-	<0.0010	<0.0010	0.0015	0.0011	<0.0010
Zinc (Zn)-Total	5.0	Hardness >90 mg/L	0.0227	0.0606	<0.0040	0.0061	<0.0040
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (instant max)	2.373	2.163	0.066	0.117	0.033
		Hardness-Dependent BCAWQG to protect AW ⁽¹⁾ (30-d average)	2.348	2.138	0.041	0.092	0.008
Zirconium (Zr)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	0.00011

Table 3: Analytical Results for Dissolved Metals			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1	SHA-SW-2
Laboratory ID			8102642-08	8111294-08	8111294-09	8102642-09	8111294-10
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	Leachate Post Treatment	Leachate Post Treatment	SW1	SW1	SW2
Date Sampled/Time			2018-10-29	2018-11-14	2018-11-14	2018-10-29	2018-11-14
Physical Tests							
Hardness (as CaCO3) (mg/L)	-	-	3210	2930	134	202	10.3
pH	7-10.5	6.5-9	6.83	6.9	7.45	7.61	6.36
Dissolved Metals (mg/L)							
Aluminum (Al)-Dissolved	-	0.05 (30-day average where median pH > 6.5) 0.1 (maximum where instantaneous pH > 6.5) *** indicates pH-dependent maximum where instant pH ≤ 6.5	0.0079	0.0114	<0.0050	<0.0050	0.0903
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (instant max)	0.133	0.147	0.371	0.502	0.071
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (30-d Mean)	0.093	0.109	0.417	0.645	0.037
Antimony (Sb)-Dissolved	-	-	<0.00020	<0.00020	<0.00020	0.00022	<0.00020
Arsenic (As)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Dissolved	-	-	0.0339	0.0338	0.0078	0.0115	<0.0050
Beryllium (Be)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Dissolved	-	-	0.282	0.259	0.0151	0.0181	<0.0050
Cadmium (Cd)-Dissolved	-	Hardness-Dependent ⁽³⁾	0.000321	0.000343	<0.000010	0.000012	<0.000010
		Calculated Hardness-Dependent ⁽³⁾ BCAWQG to protect AW (short-term max) $e[1.03 * \ln(Hss) - 5.274]$ ug/L H<455mg/L	Hardness exceeds 455mg/L	Hardness exceeds 455mg/L	0.00080	0.00121	0.00006
		Calculated Hardness-Dependent BCAWQG to protect AW ⁽³⁾ (long-term max) $e[0.736 * \ln(Hss) - 4.943]$ ug/L H<285mg/L	Hardness exceeds 285mg/L	Hardness exceeds 285mg/L	0.00026	0.00035	0.00004
Calcium (Ca)-Dissolved	-	up to 4, highly sensitive to acid inputs 4 to 8, moderately sensitive over 8 low sensitivity	882	795	43.6	66.1	3.01
Chromium (Cr)-Dissolved	-	-	0.00063	0.00058	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	-	-	0.00104	0.00121	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	-	-	0.00139	0.00178	0.00126	0.00119	0.00084
Iron (Fe)-Dissolved	-	0.35	<0.010	<0.010	<0.010	<0.010	0.018
Lead (Pb)-Dissolved	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Lithium, dissolved	-	-	0.00026	0.00022	0.0001	0.00016	<0.00010
Magnesium (Mg)-Dissolved	-	-	245	229	5.99	8.93	0.674
Manganese (Mn)-Dissolved	-	-	6.18	7.12	0.00183	0.00228	0.0024
Mercury (Hg)-Dissolved	-	-	<0.000010	<0.000040	<0.000040	<0.000010	<0.000040
Molybdenum (Mo)-Dissolved	-	-	0.00023	0.00025	0.00082	0.00099	<0.00010
Nickel (Ni)-Dissolved	-	-	0.00475	0.00498	<0.00040	0.00059	<0.00040
Phosphorus (P)-Dissolved	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	-	-	33.2	29.3	0.67	0.74	0.26
Selenium (Se)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)-Dissolved	-	-	5	5.1	4.4	4.5	2.7
Silver (Ag)-Dissolved	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Dissolved	-	-	1740	1640	6.54	8.56	1.33
Strontium (Sr)-dissolved	-	-	4.32	3.95	0.118	0.163	0.0133
Sulfur (S)-Dissolved	-	-	709	643	30.9	45.4	4.7
Tellurium (Te)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Dissolved	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Thorium (Th)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	-	-	0.00148	0.00217	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Dissolved	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Uranium (U)-Dissolved	-	-	0.000042	0.00005	0.000502	0.000701	<0.000020
Vanadium (V)-Dissolved	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	-	-	0.0199	0.0544	<0.0040	<0.0040	<0.0040
Zirconium (Zr)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Refer to Table Endnotes (attached)

Table 4: Analytical Results for Hydrocarbons and PAHs			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1	SHA-SW-2
Laboratory ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	8102642-08	8111294-08	8111294-09	8102642-09	8111294-10
Sample ID			Leachate Post Treatment	Leachate Post Treatment	SW1	SW1	SW2
Date Sampled/ Time			2018-10-29	2018-11-14	2018-11-14	2018-10-29	2018-11-14
Hydrocarbons ug/L							
LEPH	-	-	<250	<250	<250	<250	<250
HEPH	-	-	<250	<250	<250	<250	<250
Polycyclic Aromatic							
Acenaphthene	-	6 (LONG TERM)	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	-	3 (LONG TERM), 0.05 (PHOTOTOXIC)	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	-	4 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	0.01	0.1 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	-	0.01 (LONG TERM)	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	-	-	-	-	-	-	-
Benzo(b+)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
2-Chloronaphthalene			<0.100	<0.100	<0.100	<0.100	<0.164
Chrysene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	-	-	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	-	4 (LONG TERM), 0.2 (PHOTOTOXIC)	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	-	12 (LONG TERM)	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene			<0.100	<0.100	<0.100	<0.100	<0.100
2-Methylnaphthalene			<0.100	<0.100	<0.100	<0.100	<0.100
Naphthalene	-	1 (LONG TERM)	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	-	0.3 (LONG TERM)	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	-	0.02 (PHOTOTOXIC)	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	-	-	<0.050	<0.050	<0.050	<0.050	<0.050

Notes: Refer to Table Endnotes (attached)

Analytical Table Footnotes: Leachate and Surface Water

All concentrations in mg/L, except pH or as indicated.

"<" less than the laboratory detection limit indicated.

"-" means not analyzed or no standard or guideline applies.

* RPDs are not normally calculated where one or more concentrations are less than five times RDL.

(1) Guideline of 15 mg/L Pt for Drinking Water. Once background levels are established, colour should also not exceed 5 mg/L above background, to protect for Aquatic Life. This is considered a clearwater system (background less than 20 mg/L Pt.)

(2) Nitrite BCAWWQG Guideline is Chloride dependent

(3) Standard is calculated based on the hardness dependent BCAWWQG formula, and has been calculated and shown for each individual result

(4) pH-dependent maximum where instant pH < 6.5

BOLD, UNDERLINE

Laboratory Detection Limit exceeds one or more applicable Standard

BOLD, BLUE SHADING

Concentration greater than BCAWWQG Guideline

BOLD, BEIGE SHADING

Concentration greater than BCAWWQG Chronic Guideline

BOLD, GREEN SHADING

Concentration greater than BC Ministry of Environment Drinking Water Sources

RED FONT

Concentration less than laboratory detection limit (Formula 0.5MRL utilized for statistical analysis)

Table 1: Analytical Results for Nutrients

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB-1	SB-1	SB2	SB2	SB-3	SB-3
	As-built Well Depths		47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m	3.53m	3.53m
Sample ID			8102642-01	8111294-01	8102642-02	8111294-02	8102642-03	8111294-03	8102642-04	8111294-04	8102642-05	8111294-05	8102642-06	8111294-06	8102642-07	8111294-07
			MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2	SB3	SB3
Date Sampled	Aquatic Life	Drinking Water	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14
Physical Tests																
Colour, True (TCU)	-	-	7.3	5.1	<5.0	<5.0	6.4	5.9	8.3	5.2	<5.0	<5.0	<5.0	<5.0	9	<5.0
Conductivity (uS/cm)	-	-	1320	1220	373	343	258	238	292	285	167	91.9	392	310	82	165
Hardness (as CaCO3) mg/L	-	-	568	520	147	134	103	94.2	126	115	64.8	34	157	122	29.7	64.3
pH (pH Units)	-	-	7.3	7.17	7.75	7.63	7.77	7.67	7.88	7.77	7.37	6.97	7.21	6.82	6.98	7.13
Total Suspended Solids mg/L	-	-	14.3	6	13.7	7.2	12.4	7.8	21	18.2	105	49	47	28.4	428	138
Total Dissolved Solids mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity (NTU)	-	-	31.5	26.8	7.72	4.19	11.2	6.91	20.5	18.2	66	21.5	55.4	28.5	388	121
Anions and Nutrients mg/L																
Alkalinity, Total (as CaCO3)	-	-	631	643	131	131	106	110	128	131	10.8	10.3	70.2	94.9	6.5	29.4
Chloride (Cl)	1500	250	39	36.8	14.4	14.2	2.67	2.58	5.69	5.59	0.58	0.37	13.5	17.7	0.63	1.42
Fluoride (F)	2 (H < 50)	1.5										<0.10			<0.10	
	3 (H ≥ 50)		0.17	<0.10	<0.10	<0.10	0.12	<0.10	0.11	<0.10	<0.10		<0.10	<0.10		<0.10
Nitrate (as N)	400	10	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.311	0.137	0.609	0.246	0.084	0.315
Nitrite (as N) ⁽¹⁾ Cl <2 mg/L	0.2										<0.010	<0.010			<0.010	<0.010
Cl 2 - <4 mg/L	0.4						<0.010	<0.010								
Cl 4 - <6 mg/L	0.6								<0.010	<0.010						
Cl 6 - <8 mg/L	0.8															
Cl 8 - <10 mg/L	1	3.2														
Cl ≥ 10 mg/L	2		<0.010	<0.010	<0.010	<0.010							<0.010	<0.010		
Sulfate (SO4)	1000	500	73.9	77	38.4	40.5	20.2	20.3	16.1	17.9	55.7	33	91.6	49	24.5	51.9

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB-1	SB-1	SB2	SB2	SB-3	SB-3
			47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m	3.53m	3.53m
As-built Well Depths			8102642-01	8111294-01	8102642-02	8111294-02	8102642-03	8111294-03	8102642-04	8111294-04	8102642-05	8111294-05	8102642-06	8111294-06	8102642-07	8111294-07
Sample ID			MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2	SB3	SB3
Date Sampled	Aquatic Life	Drinking Water	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14
Physical Tests mg/L																
Hardness (as CaCO3)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals mg/L																
Aluminum (Al)-Total			0.11	0.132	0.0977	0.0476	0.0599	0.0689	0.254	0.556	1.84	0.915	1.46	0.78	9.65	3.7
Antimony (Sb)-Total			0.0007	0.00084	0.00024	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total			0.00484	0.00524	0.00117	0.00124	0.00138	0.00152	0.00199	0.00231	<0.00050	<0.00050	<0.00050	<0.00050	0.00103	0.00078
Barium (Ba)-Total			0.0906	0.0907	0.0354	0.0315	0.0215	0.0208	0.0325	0.0341	0.0171	0.0074	0.0139	0.0087	0.042	0.0184
Beryllium (Be)-Total			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010
Bismuth (Bi)-Total			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Total			0.0711	0.0703	0.0211	0.0181	0.0225	0.0219	0.0234	0.0227	<0.0050	<0.0050	0.0206	0.0137	0.0076	0.0104
Cadmium (Cd)-Total			0.000036	0.000078	0.000184	0.000118	0.000106	0.000097	0.000016	0.000051	0.000023	<0.000010	0.000012	<0.000010	0.000043	0.00002
Calcium (Ca)-Total			170	170	48.5	45.3	32.4	31.8	39.8	38.6	25.1	13.3	52.3	43	14.5	23.6
Chromium (Cr)-Total			<0.00050	0.00063	<0.00050	<0.00050	<0.00050	<0.00050	0.00058	0.00096	0.00198	0.00128	0.00188	0.00151	0.017	0.00762
Cobalt (Co)-Total			0.00305	0.00348	0.00061	0.00063	0.00039	0.00042	0.00051	0.00077	0.00274	0.00144	0.00125	0.00069	0.0145	0.00651
Copper (Cu)-Total			0.00143	0.0021	0.00055	<0.00040	<0.00040	<0.00040	0.00043	0.0011	0.00635	0.00395	0.00501	0.00314	0.0325	0.016
Iron (Fe)-Total			3.58	3.47	0.197	0.147	0.196	0.207	0.716	1.12	2.11	1.05	1.71	0.916	11.4	4.61
Lead (Pb)-Total			0.00064	0.0007	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	0.00062	0.00316	0.00137	0.00056	0.0004	0.00462	0.00244
Lithium (Li)-Total			0.012	0.0113	0.00023	0.00013	0.00015	0.00011	0.00017	0.00017	0.00075	0.00036	0.00077	0.00043	0.00443	0.00199
Magnesium (Mg)-Total			35.7	35	7.53	7.28	5.6	5.59	7.69	7.83	2.83	1.55	8.5	6.51	5.97	5.13
Manganese (Mn)-Total			2.18	2.07	0.376	0.397	0.306	0.346	0.459	0.509	0.0735	0.0356	0.0632	0.0284	0.23	0.103
Mercury (Hg)-Total			<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total			0.00125	0.00136	0.00637	0.00609	0.00643	0.00644	0.00418	0.00439	0.00015	0.00022	0.00052	0.00061	0.00038	0.00055
Nickel (Ni)-Total			0.00696	0.0073	0.00157	0.0013	0.00125	0.00128	0.00108	0.00138	0.00311	0.002	0.00179	0.00128	0.0169	0.00768
Phosphorus (P)-Total			<0.050	<0.050	0.08	0.075	0.097	0.127	0.179	0.195	0.073	<0.050	0.062	<0.050	0.362	0.152
Potassium (K)-Total			3.25	3.47	0.91	0.94	0.56	0.65	0.66	0.78	0.33	0.25	1.05	0.98	0.83	0.68
Selenium (Se)-Total			<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)-Total			11	12.3	5.9	6.6	6.7	6.8	8.1	6.1	3.6	2.4	6.1	5.6	14.6	8.5
Silver (Ag)-Total			<0.000050	0.000051	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Total			60.2	57.5	14.4	13.5	10.5	10.8	9.47	9.61	1.9	1.3	11.7	12.1	2.11	3.43
Strontium (Sr)-Total			0.557	0.567	0.224	0.225	0.185	0.193	0.162	0.168	0.0614	0.0346	0.152	0.134	0.0531	0.0654
Sulfur (S)-Total			23.5	23.6	15	15.6	9.2	9.8	7.8	8.2	20.5	11.7	34	17.8	10.6	18.9
Tellurium (Te)-Total			<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Total			0.000035	0.00005	0.000036	0.000031	<0.000020	<0.000020	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	<0.000020
Thorium (Th)-Total			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00024	<0.00010
Tin (Sn)-Total			0.00098	0.00101	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00025	0.00046
Titanium (Ti)-Total			0.0055	0.0066	<0.0050	<0.0050	<0.0050	<0.0050	0.013	0.0277	0.0888	0.0461	0.0806	0.0442	0.439	0.171
Uranium (U)-Total			0.00644	0.00694	0.00112	0.00105	0.000649	0.0007	0.000817	0.000859	0.000153	0.000081	0.000477	0.000506	0.000408	0.000241
Vanadium (V)-Total			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	0.0025	0.0052	0.0029	0.004	0.0028	0.0245	0.0112
Zinc (Zn)-Total			0.0093	0.0105	0.0053	<0.0040	<0.0040	<0.0040	<0.0040	0.0051	0.011	0.0063	0.0071	0.0053	0.0303	0.0146
Zirconium (Zr)-Total			0.00017	0.00019	0.0002	<0.00010	0.00016	0.00022	0.00014	0.00017	<0.00010	<0.00010	0.00015	0.00011	0.00042	0.00014

Notes: Refer to Table Endnotes (attached)

Table 4: Analytical Results for Hydrocarbons and PAHs

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB-1	SB-1	SB2	SB2	SB-3	SB-3
	As-built Well Depths		47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m	3.53m	3.53m
Sample ID			8102642-01	8111294-01	8102642-02	8111294-02	8102642-03	8111294-03	8102642-04	8111294-04	8102642-05	8111294-05	8102642-06	8111294-06	8102642-07	8111294-07
Date Sampled	Aquatic Life	Drinking Water	MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2	SB3	SB3
			2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14	2018-10-29	2018-11-14
Turbidity (NTU)	-	-	31.5	26.8	7.72	4.19	11.2	6.91	20.5	18.2	66	21.5	55.4	28.5	388	121
Hydrocarbons ug/L																
EPH10-19	5000	5000	-	<250	-	<250	-	<250	-	<250	-	<250	<250	<250	<250	<250
EPH10-19 (SG)	5000	5000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPH19-32	-	-	-	<250	-	<250	-	<250	-	<250	-	<250	<250	<250	<250	<250
EPH19-32 (SG)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LEPH	500	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
HEPH	-	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
Polycyclic Aromatic Hydrocarbons ug/L																
Acenaphthene	60	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	0.5	-	<0.050	<0.050	<0.096	0.054	<0.294	0.328	<0.145	0.103	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	1	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	1	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.032	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	0.1	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.04	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.09	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.051	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.058	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-Chloronaphthalene	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.183
Chrysene	1	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.054	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	2	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	120	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
2-Methylnaphthalene	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Naphthalene	10	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	3	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	0.2	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	34	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Notes: Refer to Table Endnotes (attached)

Analytical Table Footnotes: Analytical Results for Groundwater and Seepage Blanket Water

All concentrations in mg/L, except pH or as indicated.

- "<" less than the laboratory detection limit indicated.
- "-" means not analyzed or no standard or guideline applies.
- * RPDs are not normally calculated where one or more concentrations are less than five times MDL.
- (1) A compendium of CSR Schedules 6 and 10 guidelines with respect to Drinking Water (DW) and Freshwater Aquatic Life (AW).
- (2) Standard is dissolved Chloride-dependent.

BOLD, UNDERLINE	Laboratory Detection Limit exceeds one or more applicable Standard
BLUE SHADING	Concentration greater than CSR Aquatic Life (AW) Standard
BOLD, BEIGE TEXT	Concentration greater than CSR Drinking Water (DW) Standard

Total Metals	Arsenic, total	mg/L	0.0005	0.00524	0.00124	0.00152	0.00231	<0.00050	<0.00050	0.00078	0.00056	<0.00050	<0.00050
Total Metals	Barium, total	mg/L	0.005	0.0907	0.0315	0.0208	0.0341	0.0074	0.0087	0.0184	0.0363	0.0095	0.0051
Total Metals	Beryllium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Bismuth, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Boron, total	mg/L	0.005	0.0703	0.0181	0.0219	0.0227	<0.0050	0.0137	0.0104	0.254	0.0142	<0.0050
Total Metals	Cadmium, total	mg/L	1E-05	0.000078	0.000118	0.000097	0.000051	<0.000010	<0.000010	0.00002	0.000348	<0.000010	<0.000010
Total Metals	Calcium, total	mg/L	0.2	170	45.3	31.8	38.6	13.3	43	23.6	877	46.3	3.27
Total Metals	Chromium, total	mg/L	0.0005	0.00063	<0.00050	<0.00050	0.00096	0.00128	0.00151	0.00762	0.00066	0.00058	<0.00050
Total Metals	Cobalt, total	mg/L	0.0001	0.00348	0.00063	0.00042	0.00077	0.00144	0.00069	0.00651	0.00133	0.00018	0.00012
Total Metals	Copper, total	mg/L	0.0004	0.0021	<0.00040	<0.00040	0.0011	0.00395	0.00314	0.016	0.00202	0.00216	0.00123
Total Metals	Iron, total	mg/L	0.01	3.47	0.147	0.207	1.12	1.05	0.916	4.61	<0.010	0.224	0.087
Total Metals	Lead, total	mg/L	0.0002	0.0007	<0.00020	<0.00020	0.00062	0.00137	0.0004	0.00244	<0.00020	<0.00020	<0.00020
Total Metals	Lithium, total	mg/L	0.0001	0.0113	0.00013	0.00011	0.00017	0.00036	0.00043	0.00199	0.00025	0.00021	<0.00010
Total Metals	Magnesium, total	mg/L	0.01	35	7.28	5.59	7.83	1.55	6.51	5.13	241	6.54	0.764
Total Metals	Manganese, total	mg/L	0.0002	2.07	0.397	0.346	0.509	0.0356	0.0284	0.103	7.67	0.00697	0.00385
Total Metals	Mercury, total	mg/L	1E-05	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Metals	Molybdenum, total	mg/L	0.0001	0.00136	0.00609	0.00644	0.00439	0.00022	0.00061	0.00055	0.00028	0.00083	<0.00010
Total Metals	Nickel, total	mg/L	0.0004	0.0073	0.0013	0.00128	0.00138	0.002	0.00128	0.00768	0.00525	0.00082	0.00056
Total Metals	Phosphorus, total	mg/L	0.05	<0.050	0.075	0.127	0.195	<0.050	<0.050	0.152	<0.050	<0.050	<0.050
Total Metals	Potassium, total	mg/L	0.1	3.47	0.94	0.65	0.78	0.25	0.98	0.68	32.2	0.74	0.29
Total Metals	Selenium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Silicon, total	mg/L	1	12.3	6.6	6.7	8.1	2.4	5.6	8.5	5.8	5.1	3
Total Metals	Silver, total	mg/L	5E-05	0.000051	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Total Metals	Sodium, total	mg/L	0.1	57.5	13.5	10.8	9.61	1.3	12.1	3.43	1720	6.87	1.46
Total Metals	Strontium, total	mg/L	0.001	0.567	0.225	0.193	0.168	0.0346	0.134	0.0654	4.36	0.126	0.0146
Total Metals	Sulfur, total	mg/L	3	23.6	15.6	9.8	8.2	11.7	17.8	18.9	674	33.2	5.2
Total Metals	Tellurium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Thallium, total	mg/L	2E-05	0.00005	0.000031	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Total Metals	Thorium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Tin, total	mg/L	0.0002	0.00101	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00046	0.00242	<0.00020	<0.00020
Total Metals	Titanium, total	mg/L	0.005	0.0066	<0.0050	<0.0050	0.0277	0.0461	0.0442	0.171	<0.0050	0.0086	<0.0050
Total Metals	Tungsten, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Uranium, total	mg/L	2E-05	0.00694	0.00105	0.0007	0.000859	0.000081	0.000506	0.000241	0.000054	0.000542	<0.000020
Total Metals	Vanadium, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	0.0025	0.0029	0.0028	0.0112	<0.0010	0.0015	<0.0010
Total Metals	Zinc, total	mg/L	0.004	0.0105	<0.0040	<0.0040	0.0051	0.0063	0.0053	0.0146	0.0606	<0.0040	<0.0040
Total Metals	Zirconium, total	mg/L	0.0001	0.00019	<0.00010	0.00022	0.00017	<0.00010	0.00011	0.00014	<0.00010	<0.00010	0.00011

Polycyclic Aromatic Hydrocarbons (PAH)	Phenanthrene	ug/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Pyrene	ug/L	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Polycyclic Aromatic Hydrocarbons (PAH)	Quinoline	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Aluminum, total	mg/L	0.005	0.11	0.0977	0.0599	0.254	1.84	1.46	9.65	0.0332	0.0472
Total Metals	Antimony, total	mg/L	0.0002	0.0007	0.00024	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00024
Total Metals	Arsenic, total	mg/L	0.0005	0.00484	0.00117	0.00138	0.00199	<0.00050	<0.00050	0.00103	0.00052	<0.00050
Total Metals	Barium, total	mg/L	0.005	0.0906	0.0354	0.0215	0.0325	0.0171	0.0139	0.042	0.0379	0.013
Total Metals	Beryllium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010	<0.00010
Total Metals	Bismuth, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Boron, total	mg/L	0.005	0.0711	0.0211	0.0225	0.0234	<0.0050	0.0206	0.0076	0.307	0.0199
Total Metals	Cadmium, total	mg/L	1E-05	0.000036	0.000184	0.000106	0.000016	0.000023	0.000012	0.000043	0.000325	<0.000010
Total Metals	Calcium, total	mg/L	0.2	170	48.5	32.4	39.8	25.1	52.3	14.5	926	70.1
Total Metals	Chromium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	0.00058	0.00198	0.00188	0.017	0.00068	<0.00050
Total Metals	Cobalt, total	mg/L	0.0001	0.00305	0.00061	0.00039	0.00051	0.00274	0.00125	0.0145	0.00106	<0.00010
Total Metals	Copper, total	mg/L	0.0004	0.00143	0.00055	<0.00040	0.00043	0.00635	0.00501	0.0325	0.00163	0.00143
Total Metals	Iron, total	mg/L	0.01	3.58	0.197	0.196	0.716	2.11	1.71	11.4	0.024	0.047
Total Metals	Lead, total	mg/L	0.0002	0.00064	<0.00020	<0.00020	0.00032	0.00316	0.00056	0.00462	<0.00020	<0.00020
Total Metals	Lithium, total	mg/L	0.0001	0.012	0.00023	0.00015	0.00017	0.00075	0.00077	0.00443	0.0004	0.0003
Total Metals	Magnesium, total	mg/L	0.01	35.7	7.53	5.6	7.69	2.83	8.5	5.97	253	9.28
Total Metals	Manganese, total	mg/L	0.0002	2.18	0.376	0.306	0.459	0.0735	0.0632	0.23	6.38	0.00386
Total Metals	Mercury, total	mg/L	1E-05	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Metals	Molybdenum, total	mg/L	0.0001	0.00125	0.00637	0.00643	0.00418	0.00015	0.00052	0.00038	0.00024	0.00096
Total Metals	Nickel, total	mg/L	0.0004	0.00696	0.00157	0.00125	0.00108	0.00311	0.00179	0.0169	0.00496	0.00067
Total Metals	Phosphorus, total	mg/L	0.05	<0.050	0.08	0.097	0.179	0.073	0.062	0.362	<0.050	<0.050
Total Metals	Potassium, total	mg/L	0.1	3.25	0.91	0.56	0.66	0.33	1.05	0.83	33.4	0.77
Total Metals	Selenium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Silicon, total	mg/L	1	11	5.9	5.6	6.8	3.6	6.1	14.6	5	4.7
Total Metals	Silver, total	mg/L	5E-05	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Total Metals	Sodium, total	mg/L	0.1	60.2	14.4	10.5	9.47	1.9	11.7	2.11	1800	8.85
Total Metals	Strontium, total	mg/L	0.001	0.557	0.224	0.185	0.162	0.0614	0.152	0.0531	4.74	0.177
Total Metals	Sulfur, total	mg/L	3	23.5	15	9.2	7.8	20.5	34	10.6	717	48.7
Total Metals	Tellurium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Thallium, total	mg/L	2E-05	0.000035	0.000036	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	<0.000020	<0.000020
Total Metals	Thorium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00024	<0.00010	<0.00010
Total Metals	Tin, total	mg/L	0.0002	0.00098	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00025	0.00164	<0.00020
Total Metals	Titanium, total	mg/L	0.005	0.0055	<0.0050	<0.0050	0.013	0.0888	0.0806	0.439	<0.0050	<0.0050
Total Metals	Tungsten, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Uranium, total	mg/L	2E-05	0.00644	0.00112	0.000649	0.000817	0.000153	0.000477	0.000408	0.000045	0.000752
Total Metals	Vanadium, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	0.0014	0.0052	0.004	0.0245	<0.0010	0.0011
Total Metals	Zinc, total	mg/L	0.004	0.0093	0.0053	<0.0040	<0.0040	0.011	0.0071	0.0303	0.0227	0.0061
Total Metals	Zirconium, total	mg/L	0.0001	0.00017	0.0002	0.00016	0.00014	<0.00010	0.00015	0.00042	<0.00010	<0.00010

CERTIFICATE OF ANALYSIS

REPORTED TO Allterra Construction
2158 Millstream Road
Victoria, BC V9B 6H4

ATTENTION Rahim Gaidhar

PO NUMBER P15-06 SIRM

PROJECT P17-932

PROJECT INFO

WORK ORDER 8111294

RECEIVED / TEMP 2018-11-16 09:15 / 3°C

REPORTED 2018-11-26 15:08

COC NUMBER Nov 2018

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

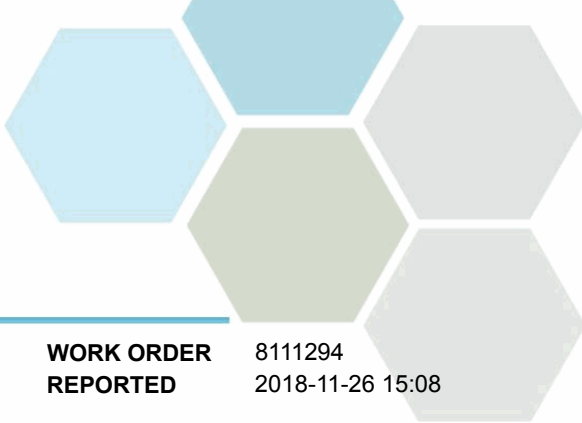
If you have any questions or concerns, please contact me at bshaw@caro.ca

Authorized By:

Bryan Shaw, Ph.D., P.Chem.
Client Service Coordinator

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7

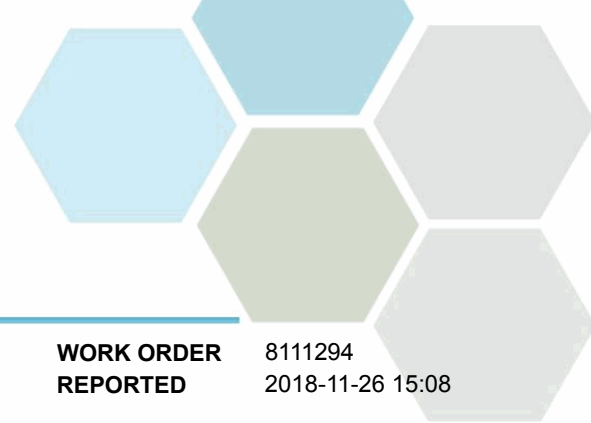


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (8111294-01) Matrix: Water Sampled: 2018-11-14 10:45					
Anions					
Chloride	36.8	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	< 0.100	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	77.0	1.0	mg/L	2018-11-17	
BCMOE Aggregate Hydrocarbons					
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	73	60-140	%	2018-11-23	
Calculated Parameters					
Hardness, Total (as CaCO3)	520	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	0.00043	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	0.00419	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0779	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0600	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	154	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00190	0.00010	mg/L	2018-11-22	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, dissolved	2.61	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	0.00988	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	32.8	0.010	mg/L	2018-11-22	
Manganese, dissolved	1.94	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00039	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00186	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	3.30	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	11.5	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	54.3	0.10	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (8111294-01) | Matrix: Water | Sampled: 2018-11-14 10:45, Continued

Dissolved Metals, Continued

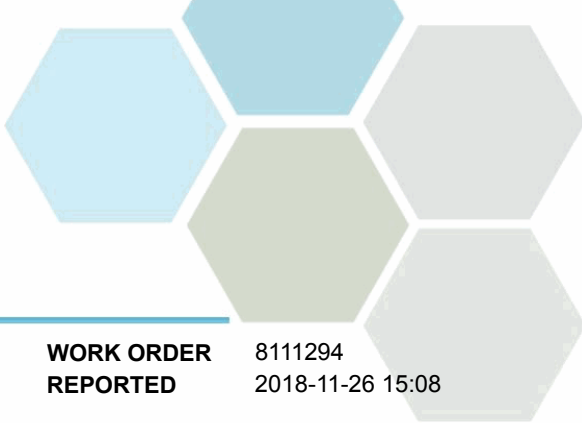
Strontium, dissolved	0.530	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	22.3	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.00646	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	0.00020	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	643	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	643	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	5.1	5.0	CU	2018-11-19	HT1
Conductivity (EC)	1220	2.0	µS/cm	2018-11-23	
pH	7.17	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	6.0	2.0	mg/L	2018-11-21	
Turbidity	26.8	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-23	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-23	
Acridine	< 0.050	0.050	µg/L	2018-11-23	
Anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-23	
Chrysene	< 0.050	0.050	µg/L	2018-11-23	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-23	
Fluorene	< 0.050	0.050	µg/L	2018-11-23	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-23	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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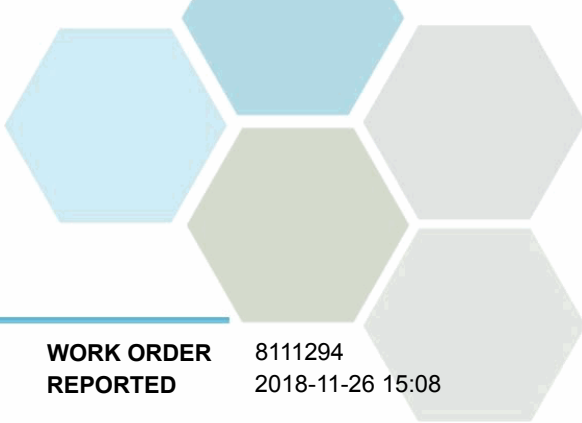
MW6 (8111294-01) | Matrix: Water | Sampled: 2018-11-14 10:45, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Naphthalene	< 0.200	0.200	µg/L	2018-11-23	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-23	
Pyrene	< 0.020	0.020	µg/L	2018-11-23	
Quinoline	< 0.050	0.050	µg/L	2018-11-23	
Surrogate: Acridine-d9	79	50-140	%	2018-11-23	
Surrogate: Naphthalene-d8	65	50-140	%	2018-11-23	
Surrogate: Perylene-d12	102	50-140	%	2018-11-23	

Total Metals

Aluminum, total	0.132	0.0050	mg/L	2018-11-22	
Antimony, total	0.00084	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00524	0.00050	mg/L	2018-11-22	
Barium, total	0.0907	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0703	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000078	0.000010	mg/L	2018-11-22	
Calcium, total	170	0.20	mg/L	2018-11-22	
Chromium, total	0.00063	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00348	0.00010	mg/L	2018-11-22	
Copper, total	0.00210	0.00040	mg/L	2018-11-22	
Iron, total	3.47	0.010	mg/L	2018-11-22	
Lead, total	0.00070	0.00020	mg/L	2018-11-22	
Lithium, total	0.0113	0.00010	mg/L	2018-11-22	
Magnesium, total	35.0	0.010	mg/L	2018-11-22	
Manganese, total	2.07	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00136	0.00010	mg/L	2018-11-22	
Nickel, total	0.00730	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	3.47	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	12.3	1.0	mg/L	2018-11-22	
Silver, total	0.000051	0.000050	mg/L	2018-11-22	
Sodium, total	57.5	0.10	mg/L	2018-11-22	
Strontium, total	0.567	0.0010	mg/L	2018-11-22	
Sulfur, total	23.6	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	0.000050	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	0.00101	0.00020	mg/L	2018-11-22	
Titanium, total	0.0066	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (8111294-01) | Matrix: Water | Sampled: 2018-11-14 10:45, Continued

Total Metals, Continued

Uranium, total	0.00694	0.000020	mg/L	2018-11-22	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, total	0.0105	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00019	0.00010	mg/L	2018-11-22	

MW3S (8111294-02) | Matrix: Water | Sampled: 2018-11-14 13:00

Anions

Chloride	14.2	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	40.5	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

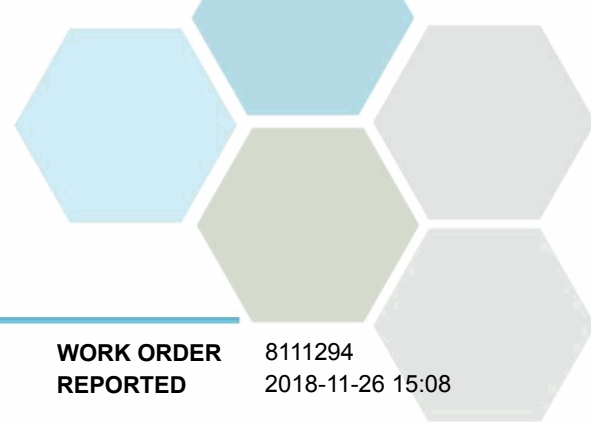
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	81	60-140	%	2018-11-23	

Calculated Parameters

Hardness, Total (as CaCO3)	134	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	0.00115	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0297	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0173	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	42.5	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00054	0.00010	mg/L	2018-11-22	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, dissolved	0.104	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	6.81	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.371	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5



TEST RESULTS

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MW3S (8111294-02) | Matrix: Water | Sampled: 2018-11-14 13:00, Continued

Dissolved Metals, Continued

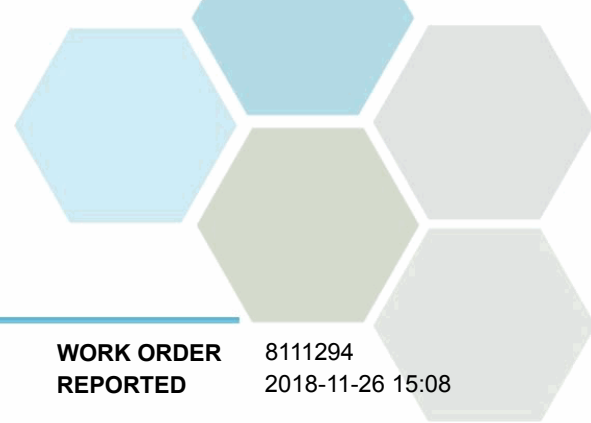
Molybdenum, dissolved	0.00547	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00108	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	0.074	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.87	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	6.0	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	12.6	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.211	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	14.2	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000981	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	131	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	131	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	343	2.0	µS/cm	2018-11-23	
pH	7.63	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	7.2	2.0	mg/L	2018-11-21	
Turbidity	4.19	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-23	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-23	
Acridine	0.054	0.050	µg/L	2018-11-23	
Anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	



TEST RESULTS

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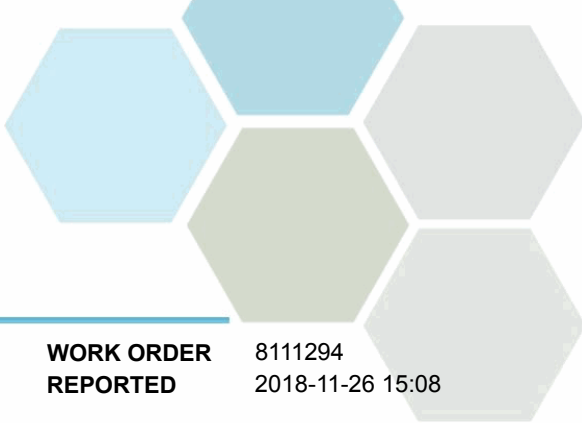
MW3S (8111294-02) | Matrix: Water | Sampled: 2018-11-14 13:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-23	
Chrysene	< 0.050	0.050	µg/L	2018-11-23	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-23	
Fluorene	< 0.050	0.050	µg/L	2018-11-23	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-23	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	
Naphthalene	< 0.200	0.200	µg/L	2018-11-23	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-23	
Pyrene	< 0.020	0.020	µg/L	2018-11-23	
Quinoline	< 0.050	0.050	µg/L	2018-11-23	
Surrogate: Acridine-d9	77	50-140	%	2018-11-23	
Surrogate: Naphthalene-d8	69	50-140	%	2018-11-23	
Surrogate: Perylene-d12	106	50-140	%	2018-11-23	

Total Metals

Aluminum, total	0.0476	0.0050	mg/L	2018-11-22	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00124	0.00050	mg/L	2018-11-22	
Barium, total	0.0315	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0181	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000118	0.000010	mg/L	2018-11-22	
Calcium, total	45.3	0.20	mg/L	2018-11-22	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00063	0.00010	mg/L	2018-11-22	
Copper, total	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, total	0.147	0.010	mg/L	2018-11-22	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, total	0.00013	0.00010	mg/L	2018-11-22	
Magnesium, total	7.28	0.010	mg/L	2018-11-22	
Manganese, total	0.397	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00609	0.00010	mg/L	2018-11-22	
Nickel, total	0.00130	0.00040	mg/L	2018-11-22	
Phosphorus, total	0.075	0.050	mg/L	2018-11-22	
Potassium, total	0.94	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	6.6	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	13.5	0.10	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
MW3S (8111294-02) Matrix: Water Sampled: 2018-11-14 13:00, Continued					
<i>Total Metals, Continued</i>					
Strontium, total	0.225	0.0010	mg/L	2018-11-22	
Sulfur, total	15.6	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	0.000031	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.00105	0.000020	mg/L	2018-11-22	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-22	

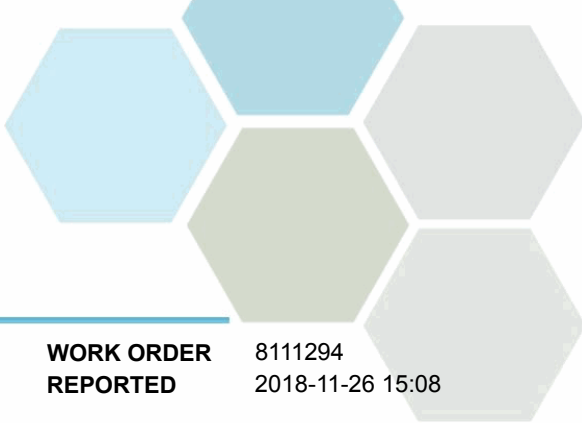
MW3D (8111294-03) | Matrix: Water | Sampled: 2018-11-14 13:20

<i>Anions</i>					
Chloride	2.58	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	20.3	1.0	mg/L	2018-11-17	

<i>BCMOE Aggregate Hydrocarbons</i>					
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	101	60-140	%	2018-11-23	

<i>Calculated Parameters</i>					
Hardness, Total (as CaCO3)	94.2	0.500	mg/L	N/A	

<i>Dissolved Metals</i>					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	0.00139	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0193	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0189	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	29.2	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	



TEST RESULTS

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MW3D (8111294-03) | Matrix: Water | Sampled: 2018-11-14 13:20, Continued

Dissolved Metals, Continued

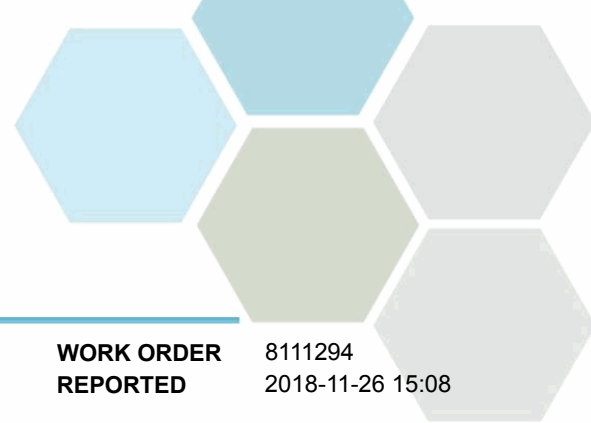
Cobalt, dissolved	0.00035	0.00010	mg/L	2018-11-22	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, dissolved	0.140	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	5.14	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.320	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00573	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00089	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	0.113	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.60	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	6.2	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	9.98	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.177	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	8.6	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000598	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	110	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	110	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	5.9	5.0	CU	2018-11-19	HT1
Conductivity (EC)	238	2.0	µS/cm	2018-11-23	
pH	7.67	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	7.8	2.0	mg/L	2018-11-21	
Turbidity	6.91	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
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Analyte	Result	RL	Units	Analyzed	Qualifier
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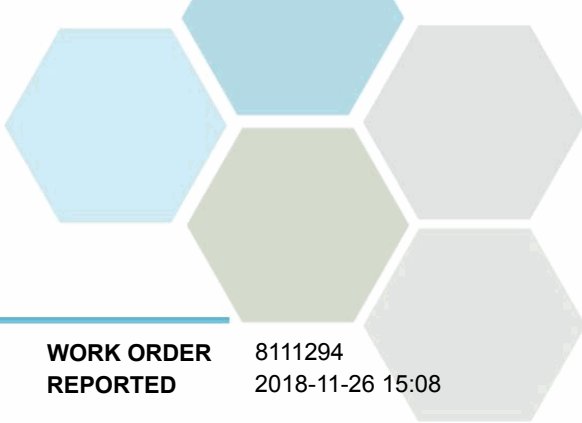
MW3D (8111294-03) | Matrix: Water | Sampled: 2018-11-14 13:20, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	0.328	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	93	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	94	50-140	%	2018-11-26	
Surrogate: Perylene-d12	136	50-140	%	2018-11-26	

Total Metals

Aluminum, total	0.0689	0.0050	mg/L	2018-11-22	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00152	0.00050	mg/L	2018-11-22	
Barium, total	0.0208	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0219	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000097	0.000010	mg/L	2018-11-22	
Calcium, total	31.8	0.20	mg/L	2018-11-22	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00042	0.00010	mg/L	2018-11-22	
Copper, total	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, total	0.207	0.010	mg/L	2018-11-22	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, total	0.00011	0.00010	mg/L	2018-11-22	
Magnesium, total	5.59	0.010	mg/L	2018-11-22	
Manganese, total	0.346	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3D (8111294-03) Matrix: Water Sampled: 2018-11-14 13:20, Continued					
<i>Total Metals, Continued</i>					
Molybdenum, total	0.00644	0.00010	mg/L	2018-11-22	
Nickel, total	0.00128	0.00040	mg/L	2018-11-22	
Phosphorus, total	0.127	0.050	mg/L	2018-11-22	
Potassium, total	0.65	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	6.7	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	10.8	0.10	mg/L	2018-11-22	
Strontium, total	0.193	0.0010	mg/L	2018-11-22	
Sulfur, total	9.8	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000700	0.000020	mg/L	2018-11-22	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00022	0.00010	mg/L	2018-11-22	

MW2 (8111294-04) | Matrix: Water | Sampled: 2018-11-14 14:00

Anions

Chloride	5.59	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	17.9	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

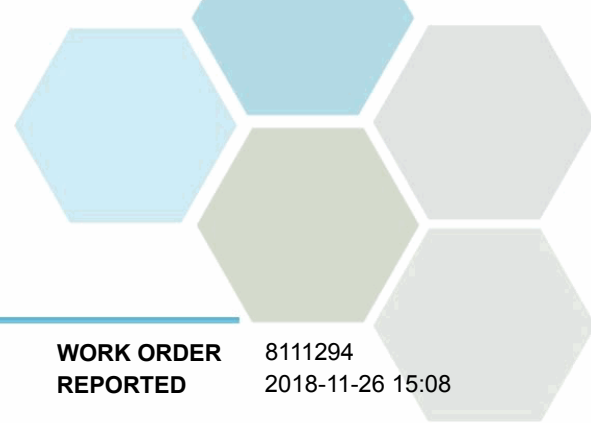
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	76	60-140	%	2018-11-23	

Calculated Parameters

Hardness, Total (as CaCO3)	115	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	0.00032	0.00020	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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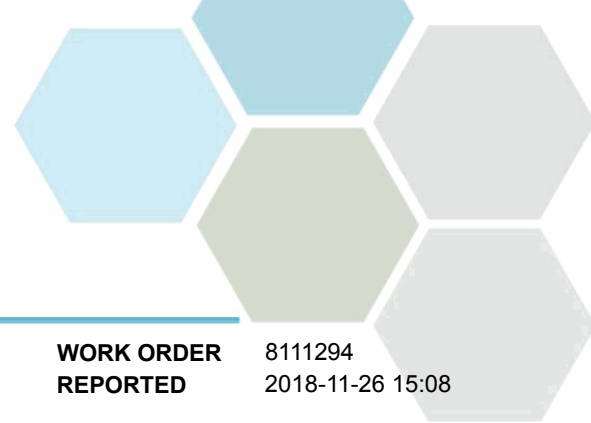
MW2 (8111294-04) | Matrix: Water | Sampled: 2018-11-14 14:00, Continued

Dissolved Metals, Continued

Arsenic, dissolved	0.00201	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0289	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0194	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	34.6	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00036	0.00010	mg/L	2018-11-22	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Iron, dissolved	0.299	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	6.85	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.452	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00376	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00064	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	0.151	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.67	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	6.7	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	8.72	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.154	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	7.6	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000742	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	131	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	131	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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MW2 (8111294-04) | Matrix: Water | Sampled: 2018-11-14 14:00, Continued

General Parameters, Continued

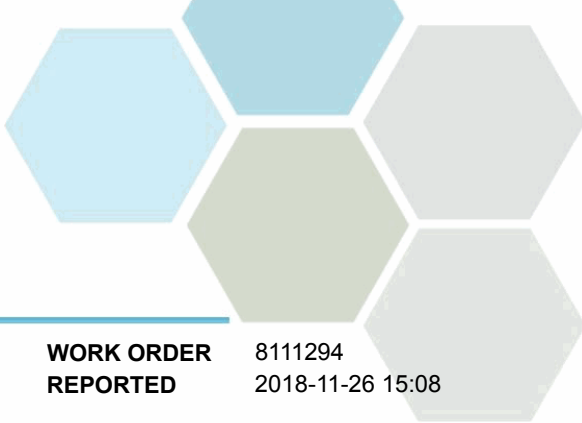
Colour, True	5.2	5.0	CU	2018-11-19	HT1
Conductivity (EC)	285	2.0	µS/cm	2018-11-23	
pH	7.77	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	18.2	2.0	mg/L	2018-11-21	
Turbidity	18.2	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	0.103	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	0.032	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	0.040	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	0.090	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	0.051	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	0.058	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	0.054	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	76	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	73	50-140	%	2018-11-26	
Surrogate: Perylene-d12	110	50-140	%	2018-11-26	

Total Metals

Aluminum, total	0.556	0.0050	mg/L	2018-11-22	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00231	0.00050	mg/L	2018-11-22	
Barium, total	0.0341	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0227	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000051	0.000010	mg/L	2018-11-22	
Calcium, total	38.6	0.20	mg/L	2018-11-22	
Chromium, total	0.00096	0.00050	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (8111294-04) Matrix: Water Sampled: 2018-11-14 14:00, Continued					
<i>Total Metals, Continued</i>					
Cobalt, total	0.00077	0.00010	mg/L	2018-11-22	
Copper, total	0.00110	0.00040	mg/L	2018-11-22	
Iron, total	1.12	0.010	mg/L	2018-11-22	
Lead, total	0.00062	0.00020	mg/L	2018-11-22	
Lithium, total	0.00017	0.00010	mg/L	2018-11-22	
Magnesium, total	7.83	0.010	mg/L	2018-11-22	
Manganese, total	0.509	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00439	0.00010	mg/L	2018-11-22	
Nickel, total	0.00138	0.00040	mg/L	2018-11-22	
Phosphorus, total	0.195	0.050	mg/L	2018-11-22	
Potassium, total	0.78	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	8.1	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	9.61	0.10	mg/L	2018-11-22	
Strontium, total	0.168	0.0010	mg/L	2018-11-22	
Sulfur, total	8.2	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	0.000024	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	0.0277	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000859	0.000020	mg/L	2018-11-22	
Vanadium, total	0.0025	0.0010	mg/L	2018-11-22	
Zinc, total	0.0051	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00017	0.00010	mg/L	2018-11-22	

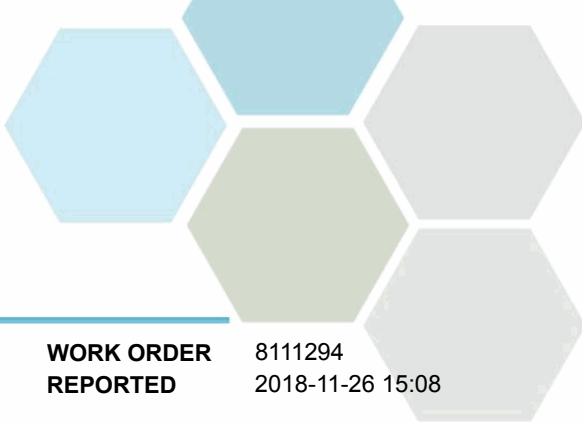
SB1 (8111294-05) | Matrix: Water | Sampled: 2018-11-14 12:00

Anions

Chloride	0.37	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	0.137	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	33.0	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (8111294-05) | Matrix: Water | Sampled: 2018-11-14 12:00, Continued

BCMOE Aggregate Hydrocarbons, Continued

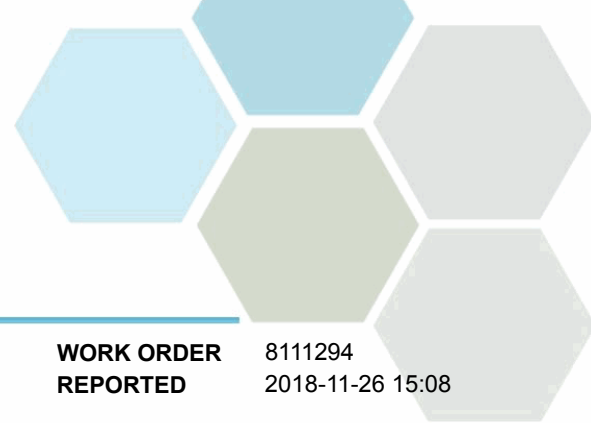
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	77	60-140	%	2018-11-23	

Calculated Parameters

Hardness, Total (as CaCO3)	34.0	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	11.7	0.20	mg/L	2018-11-22	
Chromium, dissolved	0.00055	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00018	0.00010	mg/L	2018-11-22	
Copper, dissolved	0.00058	0.00040	mg/L	2018-11-22	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	1.13	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.00117	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00026	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00088	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.16	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	1.2	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	1.12	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.0291	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	11.0	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000021	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (8111294-05) | Matrix: Water | Sampled: 2018-11-14 12:00, Continued

Dissolved Metals, Continued

Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

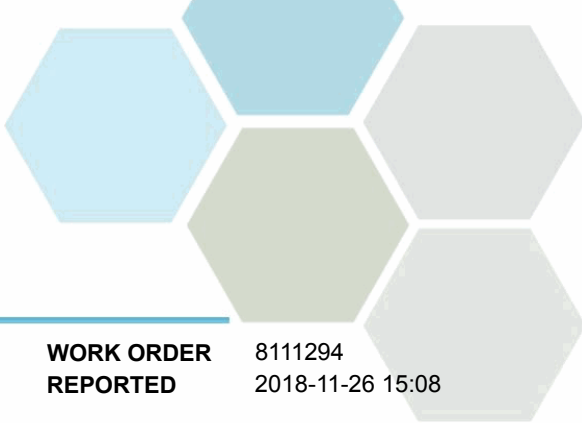
Alkalinity, Total (as CaCO3)	10.3	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	10.3	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	91.9	2.0	µS/cm	2018-11-23	
pH	6.97	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	49.0	2.0	mg/L	2018-11-21	
Turbidity	21.5	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-23	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-23	
Acridine	< 0.050	0.050	µg/L	2018-11-23	
Anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-23	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-23	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-23	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-23	
Chrysene	< 0.050	0.050	µg/L	2018-11-23	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-23	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-23	
Fluorene	< 0.050	0.050	µg/L	2018-11-23	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-23	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-23	
Naphthalene	< 0.200	0.200	µg/L	2018-11-23	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-23	
Pyrene	< 0.020	0.020	µg/L	2018-11-23	
Quinoline	< 0.050	0.050	µg/L	2018-11-23	
Surrogate: Acridine-d9	60	50-140	%	2018-11-23	
Surrogate: Naphthalene-d8	61	50-140	%	2018-11-23	
Surrogate: Perylene-d12	92	50-140	%	2018-11-23	

Total Metals

Aluminum, total	0.915	0.0050	mg/L	2018-11-22	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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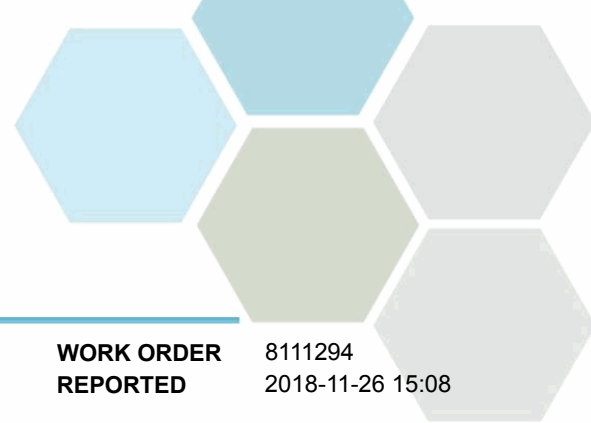
WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
SB1 (8111294-05) Matrix: Water Sampled: 2018-11-14 12:00, Continued					
<i>Total Metals, Continued</i>					
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, total	0.0074	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	< 0.0050	0.0050	mg/L	2018-11-22	
Cadmium, total	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, total	13.3	0.20	mg/L	2018-11-22	
Chromium, total	0.00128	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00144	0.00010	mg/L	2018-11-22	
Copper, total	0.00395	0.00040	mg/L	2018-11-22	
Iron, total	1.05	0.010	mg/L	2018-11-22	
Lead, total	0.00137	0.00020	mg/L	2018-11-22	
Lithium, total	0.00036	0.00010	mg/L	2018-11-22	
Magnesium, total	1.55	0.010	mg/L	2018-11-22	
Manganese, total	0.0356	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00022	0.00010	mg/L	2018-11-22	
Nickel, total	0.00200	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	0.25	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	2.4	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	1.30	0.10	mg/L	2018-11-22	
Strontium, total	0.0346	0.0010	mg/L	2018-11-22	
Sulfur, total	11.7	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	0.0461	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000081	0.000020	mg/L	2018-11-22	
Vanadium, total	0.0029	0.0010	mg/L	2018-11-22	
Zinc, total	0.0063	0.0040	mg/L	2018-11-22	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-22	

SB2 (8111294-06) | Matrix: Water | Sampled: 2018-11-14 11:45

Anions

Chloride	17.7	0.10	mg/L	2018-11-17	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8111294-06) | Matrix: Water | Sampled: 2018-11-14 11:45, Continued

Anions, Continued

Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	0.246	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	49.0	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

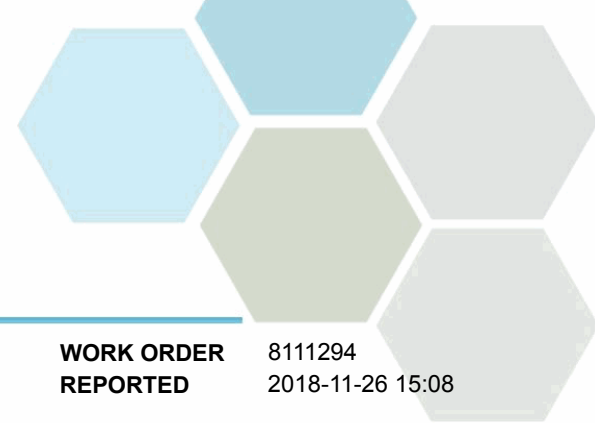
EPHw10-19	< 250	250	µg/L	2018-11-23	S09
EPHw19-32	< 250	250	µg/L	2018-11-23	S09
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	56	60-140	%	2018-11-23	S09

Calculated Parameters

Hardness, Total (as CaCO3)	122	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0111	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	39.3	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Copper, dissolved	0.00054	0.00040	mg/L	2018-11-22	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	5.76	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.00073	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00056	0.00010	mg/L	2018-11-22	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.82	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	4.1	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	11.0	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.124	0.0010	mg/L	2018-11-22	



TEST RESULTS

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WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8111294-06) | Matrix: Water | Sampled: 2018-11-14 11:45, Continued

Dissolved Metals, Continued

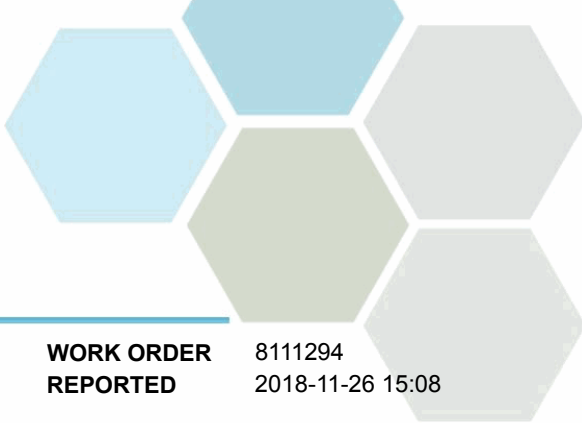
Sulfur, dissolved	17.3	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000428	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	94.9	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	94.9	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	310	2.0	µS/cm	2018-11-23	
pH	6.82	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	28.4	2.0	mg/L	2018-11-21	
Turbidity	28.5	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	< 0.050	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
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Analyte	Result	RL	Units	Analyzed	Qualifier
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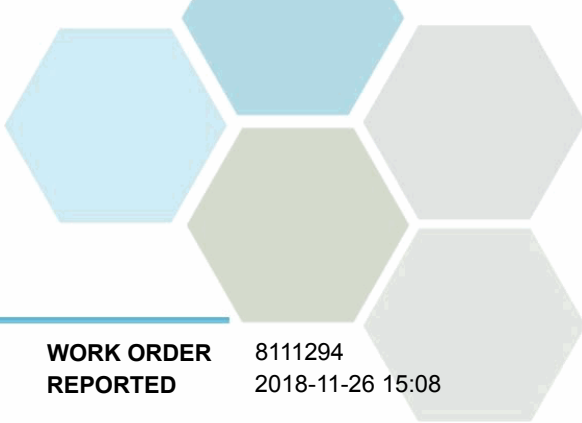
SB2 (8111294-06) | Matrix: Water | Sampled: 2018-11-14 11:45, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	47	50-140	%	2018-11-26	S02
Surrogate: Naphthalene-d8	67	50-140	%	2018-11-26	
Surrogate: Perylene-d12	102	50-140	%	2018-11-26	

Total Metals

Aluminum, total	0.780	0.0050	mg/L	2018-11-22	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, total	0.0087	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0137	0.0050	mg/L	2018-11-22	
Cadmium, total	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, total	43.0	0.20	mg/L	2018-11-22	
Chromium, total	0.00151	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00069	0.00010	mg/L	2018-11-22	
Copper, total	0.00314	0.00040	mg/L	2018-11-22	
Iron, total	0.916	0.010	mg/L	2018-11-22	
Lead, total	0.00040	0.00020	mg/L	2018-11-22	
Lithium, total	0.00043	0.00010	mg/L	2018-11-22	
Magnesium, total	6.51	0.010	mg/L	2018-11-22	
Manganese, total	0.0284	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00061	0.00010	mg/L	2018-11-22	
Nickel, total	0.00128	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	0.98	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	5.6	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	12.1	0.10	mg/L	2018-11-22	
Strontium, total	0.134	0.0010	mg/L	2018-11-22	
Sulfur, total	17.8	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	0.0442	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000506	0.000020	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8111294-06) | Matrix: Water | Sampled: 2018-11-14 11:45, Continued

Total Metals, Continued

Vanadium, total	0.0028	0.0010	mg/L	2018-11-22	
Zinc, total	0.0053	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00011	0.00010	mg/L	2018-11-22	

SB3 (8111294-07) | Matrix: Water | Sampled: 2018-11-14 11:30

Anions

Chloride	1.42	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	0.315	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	51.9	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

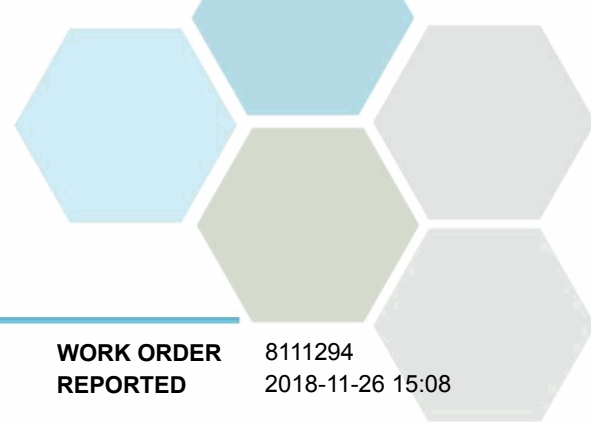
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	60	60-140	%	2018-11-23	

Calculated Parameters

Hardness, Total (as CaCO3)	64.3	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0083	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	20.3	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00015	0.00010	mg/L	2018-11-22	
Copper, dissolved	0.00111	0.00040	mg/L	2018-11-22	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	3.30	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.00223	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00052	0.00010	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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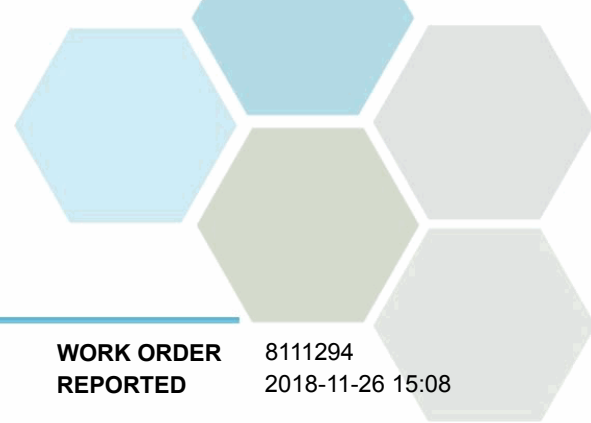
Analyte	Result	RL	Units	Analyzed	Qualifier
SB3 (8111294-07) Matrix: Water Sampled: 2018-11-14 11:30, Continued					
<i>Dissolved Metals, Continued</i>					
Nickel, dissolved	0.00075	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.38	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	2.9	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	2.97	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.0541	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	17.6	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000044	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	29.4	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	29.4	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	165	2.0	µS/cm	2018-11-23	
pH	7.13	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	138	2.0	mg/L	2018-11-21	
Turbidity	121	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	< 0.050	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.183	0.100	µg/L	2018-11-26	RA1



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
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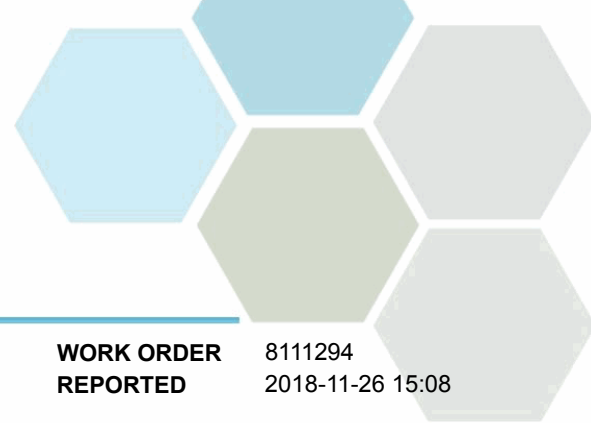
SB3 (8111294-07) | Matrix: Water | Sampled: 2018-11-14 11:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	54	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	70	50-140	%	2018-11-26	
Surrogate: Perylene-d12	103	50-140	%	2018-11-26	

Total Metals

Aluminum, total	3.70	0.0050	mg/L	2018-11-22	
Antimony, total	0.00025	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00078	0.00050	mg/L	2018-11-22	
Barium, total	0.0184	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0104	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000020	0.000010	mg/L	2018-11-22	
Calcium, total	23.6	0.20	mg/L	2018-11-22	
Chromium, total	0.00762	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00651	0.00010	mg/L	2018-11-22	
Copper, total	0.0160	0.00040	mg/L	2018-11-22	
Iron, total	4.61	0.010	mg/L	2018-11-22	
Lead, total	0.00244	0.00020	mg/L	2018-11-22	
Lithium, total	0.00199	0.00010	mg/L	2018-11-22	
Magnesium, total	5.13	0.010	mg/L	2018-11-22	
Manganese, total	0.103	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00055	0.00010	mg/L	2018-11-22	
Nickel, total	0.00768	0.00040	mg/L	2018-11-22	
Phosphorus, total	0.152	0.050	mg/L	2018-11-22	
Potassium, total	0.68	0.10	mg/L	2018-11-22	
Selenium, total	< 0.000050	0.000050	mg/L	2018-11-22	
Silicon, total	8.5	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	3.43	0.10	mg/L	2018-11-22	
Strontium, total	0.0654	0.0010	mg/L	2018-11-22	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
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SB3 (8111294-07) | Matrix: Water | Sampled: 2018-11-14 11:30, Continued

Total Metals, Continued

Sulfur, total	18.9	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	0.00046	0.00020	mg/L	2018-11-22	
Titanium, total	0.171	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000241	0.000020	mg/L	2018-11-22	
Vanadium, total	0.0112	0.0010	mg/L	2018-11-22	
Zinc, total	0.0146	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00014	0.00010	mg/L	2018-11-22	

LE-1 (8111294-08) | Matrix: Water | Sampled: 2018-11-14 15:00

Anions

Chloride	3260	0.10	mg/L	2018-11-17	
Fluoride	< 0.10	0.10	mg/L	2018-11-17	
Nitrate (as N)	1.78	0.010	mg/L	2018-11-17	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-17	
Sulfate	1870	1.0	mg/L	2018-11-17	

BCMOE Aggregate Hydrocarbons

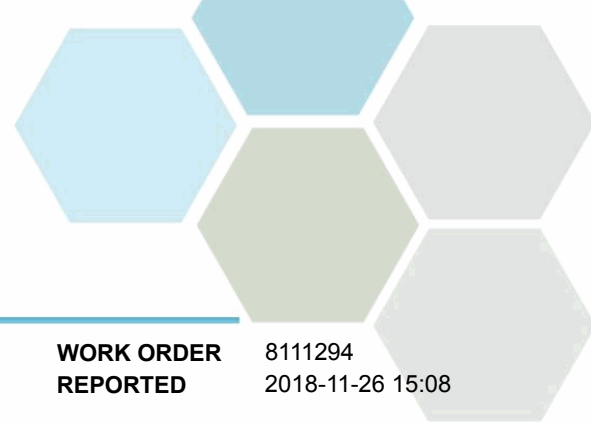
EPHw10-19	< 250	250	µg/L	2018-11-23	
EPHw19-32	< 250	250	µg/L	2018-11-23	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	68	60-140	%	2018-11-23	

Calculated Parameters

Hardness, Total (as CaCO3)	2930	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0114	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0338	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.259	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	0.000343	0.000010	mg/L	2018-11-22	
Calcium, dissolved	795	0.20	mg/L	2018-11-22	
Chromium, dissolved	0.00058	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	0.00121	0.00010	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (8111294-08) | Matrix: Water | Sampled: 2018-11-14 15:00, Continued

Dissolved Metals, Continued

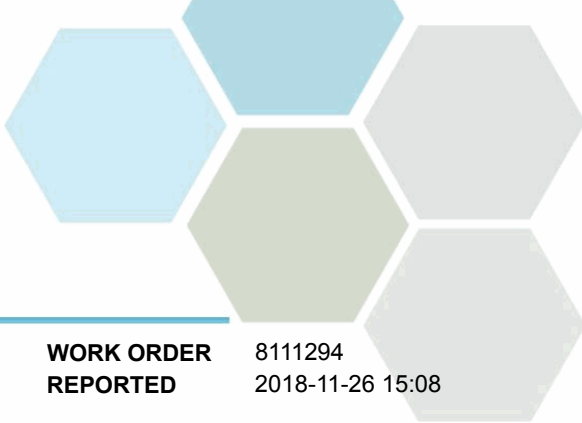
Copper, dissolved	0.00178	0.00040	mg/L	2018-11-22	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	0.00022	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	229	0.010	mg/L	2018-11-22	
Manganese, dissolved	7.12	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00025	0.00010	mg/L	2018-11-22	
Nickel, dissolved	0.00498	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	29.3	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	5.1	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	1640	0.10	mg/L	2018-11-22	
Strontium, dissolved	3.95	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	643	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	0.00217	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000050	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	0.0544	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	29.6	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	29.6	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	12500	2.0	µS/cm	2018-11-23	
pH	6.90	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	4.4	2.0	mg/L	2018-11-21	
Turbidity	0.50	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	



TEST RESULTS

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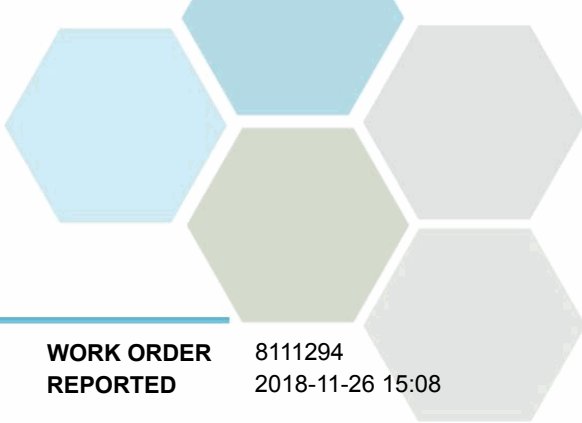
LE-1 (8111294-08) | Matrix: Water | Sampled: 2018-11-14 15:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acridine	< 0.050	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	64	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	64	50-140	%	2018-11-26	
Surrogate: Perylene-d12	96	50-140	%	2018-11-26	

Total Metals

Aluminum, total	0.0189	0.0050	mg/L	2018-11-22	
Antimony, total	0.00032	0.00020	mg/L	2018-11-22	
Arsenic, total	0.00056	0.00050	mg/L	2018-11-22	
Barium, total	0.0363	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.254	0.0050	mg/L	2018-11-22	
Cadmium, total	0.000348	0.000010	mg/L	2018-11-22	
Calcium, total	877	0.20	mg/L	2018-11-22	
Chromium, total	0.00066	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00133	0.00010	mg/L	2018-11-22	
Copper, total	0.00202	0.00040	mg/L	2018-11-22	
Iron, total	< 0.010	0.010	mg/L	2018-11-22	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, total	0.00025	0.00010	mg/L	2018-11-22	
Magnesium, total	241	0.010	mg/L	2018-11-22	
Manganese, total	7.67	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00028	0.00010	mg/L	2018-11-22	



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Analyte	Result	RL	Units	Analyzed	Qualifier
LE-1 (8111294-08) Matrix: Water Sampled: 2018-11-14 15:00, Continued					
<i>Total Metals, Continued</i>					
Nickel, total	0.00525	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	32.2	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	5.8	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	1720	0.10	mg/L	2018-11-22	
Strontium, total	4.36	0.0010	mg/L	2018-11-22	
Sulfur, total	674	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	0.00242	0.00020	mg/L	2018-11-22	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000054	0.000020	mg/L	2018-11-22	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, total	0.0606	0.0040	mg/L	2018-11-22	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-22	

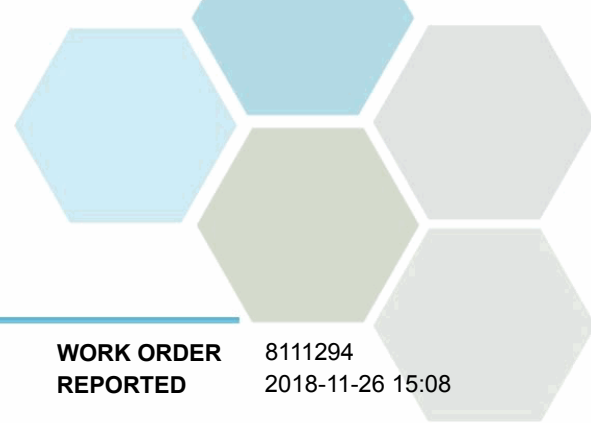
SHA-SW1 (8111294-09) | Matrix: Water | Sampled: 2018-11-14 13:45

<i>Anions</i>					
Chloride	7.58	0.10	mg/L	2018-11-18	
Fluoride	< 0.10	0.10	mg/L	2018-11-18	
Nitrate (as N)	0.395	0.010	mg/L	2018-11-18	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-18	
Sulfate	91.6	1.0	mg/L	2018-11-17	

<i>BCMOE Aggregate Hydrocarbons</i>					
EPHw10-19	< 250	250	µg/L	2018-11-23	S09
EPHw19-32	< 250	250	µg/L	2018-11-23	S09
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	55	60-140	%	2018-11-23	S09

<i>Calculated Parameters</i>					
Chromium, Trivalent	< 0.00100	0.00100	mg/L	N/A	
Hardness, Total (as CaCO3)	134	0.500	mg/L	N/A	

<i>Dissolved Metals</i>					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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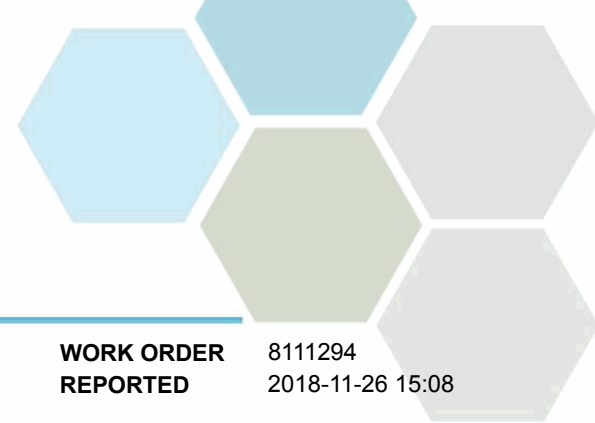
SHA-SW1 (8111294-09) | Matrix: Water | Sampled: 2018-11-14 13:45, Continued

Dissolved Metals, Continued

Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	0.0078	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	0.0151	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	43.6	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Copper, dissolved	0.00126	0.00040	mg/L	2018-11-22	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	5.99	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.00183	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	0.00082	0.00010	mg/L	2018-11-22	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.67	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	4.4	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	6.54	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.118	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	30.9	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, dissolved	0.000502	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	66.8	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	66.8	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	



TEST RESULTS

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SHA-SW1 (8111294-09) | Matrix: Water | Sampled: 2018-11-14 13:45, Continued

General Parameters, Continued

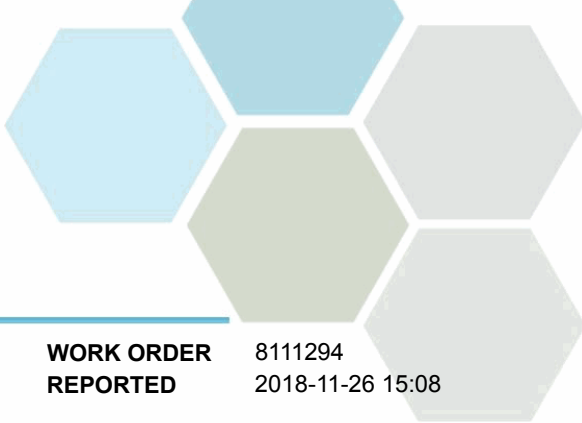
Chromium, Hexavalent	< 0.0010	0.0010	mg/L	2018-11-20	
Colour, True	< 5.0	5.0	CU	2018-11-19	HT1
Conductivity (EC)	314	2.0	µS/cm	2018-11-23	
pH	7.45	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	3.0	2.0	mg/L	2018-11-21	
Turbidity	8.13	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	< 0.050	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	57	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	70	50-140	%	2018-11-26	
Surrogate: Perylene-d12	104	50-140	%	2018-11-26	

Total Metals

Aluminum, total	0.196	0.0050	mg/L	2018-11-22	
Antimony, total	0.00021	0.00020	mg/L	2018-11-22	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, total	0.0095	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	0.0142	0.0050	mg/L	2018-11-22	
Cadmium, total	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, total	46.3	0.20	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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SHA-SW1 (8111294-09) | Matrix: Water | Sampled: 2018-11-14 13:45, Continued

Total Metals, Continued

Chromium, total	0.00058	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00018	0.00010	mg/L	2018-11-22	
Copper, total	0.00216	0.00040	mg/L	2018-11-22	
Iron, total	0.224	0.010	mg/L	2018-11-22	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, total	0.00021	0.00010	mg/L	2018-11-22	
Magnesium, total	6.54	0.010	mg/L	2018-11-22	
Manganese, total	0.00697	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	0.00083	0.00010	mg/L	2018-11-22	
Nickel, total	0.00082	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	0.74	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	5.1	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	6.87	0.10	mg/L	2018-11-22	
Strontium, total	0.126	0.0010	mg/L	2018-11-22	
Sulfur, total	33.2	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	0.0086	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	0.000542	0.000020	mg/L	2018-11-22	
Vanadium, total	0.0015	0.0010	mg/L	2018-11-22	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-22	

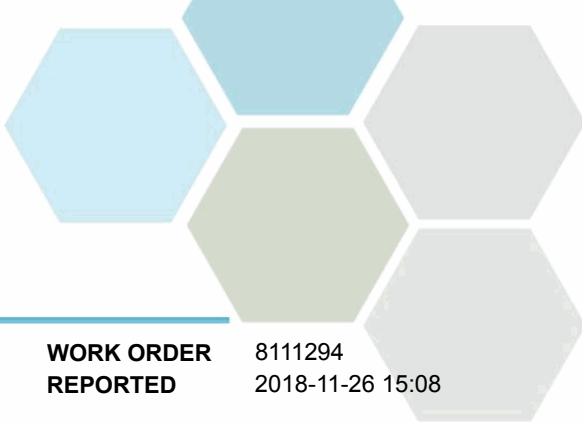
SHA-SW2 (8111294-10) | Matrix: Water | Sampled: 2018-11-14 12:15

Anions

Chloride	1.66	0.10	mg/L	2018-11-18	
Fluoride	< 0.10	0.10	mg/L	2018-11-18	
Nitrate (as N)	0.034	0.010	mg/L	2018-11-18	
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-18	
Sulfate	5.9	1.0	mg/L	2018-11-18	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2018-11-23	S09
EPHw19-32	< 250	250	µg/L	2018-11-23	S09



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
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Analyte	Result	RL	Units	Analyzed	Qualifier
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SHA-SW2 (8111294-10) | Matrix: Water | Sampled: 2018-11-14 12:15, Continued

BCMOE Aggregate Hydrocarbons, Continued

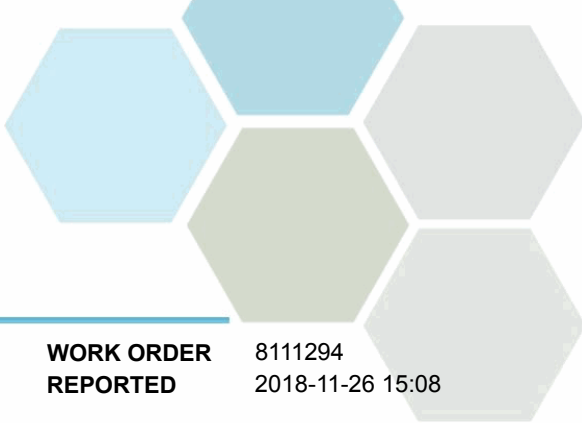
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	56	60-140	%	2018-11-23	S09

Calculated Parameters

Chromium, Trivalent	< 0.00150	0.00150	mg/L	N/A	
Hardness, Total (as CaCO3)	10.3	0.500	mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	0.0903	0.0050	mg/L	2018-11-22	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, dissolved	3.01	0.20	mg/L	2018-11-22	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Copper, dissolved	0.00084	0.00040	mg/L	2018-11-22	
Iron, dissolved	0.018	0.010	mg/L	2018-11-22	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, dissolved	0.674	0.010	mg/L	2018-11-22	
Manganese, dissolved	0.00240	0.00020	mg/L	2018-11-22	
Mercury, dissolved	< 0.000040	0.000040	mg/L	2018-11-22	CT5
Molybdenum, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2018-11-22	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-22	
Potassium, dissolved	0.26	0.10	mg/L	2018-11-22	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, dissolved	2.7	1.0	mg/L	2018-11-22	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, dissolved	1.33	0.10	mg/L	2018-11-22	
Strontium, dissolved	0.0133	0.0010	mg/L	2018-11-22	
Sulfur, dissolved	4.7	3.0	mg/L	2018-11-22	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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SHA-SW2 (8111294-10) | Matrix: Water | Sampled: 2018-11-14 12:15, Continued

Dissolved Metals, Continued

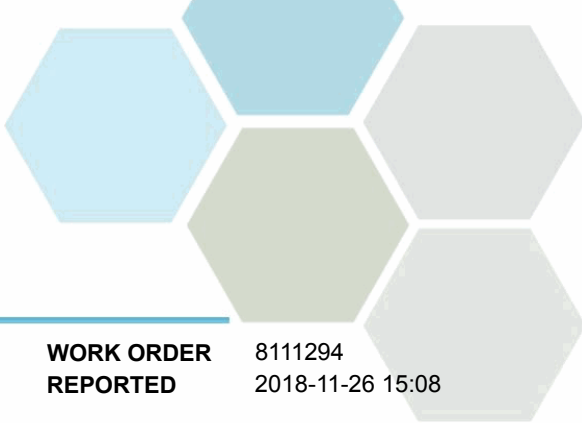
Uranium, dissolved	< 0.000020	0.000020	mg/L	2018-11-22	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-22	

General Parameters

Alkalinity, Total (as CaCO3)	5.6	1.0	mg/L	2018-11-19	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Bicarbonate (as CaCO3)	5.6	1.0	mg/L	2018-11-19	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-19	
Chromium, Hexavalent	< 0.0015	0.0010	mg/L	2018-11-20	RA1
Colour, True	11	5.0	CU	2018-11-19	HT1
Conductivity (EC)	33.5	2.0	µS/cm	2018-11-23	
pH	6.36	0.10	pH units	2018-11-16	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2018-11-21	
Turbidity	2.26	0.10	NTU	2018-11-16	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-26	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-26	
Acridine	< 0.050	0.050	µg/L	2018-11-26	
Anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-26	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-26	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-26	
2-Chloronaphthalene	< 0.164	0.100	µg/L	2018-11-26	RA1
Chrysene	< 0.050	0.050	µg/L	2018-11-26	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-26	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-26	
Fluorene	< 0.050	0.050	µg/L	2018-11-26	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-26	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-26	
Naphthalene	< 0.200	0.200	µg/L	2018-11-26	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-26	
Pyrene	< 0.020	0.020	µg/L	2018-11-26	
Quinoline	< 0.050	0.050	µg/L	2018-11-26	
Surrogate: Acridine-d9	64	50-140	%	2018-11-26	
Surrogate: Naphthalene-d8	60	50-140	%	2018-11-26	
Surrogate: Perylene-d12	108	50-140	%	2018-11-26	

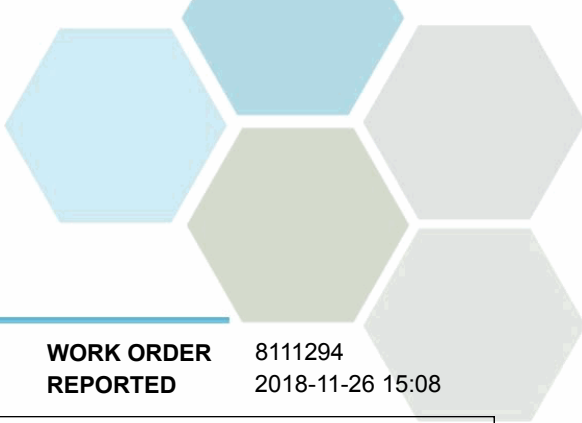


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
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Analyte	Result	RL	Units	Analyzed	Qualifier
SHA-SW2 (8111294-10) Matrix: Water Sampled: 2018-11-14 12:15, Continued					
<i>Total Metals</i>					
Aluminum, total	0.176	0.0050	mg/L	2018-11-22	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-22	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-22	
Barium, total	0.0051	0.0050	mg/L	2018-11-22	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-22	
Boron, total	< 0.0050	0.0050	mg/L	2018-11-22	
Cadmium, total	< 0.000010	0.000010	mg/L	2018-11-22	
Calcium, total	3.27	0.20	mg/L	2018-11-22	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Cobalt, total	0.00012	0.00010	mg/L	2018-11-22	
Copper, total	0.00123	0.00040	mg/L	2018-11-22	
Iron, total	0.087	0.010	mg/L	2018-11-22	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-22	
Lithium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Magnesium, total	0.764	0.010	mg/L	2018-11-22	
Manganese, total	0.00385	0.00020	mg/L	2018-11-22	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-20	
Molybdenum, total	< 0.00010	0.00010	mg/L	2018-11-22	
Nickel, total	0.00056	0.00040	mg/L	2018-11-22	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-22	
Potassium, total	0.29	0.10	mg/L	2018-11-22	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Silicon, total	3.0	1.0	mg/L	2018-11-22	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-22	
Sodium, total	1.46	0.10	mg/L	2018-11-22	
Strontium, total	0.0146	0.0010	mg/L	2018-11-22	
Sulfur, total	5.2	3.0	mg/L	2018-11-22	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-22	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-22	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-22	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-22	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-22	
Uranium, total	< 0.000020	0.000020	mg/L	2018-11-22	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-22	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-22	
Zirconium, total	0.00011	0.00010	mg/L	2018-11-22	



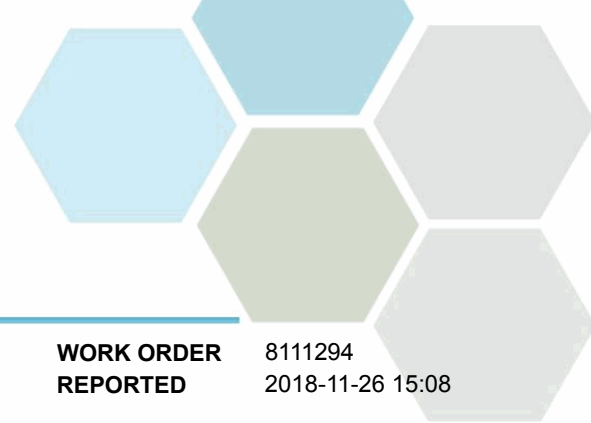
TEST RESULTS

REPORTED TO Allterra Construction
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WORK ORDER 8111294
REPORTED 2018-11-26 15:08

Sample Qualifiers:

- CT5 This sample has been incorrectly preserved for Mercury analysis
- 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.
- RA1 The Reporting Limit has been raised due to matrix interference.
- S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
- S09 The surrogate recovery for this sample is outside of established control limits .



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Allterra Construction
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Analysis Description	Method Ref.	Technique	Location
Alkalinity in Water	SM 2320 B* (2011)	Titration with H2SO4	Kelowna
Anions in Water	SM 4110 B (2011)	Ion Chromatography	Kelowna
Chromium, Hexavalent in Water	SM 3500-Cr B (2011)	Spectrophotometry	Richmond
Colour, True in Water	SM 2120 C (2011)	Spectrophotometry (456 nm)	Kelowna
Conductivity in Water	SM 2510 B (2011)	Conductivity Meter	Richmond
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Hardness in Water	SM 2340 B* (2011)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
pH in Water	SM 4500-H+ B (2011)	Electrometry	Richmond
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MSD (SIM)	Richmond
Solids, Total Suspended in Water	SM 2540 D* (2011)	Gravimetry (Dried at 103-105C)	Richmond
Total Metals in Water	EPA 200.2* / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
Turbidity in Water	SM 2130 B (2011)	Nephelometry	Richmond

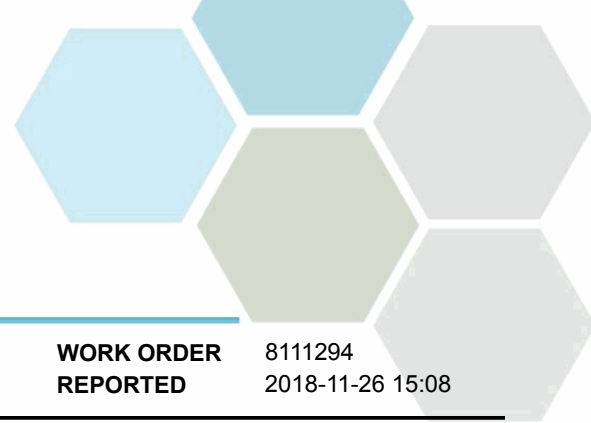
Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
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
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

The results in this report apply to the samples analyzed in accordance with the Chain of Custody 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.



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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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):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is 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 10-20 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	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Anions, Batch B8K1320

Blank (B8K1320-BLK1)		Prepared: 2018-11-17, Analyzed: 2018-11-17							
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							

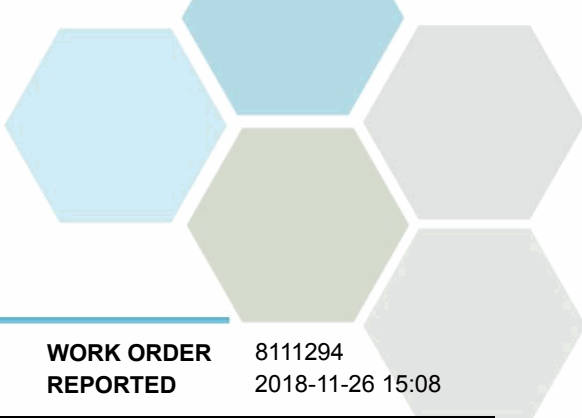
LCS (B8K1320-BS1)		Prepared: 2018-11-17, Analyzed: 2018-11-17							
Chloride	16.0	0.10 mg/L	16.0		100	90-110			
Fluoride	3.79	0.10 mg/L	4.00		95	88-108			
Nitrate (as N)	4.04	0.010 mg/L	4.00		101	93-108			
Nitrite (as N)	2.08	0.010 mg/L	2.00		104	85-114			
Sulfate	16.0	1.0 mg/L	16.0		100	91-109			

Duplicate (B8K1320-DUP1)		Source: 8111294-02		Prepared: 2018-11-17, Analyzed: 2018-11-17					
Chloride	14.1	0.10 mg/L		14.2			1	10	
Fluoride	< 0.10	0.10 mg/L		< 0.10				10	
Nitrate (as N)	< 0.010	0.010 mg/L		< 0.010				10	
Nitrite (as N)	< 0.010	0.010 mg/L		< 0.010				6	
Sulfate	41.5	1.0 mg/L		40.5			2	6	

Matrix Spike (B8K1320-MS1)		Source: 8111294-02		Prepared: 2018-11-17, Analyzed: 2018-11-17					
Chloride	30.0	0.10 mg/L	16.0	14.2	99	75-125			
Fluoride	3.93	0.10 mg/L	4.00	< 0.10	97	75-125			
Nitrate (as N)	3.99	0.010 mg/L	4.00	< 0.010	100	75-125			
Nitrite (as N)	2.01	0.010 mg/L	2.00	< 0.010	100	80-120			
Sulfate	58.6	1.0 mg/L	16.0	40.5	113	75-125			

BCMOE Aggregate Hydrocarbons, Batch B8K1806

Blank (B8K1806-BLK1)		Prepared: 2018-11-22, Analyzed: 2018-11-23							
EPHw10-19	< 250	250 µg/L							S09
EPHw19-32	< 250	250 µg/L							S09
Surrogate: 2-Methylnonane (EPH/F2-4)	179	µg/L	444		40	60-140			S09



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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BCMOE Aggregate Hydrocarbons, Batch B8K1806, Continued

LCS (B8K1806-BS2)

Prepared: 2018-11-22, Analyzed: 2018-11-23

EPHw10-19	14500	250 µg/L	15400		94	70-130			
EPHw19-32	18800	250 µg/L	22200		85	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	301	µg/L	444		68	60-140			

Dissolved Metals, Batch B8K1443

Blank (B8K1443-BLK1)

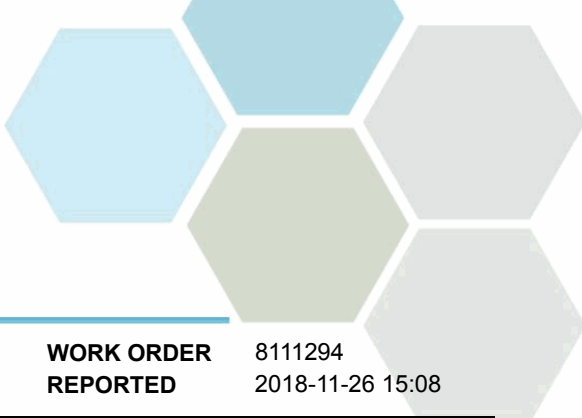
Prepared: 2018-11-21, Analyzed: 2018-11-21

Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Mercury, dissolved	< 0.000040	0.000040 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

Blank (B8K1443-BLK2)

Prepared: 2018-11-21, Analyzed: 2018-11-21

Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B8K1443, Continued

Blank (B8K1443-BLK2), Continued

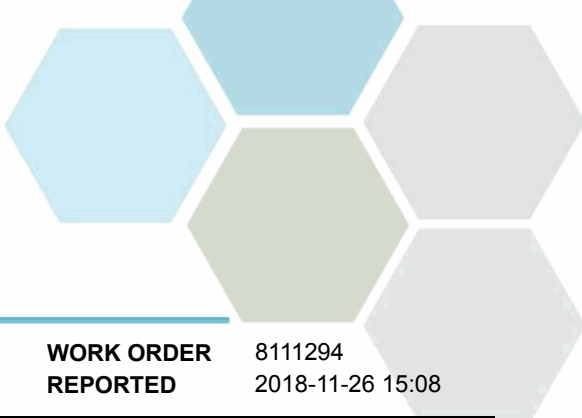
Prepared: 2018-11-21, Analyzed: 2018-11-21

Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Mercury, dissolved	< 0.000040	0.000040 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

Blank (B8K1443-BLK3)

Prepared: 2018-11-22, Analyzed: 2018-11-22

Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Mercury, dissolved	< 0.000040	0.000040 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B8K1443, Continued

Blank (B8K1443-BLK3), Continued

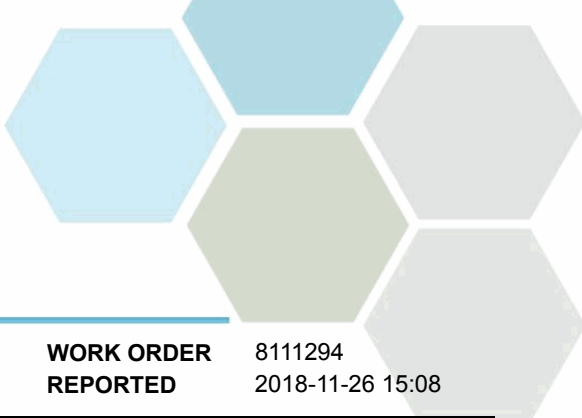
Prepared: 2018-11-22, Analyzed: 2018-11-22

Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B8K1443-BS1)

Prepared: 2018-11-21, Analyzed: 2018-11-21

Aluminum, dissolved	0.0198	0.0050 mg/L	0.0200		99	80-120			
Antimony, dissolved	0.0183	0.00020 mg/L	0.0200		91	80-120			
Arsenic, dissolved	0.0191	0.00050 mg/L	0.0200		95	80-120			
Barium, dissolved	0.0187	0.0050 mg/L	0.0200		93	80-120			
Beryllium, dissolved	0.0198	0.00010 mg/L	0.0200		99	80-120			
Bismuth, dissolved	0.0193	0.00010 mg/L	0.0200		96	80-120			
Boron, dissolved	0.0216	0.0050 mg/L	0.0200		108	80-120			
Cadmium, dissolved	0.0195	0.000010 mg/L	0.0200		97	80-120			
Calcium, dissolved	1.80	0.20 mg/L	2.00		90	80-120			
Chromium, dissolved	0.0193	0.00050 mg/L	0.0200		97	80-120			
Cobalt, dissolved	0.0198	0.00010 mg/L	0.0200		99	80-120			
Copper, dissolved	0.0200	0.00040 mg/L	0.0200		100	80-120			
Iron, dissolved	1.84	0.010 mg/L	2.00		92	80-120			
Lead, dissolved	0.0195	0.00020 mg/L	0.0200		97	80-120			
Lithium, dissolved	0.0199	0.00010 mg/L	0.0200		99	80-120			
Magnesium, dissolved	1.92	0.010 mg/L	2.00		96	80-120			
Manganese, dissolved	0.0192	0.00020 mg/L	0.0200		96	80-120			
Mercury, dissolved	0.000816	0.000040 mg/L	0.00100		82	80-120			
Molybdenum, dissolved	0.0180	0.00010 mg/L	0.0200		90	80-120			
Nickel, dissolved	0.0196	0.00040 mg/L	0.0200		98	80-120			
Phosphorus, dissolved	1.89	0.050 mg/L	2.00		95	80-120			
Potassium, dissolved	1.86	0.10 mg/L	2.00		93	80-120			
Selenium, dissolved	0.0199	0.00050 mg/L	0.0200		99	80-120			
Silicon, dissolved	1.9	1.0 mg/L	2.00		96	80-120			
Silver, dissolved	0.0187	0.000050 mg/L	0.0200		94	80-120			
Sodium, dissolved	1.94	0.10 mg/L	2.00		97	80-120			
Strontium, dissolved	0.0179	0.0010 mg/L	0.0200		89	80-120			
Sulfur, dissolved	4.6	3.0 mg/L	5.00		92	80-120			
Tellurium, dissolved	0.0197	0.00050 mg/L	0.0200		99	80-120			
Thallium, dissolved	0.0194	0.000020 mg/L	0.0200		97	80-120			
Thorium, dissolved	0.0185	0.00010 mg/L	0.0200		92	80-120			
Tin, dissolved	0.0191	0.00020 mg/L	0.0200		96	80-120			
Titanium, dissolved	0.0189	0.0050 mg/L	0.0200		95	80-120			
Tungsten, dissolved	0.0171	0.0010 mg/L	0.0200		86	80-120			
Uranium, dissolved	0.0193	0.000020 mg/L	0.0200		96	80-120			
Vanadium, dissolved	0.0189	0.0010 mg/L	0.0200		95	80-120			
Zinc, dissolved	0.0210	0.0040 mg/L	0.0200		105	80-120			
Zirconium, dissolved	0.0193	0.00010 mg/L	0.0200		97	80-120			



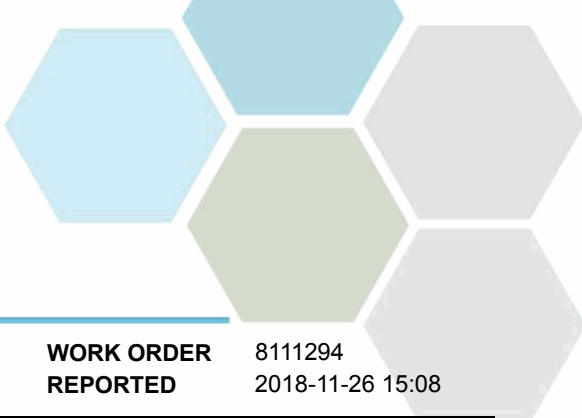
APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B8K1443, Continued									
Duplicate (B8K1443-DUP1)		Source: 8111294-01		Prepared: 2018-11-22, Analyzed: 2018-11-22					
Aluminum, dissolved	< 0.0050	0.0050 mg/L		< 0.0050					11
Antimony, dissolved	0.00037	0.00020 mg/L		0.00043					20
Arsenic, dissolved	0.00398	0.00050 mg/L		0.00419			5	8	
Barium, dissolved	0.0761	0.0050 mg/L		0.0779			2	7	
Beryllium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					14
Bismuth, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					20
Boron, dissolved	0.0564	0.0050 mg/L		0.0600			6	13	
Cadmium, dissolved	< 0.000010	0.000010 mg/L		< 0.000010					20
Calcium, dissolved	152	0.20 mg/L		154			1	8	
Chromium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					14
Cobalt, dissolved	0.00186	0.00010 mg/L		0.00190			2	10	
Copper, dissolved	< 0.00040	0.00040 mg/L		< 0.00040					20
Iron, dissolved	2.57	0.010 mg/L		2.61			2	14	
Lead, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Lithium, dissolved	0.00950	0.00010 mg/L		0.00988			4	14	
Magnesium, dissolved	32.2	0.010 mg/L		32.8			2	6	
Manganese, dissolved	1.90	0.00020 mg/L		1.94			2	9	
Mercury, dissolved	< 0.000040	0.000040 mg/L		< 0.000040					20
Molybdenum, dissolved	0.00041	0.00010 mg/L		0.00039					19
Nickel, dissolved	0.00180	0.00040 mg/L		0.00186					20
Phosphorus, dissolved	< 0.050	0.050 mg/L		< 0.050					14
Potassium, dissolved	3.24	0.10 mg/L		3.30			2	8	
Selenium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					20
Silicon, dissolved	11.4	1.0 mg/L		11.5			< 1	12	
Silver, dissolved	< 0.000050	0.000050 mg/L		< 0.000050					20
Sodium, dissolved	53.1	0.10 mg/L		54.3			2	6	
Strontium, dissolved	0.527	0.0010 mg/L		0.530			< 1	6	
Sulfur, dissolved	21.6	3.0 mg/L		22.3			3	20	
Tellurium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					20
Thallium, dissolved	< 0.000020	0.000020 mg/L		< 0.000020					13
Thorium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					20
Tin, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Titanium, dissolved	< 0.0050	0.0050 mg/L		< 0.0050					20
Tungsten, dissolved	< 0.0010	0.0010 mg/L		< 0.0010					20
Uranium, dissolved	0.00636	0.000020 mg/L		0.00646			2	14	
Vanadium, dissolved	< 0.0010	0.0010 mg/L		< 0.0010					20
Zinc, dissolved	< 0.0040	0.0040 mg/L		< 0.0040					11
Zirconium, dissolved	0.00019	0.00010 mg/L		0.00020					20

Reference (B8K1443-SRM1)		Prepared: 2018-11-21, Analyzed: 2018-11-21							
Aluminum, dissolved	0.221	0.0050 mg/L		0.233	95	79-114			
Antimony, dissolved	0.0441	0.00020 mg/L		0.0430	103	89-123			
Arsenic, dissolved	0.433	0.00050 mg/L		0.438	99	87-113			
Barium, dissolved	3.04	0.0050 mg/L		3.35	91	85-114			
Beryllium, dissolved	0.208	0.00010 mg/L		0.213	98	79-122			
Boron, dissolved	1.59	0.0050 mg/L		1.74	91	79-117			
Cadmium, dissolved	0.217	0.000010 mg/L		0.224	97	89-112			
Calcium, dissolved	7.00	0.20 mg/L		7.69	91	85-120			
Chromium, dissolved	0.430	0.00050 mg/L		0.437	98	87-113			
Cobalt, dissolved	0.127	0.00010 mg/L		0.128	99	90-117			
Copper, dissolved	0.827	0.00040 mg/L		0.844	98	90-115			
Iron, dissolved	1.21	0.010 mg/L		1.29	94	86-112			
Lead, dissolved	0.106	0.00020 mg/L		0.112	95	90-113			
Lithium, dissolved	0.0984	0.00010 mg/L		0.104	95	77-127			
Magnesium, dissolved	6.41	0.010 mg/L		6.92	93	84-116			
Manganese, dissolved	0.318	0.00020 mg/L		0.345	92	85-113			

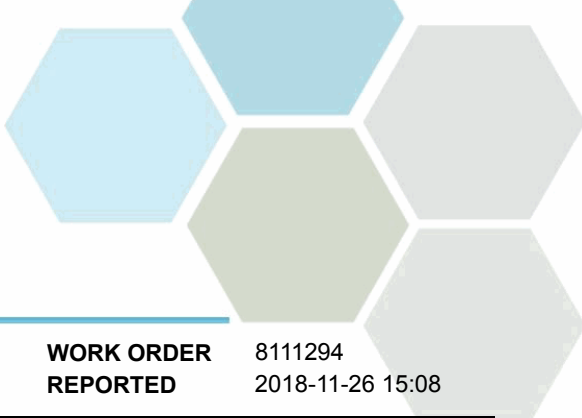


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B8K1443, Continued									
Reference (B8K1443-SRM1), Continued					Prepared: 2018-11-21, Analyzed: 2018-11-21				
Molybdenum, dissolved	0.402	0.00010 mg/L	0.426		94	87-112			
Nickel, dissolved	0.838	0.00040 mg/L	0.840		100	90-114			
Phosphorus, dissolved	0.483	0.050 mg/L	0.495		98	74-119			
Potassium, dissolved	2.82	0.10 mg/L	3.19		88	78-119			
Selenium, dissolved	0.0330	0.00050 mg/L	0.0331		100	89-123			
Sodium, dissolved	17.4	0.10 mg/L	19.1		91	81-117			
Strontium, dissolved	0.852	0.0010 mg/L	0.916		93	82-111			
Thallium, dissolved	0.0376	0.000020 mg/L	0.0393		96	90-113			
Uranium, dissolved	0.233	0.000020 mg/L	0.266		88	87-113			
Vanadium, dissolved	0.839	0.0010 mg/L	0.869		96	85-110			
Zinc, dissolved	0.857	0.0040 mg/L	0.881		97	88-114			
General Parameters, Batch B8K1287									
Blank (B8K1287-BLK1)					Prepared: 2018-11-16, Analyzed: 2018-11-16				
Turbidity	< 0.10	0.10 NTU							
Duplicate (B8K1287-DUP1)					Source: 8111294-09 Prepared: 2018-11-16, Analyzed: 2018-11-16				
Turbidity	7.75	0.10 NTU		8.13			5	18	
General Parameters, Batch B8K1318									
Reference (B8K1318-SRM1)					Prepared: 2018-11-16, Analyzed: 2018-11-16				
pH	6.24	0.10 pH units	6.20		101	97.5-102.5			
Reference (B8K1318-SRM2)					Prepared: 2018-11-16, Analyzed: 2018-11-16				
pH	6.24	0.10 pH units	6.20		101	97.5-102.5			
General Parameters, Batch B8K1419									
Blank (B8K1419-BLK1)					Prepared: 2018-11-19, Analyzed: 2018-11-19				
Colour, True	< 5.0	5.0 CU							
Blank (B8K1419-BLK2)					Prepared: 2018-11-19, Analyzed: 2018-11-19				
Colour, True	< 5.0	5.0 CU							
LCS (B8K1419-BS1)					Prepared: 2018-11-19, Analyzed: 2018-11-19				
Colour, True	8.9	5.0 CU	10.0		89	85-115			
LCS (B8K1419-BS2)					Prepared: 2018-11-19, Analyzed: 2018-11-19				
Colour, True	8.7	5.0 CU	10.0		87	85-115			
Duplicate (B8K1419-DUP2)					Source: 8111294-10 Prepared: 2018-11-19, Analyzed: 2018-11-19				
Colour, True	11	5.0 CU		11				15	
General Parameters, Batch B8K1447									
Blank (B8K1447-BLK1)					Prepared: 2018-11-19, Analyzed: 2018-11-19				
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							

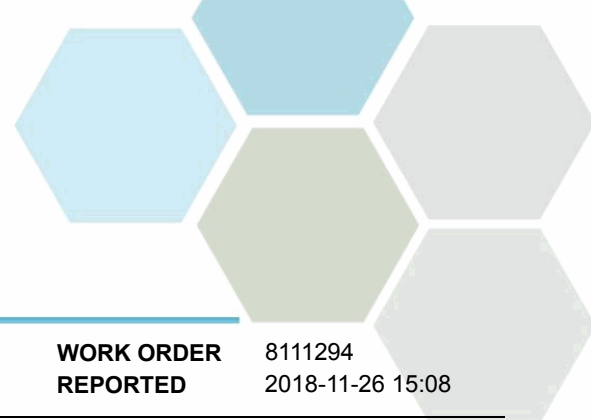


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
2018-11-26 15:08

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B8K1447, Continued									
Blank (B8K1447-BLK2)			Prepared: 2018-11-19, Analyzed: 2018-11-19						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B8K1447-BS1)			Prepared: 2018-11-19, Analyzed: 2018-11-19						
Alkalinity, Total (as CaCO3)	105	1.0 mg/L	100		105	92-106			
LCS (B8K1447-BS2)			Prepared: 2018-11-19, Analyzed: 2018-11-19						
Alkalinity, Total (as CaCO3)	105	1.0 mg/L	100		105	92-106			
General Parameters, Batch B8K1536									
Blank (B8K1536-BLK1)			Prepared: 2018-11-20, Analyzed: 2018-11-20						
Chromium, Hexavalent	< 0.0010	0.0010 mg/L							
LCS (B8K1536-BS1)			Prepared: 2018-11-20, Analyzed: 2018-11-20						
Chromium, Hexavalent	0.100	0.0010 mg/L	0.100		100	90-111			
Duplicate (B8K1536-DUP1)			Source: 8111294-10		Prepared: 2018-11-20, Analyzed: 2018-11-20				
Chromium, Hexavalent	0.0012	0.0010 mg/L		< 0.0015				7	
Matrix Spike (B8K1536-MS1)			Source: 8111294-09		Prepared: 2018-11-20, Analyzed: 2018-11-20				
Chromium, Hexavalent	0.0956	0.0010 mg/L	0.100	< 0.0010	95	70-116			
General Parameters, Batch B8K1563									
Blank (B8K1563-BLK1)			Prepared: 2018-11-21, Analyzed: 2018-11-21						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B8K1563-BS1)			Prepared: 2018-11-21, Analyzed: 2018-11-21						
Solids, Total Suspended	96.0	10.0 mg/L	100		96	83-107			
General Parameters, Batch B8K1842									
Blank (B8K1842-BLK1)			Prepared: 2018-11-23, Analyzed: 2018-11-23						
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B8K1842-BS1)			Prepared: 2018-11-23, Analyzed: 2018-11-23						
Conductivity (EC)	151	2.0 µS/cm	147		103	90-110			
Duplicate (B8K1842-DUP1)			Source: 8111294-02		Prepared: 2018-11-23, Analyzed: 2018-11-23				
Conductivity (EC)	338	2.0 µS/cm		343			2	4	
Reference (B8K1842-SRM1)			Prepared: 2018-11-23, Analyzed: 2018-11-23						
Conductivity (EC)	1010	2.0 µS/cm	1000		101	95-105			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B8K1806									
Blank (B8K1806-BLK1)			Prepared: 2018-11-22, Analyzed: 2018-11-23						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							

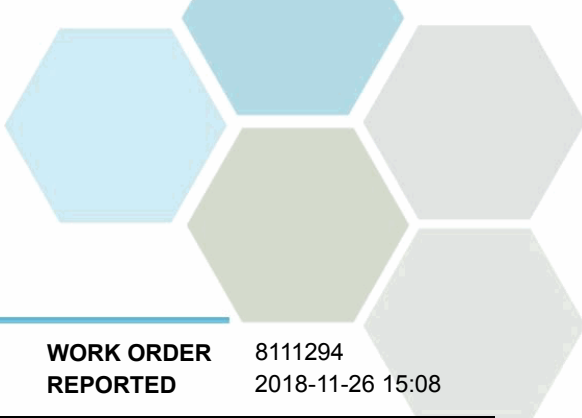


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B8K1806, Continued									
Blank (B8K1806-BLK1), Continued					Prepared: 2018-11-22, Analyzed: 2018-11-23				
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
2-Chloronaphthalene	< 0.100	0.100 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
1-Methylnaphthalene	< 0.100	0.100 µg/L							
2-Methylnaphthalene	< 0.100	0.100 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.38	µg/L	4.44		76	50-140			
Surrogate: Naphthalene-d8	3.07	µg/L	4.44		69	50-140			
Surrogate: Perylene-d12	4.91	µg/L	4.44		110	50-140			
LCS (B8K1806-BS1)					Prepared: 2018-11-22, Analyzed: 2018-11-23				
Acenaphthene	4.20	0.050 µg/L	4.40		95	58-125			
Acenaphthylene	4.16	0.200 µg/L	4.40		95	54-128			
Acridine	3.79	0.050 µg/L	4.44		85	50-112			
Anthracene	4.39	0.010 µg/L	4.44		99	66-125			
Benz(a)anthracene	5.43	0.010 µg/L	4.44		122	59-123			
Benzo(a)pyrene	4.83	0.010 µg/L	4.40		110	62-116			
Benzo(b+j)fluoranthene	9.31	0.050 µg/L	8.89		105	69-121			
Benzo(g,h,i)perylene	5.12	0.050 µg/L	4.40		116	58-129			
Benzo(k)fluoranthene	5.25	0.050 µg/L	4.44		118	67-128			
2-Chloronaphthalene	3.47	0.100 µg/L	4.44		78	50-140			
Chrysene	5.53	0.050 µg/L	4.42		125	58-125			
Dibenz(a,h)anthracene	5.49	0.010 µg/L	4.42		124	58-126			
Fluoranthene	4.79	0.030 µg/L	4.36		110	67-133			
Fluorene	4.19	0.050 µg/L	4.40		95	55-122			
Indeno(1,2,3-cd)pyrene	5.31	0.050 µg/L	4.44		119	62-126			
1-Methylnaphthalene	3.75	0.100 µg/L	4.38		86	53-125			
2-Methylnaphthalene	3.78	0.100 µg/L	4.36		87	52-122			
Naphthalene	3.90	0.200 µg/L	4.44		88	50-130			
Phenanthrene	4.57	0.100 µg/L	4.40		104	67-127			
Pyrene	4.83	0.020 µg/L	4.44		109	68-133			
Quinoline	6.68	0.050 µg/L	4.44		150	51-140			SPK
Surrogate: Acridine-d9	3.17	µg/L	4.44		71	50-140			
Surrogate: Naphthalene-d8	2.92	µg/L	4.44		66	50-140			
Surrogate: Perylene-d12	4.35	µg/L	4.44		98	50-140			
LCS Dup (B8K1806-BSD1)					Prepared: 2018-11-22, Analyzed: 2018-11-23				
Acenaphthene	3.98	0.050 µg/L	4.40		90	58-125	5	16	
Acenaphthylene	4.00	0.200 µg/L	4.40		91	54-128	4	16	
Acridine	3.13	0.050 µg/L	4.44		70	50-112	19	26	
Anthracene	4.12	0.010 µg/L	4.44		93	66-125	6	14	
Benz(a)anthracene	5.26	0.010 µg/L	4.44		118	59-123	3	23	
Benzo(a)pyrene	4.97	0.010 µg/L	4.40		113	62-116	3	16	
Benzo(b+j)fluoranthene	8.63	0.050 µg/L	8.89		97	69-121	8	14	
Benzo(g,h,i)perylene	4.68	0.050 µg/L	4.40		106	58-129	9	25	



APPENDIX 2: QUALITY CONTROL RESULTS

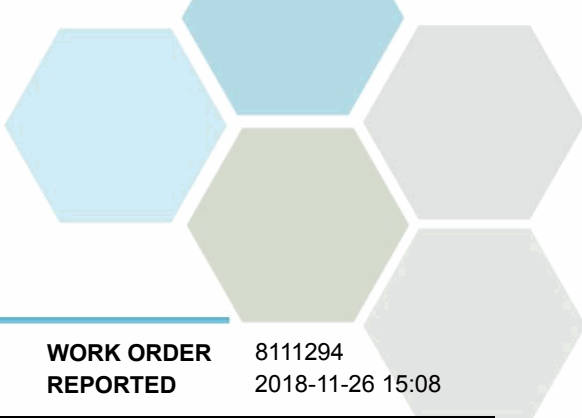
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8111294
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B8K1806, Continued									
LCS Dup (B8K1806-BSD1), Continued					Prepared: 2018-11-22, Analyzed: 2018-11-23				
Benzo(k)fluoranthene	4.54	0.050 µg/L	4.44		102	67-128	14	18	
2-Chloronaphthalene	3.38	0.100 µg/L	4.44		76	50-140	3	30	
Chrysene	5.15	0.050 µg/L	4.42		116	58-125	7	24	
Dibenz(a,h)anthracene	5.04	0.010 µg/L	4.42		114	58-126	9	23	
Fluoranthene	4.32	0.030 µg/L	4.36		99	67-133	10	18	
Fluorene	3.90	0.050 µg/L	4.40		89	55-122	7	16	
Indeno(1,2,3-cd)pyrene	4.87	0.050 µg/L	4.44		109	62-126	9	22	
1-Methylnaphthalene	3.62	0.100 µg/L	4.38		83	53-125	3	16	
2-Methylnaphthalene	3.64	0.100 µg/L	4.36		84	52-122	4	17	
Naphthalene	3.73	0.200 µg/L	4.44		84	50-130	5	18	
Phenanthrene	4.06	0.100 µg/L	4.40		92	67-127	12	14	
Pyrene	4.36	0.020 µg/L	4.44		98	68-133	10	18	
Quinoline	6.74	0.050 µg/L	4.44		152	51-140	1	12	SPK
Surrogate: Acridine-d9	2.70	µg/L	4.44		61	50-140			
Surrogate: Naphthalene-d8	2.94	µg/L	4.44		66	50-140			
Surrogate: Perylene-d12	4.19	µg/L	4.44		94	50-140			

Total Metals, Batch B8K1437

Blank (B8K1437-BLK1)			Prepared: 2018-11-19, Analyzed: 2018-11-21						
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8111294
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B8K1437, Continued

Blank (B8K1437-BLK1), Continued

Prepared: 2018-11-19, Analyzed: 2018-11-21

Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

Blank (B8K1437-BLK2)

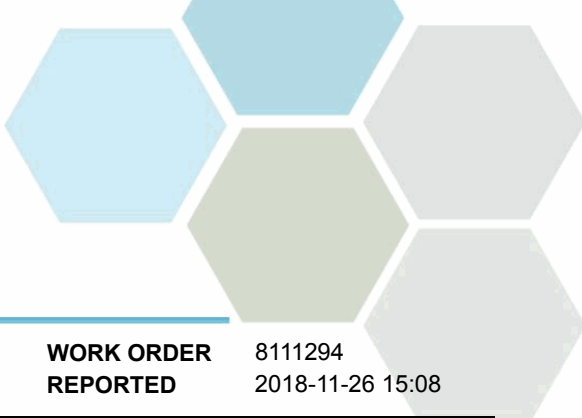
Prepared: 2018-11-19, Analyzed: 2018-11-21

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

Blank (B8K1437-BLK3)

Prepared: 2018-11-19, Analyzed: 2018-11-22

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B8K1437, Continued

Blank (B8K1437-BLK3), Continued

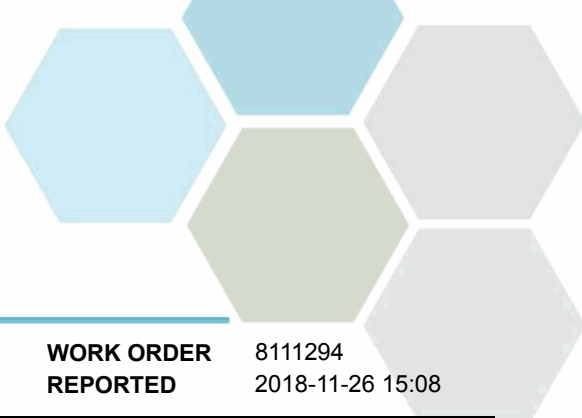
Prepared: 2018-11-19, Analyzed: 2018-11-22

Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

LCS (B8K1437-BS1)

Prepared: 2018-11-19, Analyzed: 2018-11-21

Aluminum, total	0.0221	0.0050 mg/L	0.0200		110	80-120			
Antimony, total	0.0201	0.00020 mg/L	0.0200		100	80-120			
Arsenic, total	0.0206	0.00050 mg/L	0.0200		103	80-120			
Barium, total	0.0218	0.0050 mg/L	0.0200		109	80-120			
Beryllium, total	0.0213	0.00010 mg/L	0.0200		107	80-120			
Bismuth, total	0.0206	0.00010 mg/L	0.0200		103	80-120			
Boron, total	0.0204	0.0050 mg/L	0.0200		102	80-120			
Cadmium, total	0.0205	0.000010 mg/L	0.0200		103	80-120			
Calcium, total	1.96	0.20 mg/L	2.00		98	80-120			
Chromium, total	0.0208	0.00050 mg/L	0.0200		104	80-120			
Cobalt, total	0.0214	0.00010 mg/L	0.0200		107	80-120			
Copper, total	0.0216	0.00040 mg/L	0.0200		108	80-120			
Iron, total	1.97	0.010 mg/L	2.00		99	80-120			
Lead, total	0.0207	0.00020 mg/L	0.0200		104	80-120			
Lithium, total	0.0222	0.00010 mg/L	0.0200		111	80-120			
Magnesium, total	2.08	0.010 mg/L	2.00		104	80-120			
Manganese, total	0.0205	0.00020 mg/L	0.0200		103	80-120			
Molybdenum, total	0.0192	0.00010 mg/L	0.0200		96	80-120			
Nickel, total	0.0212	0.00040 mg/L	0.0200		106	80-120			
Phosphorus, total	2.07	0.050 mg/L	2.00		103	80-120			
Potassium, total	2.02	0.10 mg/L	2.00		101	80-120			
Selenium, total	0.0217	0.00050 mg/L	0.0200		108	80-120			
Silicon, total	2.0	1.0 mg/L	2.00		102	80-120			
Silver, total	0.0203	0.000050 mg/L	0.0200		102	80-120			
Sodium, total	2.13	0.10 mg/L	2.00		107	80-120			
Strontium, total	0.0190	0.0010 mg/L	0.0200		95	80-120			
Sulfur, total	5.2	3.0 mg/L	5.00		103	80-120			
Tellurium, total	0.0204	0.00050 mg/L	0.0200		102	80-120			
Thallium, total	0.0208	0.000020 mg/L	0.0200		104	80-120			
Thorium, total	0.0200	0.00010 mg/L	0.0200		100	80-120			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B8K1437, Continued

LCS (B8K1437-BS1), Continued

Prepared: 2018-11-19, Analyzed: 2018-11-21

Tin, total	0.0204	0.00020 mg/L	0.0200		102	80-120			
Titanium, total	0.0210	0.0050 mg/L	0.0200		105	80-120			
Tungsten, total	0.0182	0.0010 mg/L	0.0200		91	80-120			
Uranium, total	0.0207	0.000020 mg/L	0.0200		103	80-120			
Vanadium, total	0.0205	0.0010 mg/L	0.0200		103	80-120			
Zinc, total	0.0219	0.0040 mg/L	0.0200		110	80-120			
Zirconium, total	0.0208	0.00010 mg/L	0.0200		104	80-120			

Reference (B8K1437-SRM1)

Prepared: 2018-11-19, Analyzed: 2018-11-21

Aluminum, total	0.310	0.0050 mg/L	0.303		102	82-114			
Antimony, total	0.0516	0.00020 mg/L	0.0511		101	88-115			
Arsenic, total	0.122	0.00050 mg/L	0.118		103	88-111			
Barium, total	0.794	0.0050 mg/L	0.823		96	83-110			
Beryllium, total	0.0522	0.00010 mg/L	0.0496		105	80-119			
Boron, total	3.61	0.0050 mg/L	3.45		105	80-118			
Cadmium, total	0.0501	0.000010 mg/L	0.0495		101	90-110			
Calcium, total	10.8	0.20 mg/L	11.6		94	85-113			
Chromium, total	0.257	0.00050 mg/L	0.250		103	88-111			
Cobalt, total	0.0407	0.00010 mg/L	0.0377		108	90-114			
Copper, total	0.522	0.00040 mg/L	0.486		107	90-117			
Iron, total	0.491	0.010 mg/L	0.488		101	90-116			
Lead, total	0.205	0.00020 mg/L	0.204		100	90-110			
Lithium, total	0.423	0.00010 mg/L	0.403		105	79-118			
Magnesium, total	3.99	0.010 mg/L	3.79		105	88-116			
Manganese, total	0.110	0.00020 mg/L	0.109		101	88-108			
Molybdenum, total	0.199	0.00010 mg/L	0.198		101	88-110			
Nickel, total	0.261	0.00040 mg/L	0.249		105	90-112			
Phosphorus, total	0.238	0.050 mg/L	0.227		105	72-118			
Potassium, total	7.40	0.10 mg/L	7.21		103	87-116			
Selenium, total	0.130	0.00050 mg/L	0.121		107	90-122			
Sodium, total	7.79	0.10 mg/L	7.54		103	86-118			
Strontium, total	0.358	0.0010 mg/L	0.375		95	86-110			
Thallium, total	0.0833	0.000020 mg/L	0.0805		103	90-113			
Uranium, total	0.0305	0.000020 mg/L	0.0306		100	88-112			
Vanadium, total	0.392	0.0010 mg/L	0.386		102	87-110			
Zinc, total	2.49	0.0040 mg/L	2.49		100	90-113			

Total Metals, Batch B8K1467

Blank (B8K1467-BLK1)

Prepared: 2018-11-19, Analyzed: 2018-11-20

Mercury, total	< 0.000010	0.000010 mg/L							
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Blank (B8K1467-BLK2)

Prepared: 2018-11-19, Analyzed: 2018-11-20

Mercury, total	< 0.000010	0.000010 mg/L							
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Reference (B8K1467-SRM1)

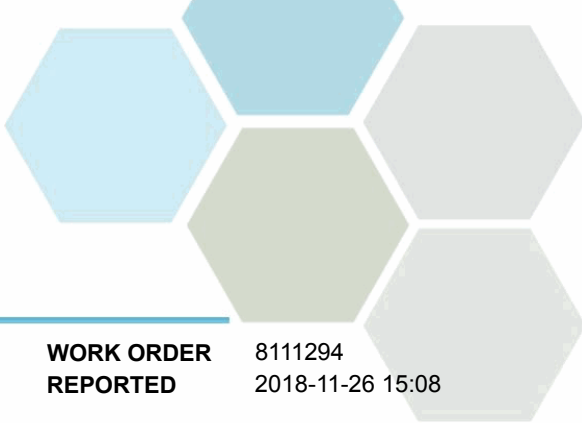
Prepared: 2018-11-19, Analyzed: 2018-11-20

Mercury, total	0.00485	0.000010 mg/L	0.00489		99	80-120			
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Reference (B8K1467-SRM2)

Prepared: 2018-11-19, Analyzed: 2018-11-20

Mercury, total	0.00460	0.000010 mg/L	0.00489		94	80-120			
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APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO Allterra Construction
PROJECT P17-932

WORK ORDER 8111294
REPORTED 2018-11-26 15:08

QC Qualifiers:

S09 The surrogate recovery for this sample is outside of established control limits .
SPK The recovery of this analyte was outside of established control limits.

Client information	Project information	Laboratory information	COC information
Allterra Construction 2158 Millstream Road Victoria, BC V9B 6H4 Phone: (250) 508-0726 Fax:	Number: [none] Sample count: 10 TAT: 5	CARO Analytical Services #110 - 4011 Viking Way Richmond, BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: Nov 2018 Shipped via: Maximum Express Tracking #: SDG:

#		Analyses	Containers
# 1	MW6 11/14/2018 10:45 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 2	MW3S 11/14/2018 13:00 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 3	MW3D 11/14/2018 13:20 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)

Submission Key F319-LBT-857A	SUBMITTED :11/15/2018 11:49:18 AM		Page 2 of 3
# 4	MW2 11/14/2018 14:00 Grab / Water	<p>Analyses</p> Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	<p>Containers</p> C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 5	SB1 11/14/2018 12:00 Grab / Water	<p>Analyses</p> Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	<p>Containers</p> C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 6	SB2 11/14/2018 11:45 Grab / Water	<p>Analyses</p> Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	<p>Containers</p> C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 7	SB3 11/14/2018 11:30 Grab / Water	<p>Analyses</p> Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	<p>Containers</p> C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)

# 8	LE-1 11/14/2018 15:00 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
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# 9	SHA-SW1 11/14/2018 13:45 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low +Cr6 (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C09_125 mL Plastic (CN/Cr6) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
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# 10	SHA-SW2 11/14/2018 12:15 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low +Cr6 (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C09_125 mL Plastic (CN/Cr6) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
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Relinquished by	Date/Time	Accepted by	Date/Time

CERTIFICATE OF ANALYSIS

REPORTED TO Allterra Construction
2158 Millstream Road
Victoria, BC V9B 6H4

ATTENTION Rahim Gaidhar

PO NUMBER P15-06 SIRM

PROJECT P17-932

PROJECT INFO

WORK ORDER 8102642

RECEIVED / TEMP 2018-10-30 14:49 / 10°C

REPORTED 2018-11-06 15:13

COC NUMBER October 2018

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

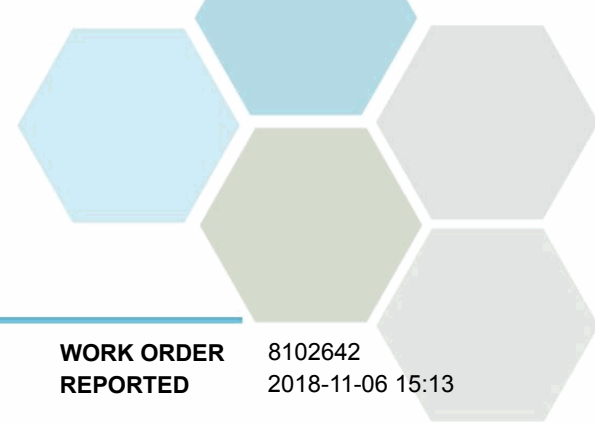
If you have any questions or concerns, please contact me at bshaw@caro.ca

Authorized By:

Bryan Shaw, Ph.D., P.Chem.
Client Service Coordinator

1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (8102642-01) | Matrix: Water | Sampled: 2018-10-29 11:30

Anions

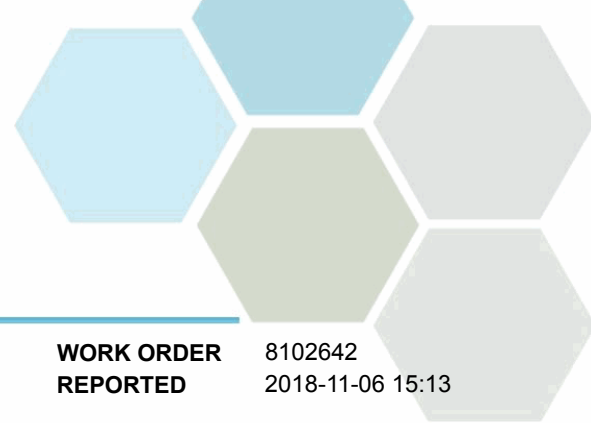
Chloride	39.0	0.10	mg/L	2018-11-02	
Fluoride	0.17	0.10	mg/L	2018-11-02	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	73.9	1.0	mg/L	2018-11-02	

Calculated Parameters

Hardness, Total (as CaCO3)	568	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Antimony, dissolved	0.00036	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	0.00451	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0762	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0646	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	169	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00199	0.00010	mg/L	2018-11-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-05	
Iron, dissolved	3.05	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	0.0103	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	35.1	0.010	mg/L	2018-11-05	
Manganese, dissolved	2.11	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00042	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00169	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	3.42	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	11.0	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	59.3	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.523	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	22.3	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (8102642-01) | Matrix: Water | Sampled: 2018-10-29 11:30, Continued

Dissolved Metals, Continued

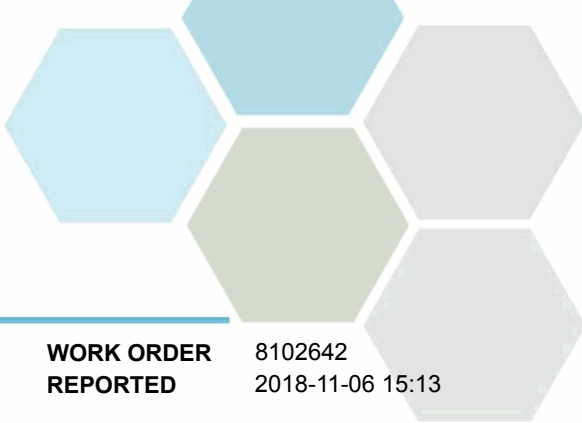
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.00624	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	0.00020	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	631	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	631	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	7.3	5.0	CU	2018-11-02	HT1
Conductivity (EC)	1320	2.0	µS/cm	2018-11-01	
pH	7.30	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	14.3	2.0	mg/L	2018-11-01	
Turbidity	31.5	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.050	0.050	µg/L	2018-11-02	
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	85	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	86	50-140	%	2018-11-02	
Surrogate: Perylene-d12	91	50-140	%	2018-11-02	



TEST RESULTS

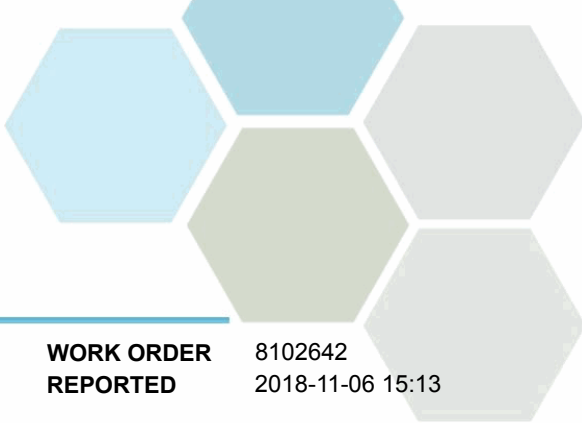
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (8102642-01) Matrix: Water Sampled: 2018-10-29 11:30, Continued					
<i>Total Metals</i>					
Aluminum, total	0.110	0.0050	mg/L	2018-11-05	
Antimony, total	0.00070	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00484	0.00050	mg/L	2018-11-05	
Barium, total	0.0906	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0711	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000036	0.000010	mg/L	2018-11-05	
Calcium, total	170	0.20	mg/L	2018-11-05	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00305	0.00010	mg/L	2018-11-05	
Copper, total	0.00143	0.00040	mg/L	2018-11-05	
Iron, total	3.58	0.010	mg/L	2018-11-05	
Lead, total	0.00064	0.00020	mg/L	2018-11-05	
Lithium, total	0.0120	0.00010	mg/L	2018-11-05	
Magnesium, total	35.7	0.010	mg/L	2018-11-05	
Manganese, total	2.18	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00125	0.00010	mg/L	2018-11-05	
Nickel, total	0.00696	0.00040	mg/L	2018-11-05	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-05	
Potassium, total	3.25	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	11.0	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	60.2	0.10	mg/L	2018-11-05	
Strontium, total	0.557	0.0010	mg/L	2018-11-05	
Sulfur, total	23.5	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	0.000035	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	0.00098	0.00020	mg/L	2018-11-05	
Titanium, total	0.0055	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.00644	0.000020	mg/L	2018-11-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, total	0.0093	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00017	0.00010	mg/L	2018-11-05	

MW3S (8102642-02) | Matrix: Water | Sampled: 2018-10-29 13:30

Anions



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (8102642-02) | Matrix: Water | Sampled: 2018-10-29 13:30, Continued

Anions, Continued

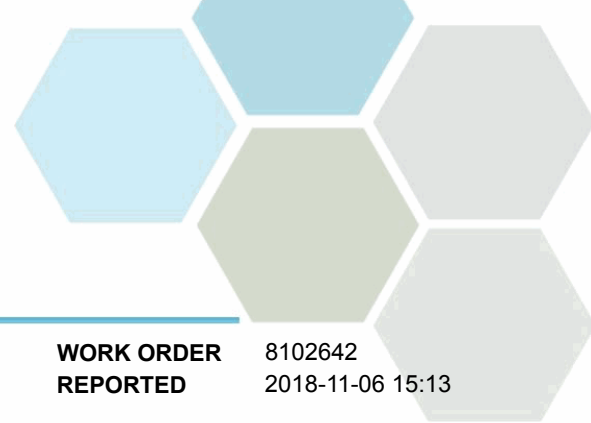
Chloride	14.4	0.10	mg/L	2018-11-02	
Fluoride	< 0.10	0.10	mg/L	2018-11-02	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	38.4	1.0	mg/L	2018-11-02	

Calculated Parameters

Hardness, Total (as CaCO3)	147	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0064	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	0.00113	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0290	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0177	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	46.9	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00057	0.00010	mg/L	2018-11-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-05	
Iron, dissolved	0.116	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	7.17	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.358	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00634	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00117	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	0.071	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.89	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	5.8	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	13.8	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.210	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	14.7	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (8102642-02) | Matrix: Water | Sampled: 2018-10-29 13:30, Continued

Dissolved Metals, Continued

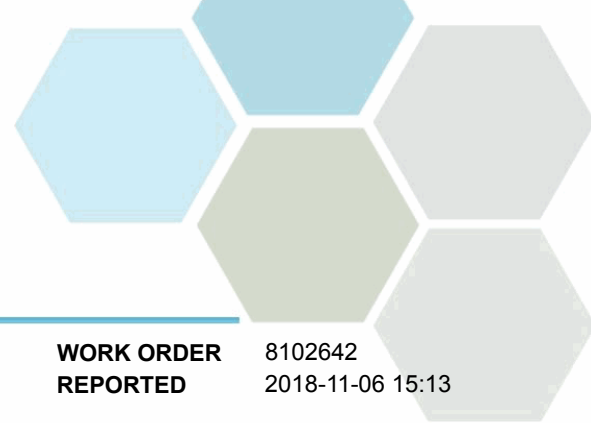
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000966	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	131	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	131	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	< 5.0	5.0	CU	2018-11-02	HT1
Conductivity (EC)	373	2.0	µS/cm	2018-11-01	
pH	7.75	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	13.7	2.0	mg/L	2018-11-01	
Turbidity	7.72	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.096	0.050	µg/L	2018-11-02	RA1
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	79	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	76	50-140	%	2018-11-02	
Surrogate: Perylene-d12	83	50-140	%	2018-11-02	



TEST RESULTS

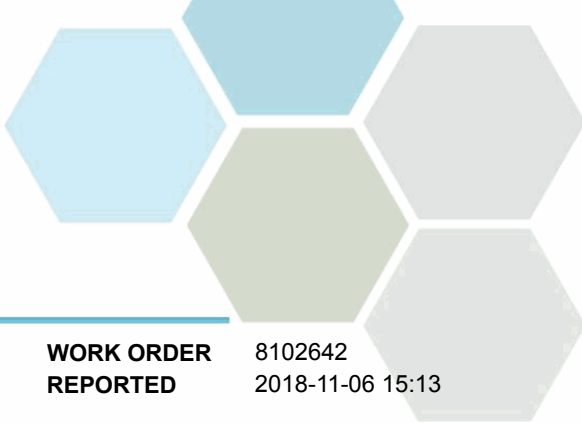
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3S (8102642-02) Matrix: Water Sampled: 2018-10-29 13:30, Continued					
<i>Total Metals</i>					
Aluminum, total	0.0977	0.0050	mg/L	2018-11-05	
Antimony, total	0.00024	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00117	0.00050	mg/L	2018-11-05	
Barium, total	0.0354	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0211	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000184	0.000010	mg/L	2018-11-05	
Calcium, total	48.5	0.20	mg/L	2018-11-05	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00061	0.00010	mg/L	2018-11-05	
Copper, total	0.00055	0.00040	mg/L	2018-11-05	
Iron, total	0.197	0.010	mg/L	2018-11-05	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, total	0.00023	0.00010	mg/L	2018-11-05	
Magnesium, total	7.53	0.010	mg/L	2018-11-05	
Manganese, total	0.376	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00637	0.00010	mg/L	2018-11-05	
Nickel, total	0.00157	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.080	0.050	mg/L	2018-11-05	
Potassium, total	0.91	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	5.9	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	14.4	0.10	mg/L	2018-11-05	
Strontium, total	0.224	0.0010	mg/L	2018-11-05	
Sulfur, total	15.0	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	0.000036	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.00112	0.000020	mg/L	2018-11-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, total	0.0053	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00020	0.00010	mg/L	2018-11-05	

MW3D (8102642-03) | Matrix: Water | Sampled: 2018-10-29 13:45

Anions



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3D (8102642-03) | Matrix: Water | Sampled: 2018-10-29 13:45, Continued

Anions, Continued

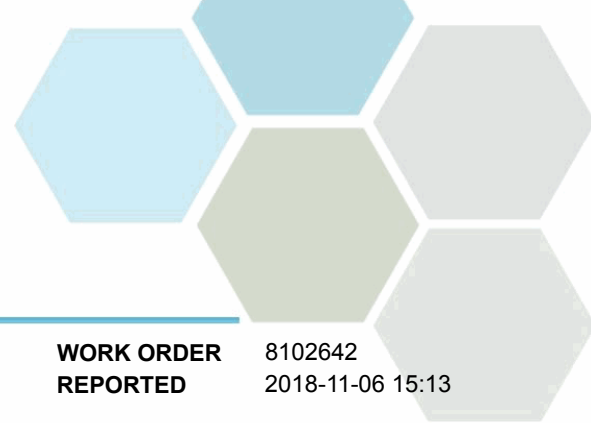
Chloride	2.67	0.10	mg/L	2018-11-02	
Fluoride	0.12	0.10	mg/L	2018-11-02	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	20.2	1.0	mg/L	2018-11-02	

Calculated Parameters

Hardness, Total (as CaCO3)	103	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	0.00142	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0212	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0199	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	32.3	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00035	0.00010	mg/L	2018-11-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-05	
Iron, dissolved	0.149	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	5.43	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.301	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00633	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00099	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	0.114	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.56	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	5.8	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	10.4	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.177	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	7.8	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3D (8102642-03) | Matrix: Water | Sampled: 2018-10-29 13:45, Continued

Dissolved Metals, Continued

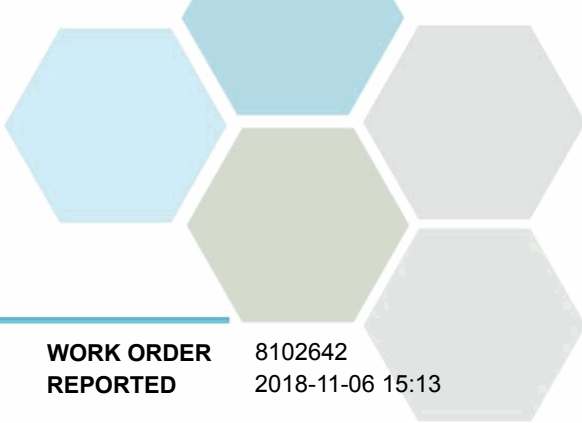
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000557	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	106	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	106	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	6.4	5.0	CU	2018-11-02	HT1
Conductivity (EC)	258	2.0	µS/cm	2018-11-01	
pH	7.77	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	12.4	2.0	mg/L	2018-11-01	
Turbidity	11.2	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.294	0.050	µg/L	2018-11-02	RA1
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	91	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	87	50-140	%	2018-11-02	
Surrogate: Perylene-d12	93	50-140	%	2018-11-02	



TEST RESULTS

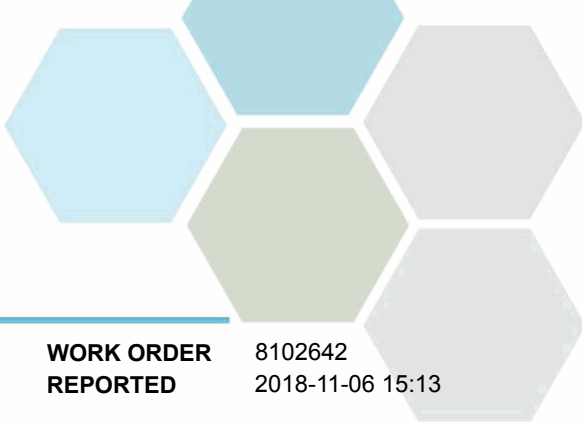
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3D (8102642-03) Matrix: Water Sampled: 2018-10-29 13:45, Continued					
<i>Total Metals</i>					
Aluminum, total	0.0599	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00138	0.00050	mg/L	2018-11-05	
Barium, total	0.0215	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0225	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000106	0.000010	mg/L	2018-11-05	
Calcium, total	32.4	0.20	mg/L	2018-11-05	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00039	0.00010	mg/L	2018-11-05	
Copper, total	< 0.00040	0.00040	mg/L	2018-11-05	
Iron, total	0.196	0.010	mg/L	2018-11-05	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, total	0.00015	0.00010	mg/L	2018-11-05	
Magnesium, total	5.60	0.010	mg/L	2018-11-05	
Manganese, total	0.306	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00643	0.00010	mg/L	2018-11-05	
Nickel, total	0.00125	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.097	0.050	mg/L	2018-11-05	
Potassium, total	0.56	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	5.6	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	10.5	0.10	mg/L	2018-11-05	
Strontium, total	0.185	0.0010	mg/L	2018-11-05	
Sulfur, total	9.2	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000649	0.000020	mg/L	2018-11-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00016	0.00010	mg/L	2018-11-05	

MW2 (8102642-04) | Matrix: Water | Sampled: 2018-10-29 14:45

Anions



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW2 (8102642-04) | Matrix: Water | Sampled: 2018-10-29 14:45, Continued

Anions, Continued

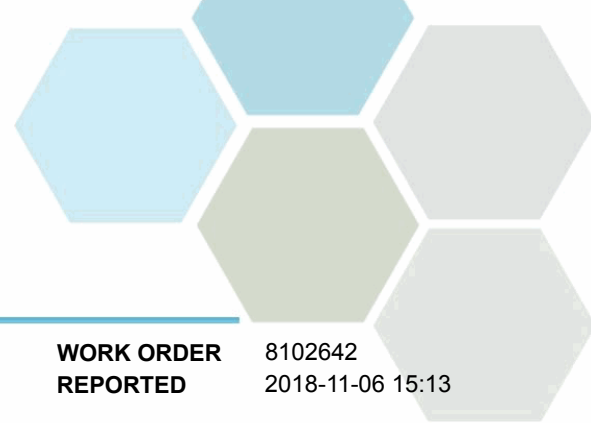
Chloride	5.69	0.10	mg/L	2018-11-02	
Fluoride	0.11	0.10	mg/L	2018-11-02	
Nitrate (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	16.1	1.0	mg/L	2018-11-02	

Calculated Parameters

Hardness, Total (as CaCO3)	126	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0057	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	0.00199	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0303	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0203	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	38.4	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00032	0.00010	mg/L	2018-11-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2018-11-05	
Iron, dissolved	0.291	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	7.24	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.433	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00398	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00066	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	0.159	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.65	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	6.3	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	9.09	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.151	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	7.3	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW2 (8102642-04) | Matrix: Water | Sampled: 2018-10-29 14:45, Continued

Dissolved Metals, Continued

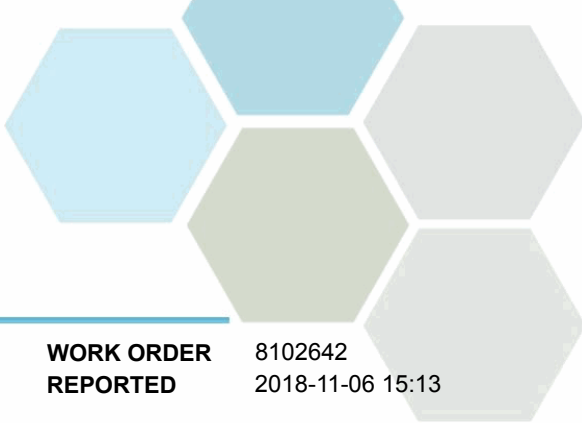
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000721	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	128	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	128	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	8.3	5.0	CU	2018-11-02	HT1
Conductivity (EC)	292	2.0	µS/cm	2018-11-01	
pH	7.88	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	21.0	2.0	mg/L	2018-11-01	
Turbidity	20.5	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.145	0.050	µg/L	2018-11-02	RA1
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	87	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	85	50-140	%	2018-11-02	
Surrogate: Perylene-d12	93	50-140	%	2018-11-02	



TEST RESULTS

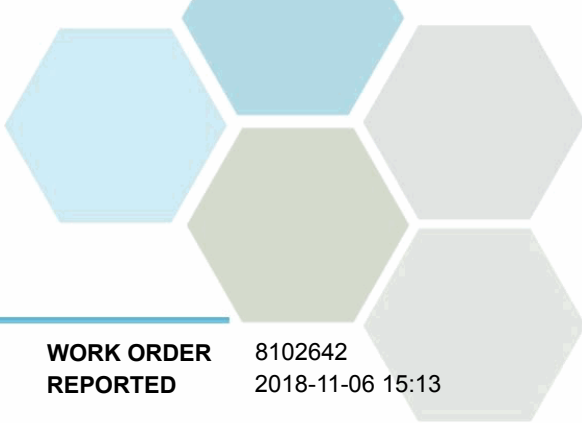
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (8102642-04) Matrix: Water Sampled: 2018-10-29 14:45, Continued					
<i>Total Metals</i>					
Aluminum, total	0.254	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00199	0.00050	mg/L	2018-11-05	
Barium, total	0.0325	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0234	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000016	0.000010	mg/L	2018-11-05	
Calcium, total	39.8	0.20	mg/L	2018-11-05	
Chromium, total	0.00058	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00051	0.00010	mg/L	2018-11-05	
Copper, total	0.00043	0.00040	mg/L	2018-11-05	
Iron, total	0.716	0.010	mg/L	2018-11-05	
Lead, total	0.00032	0.00020	mg/L	2018-11-05	
Lithium, total	0.00017	0.00010	mg/L	2018-11-05	
Magnesium, total	7.69	0.010	mg/L	2018-11-05	
Manganese, total	0.459	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00418	0.00010	mg/L	2018-11-05	
Nickel, total	0.00108	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.179	0.050	mg/L	2018-11-05	
Potassium, total	0.66	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	6.8	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	9.47	0.10	mg/L	2018-11-05	
Strontium, total	0.162	0.0010	mg/L	2018-11-05	
Sulfur, total	7.8	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	0.0130	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000817	0.000020	mg/L	2018-11-05	
Vanadium, total	0.0014	0.0010	mg/L	2018-11-05	
Zinc, total	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00014	0.00010	mg/L	2018-11-05	

SB1 (8102642-05) | Matrix: Water | Sampled: 2018-10-29 12:45

Anions



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (8102642-05) | Matrix: Water | Sampled: 2018-10-29 12:45, Continued

Anions, Continued

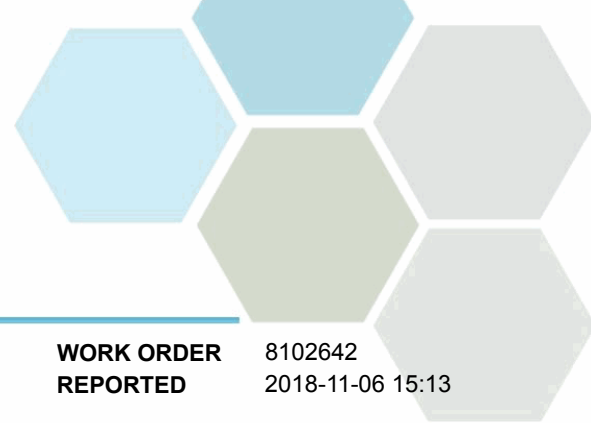
Chloride	0.58	0.10	mg/L	2018-11-02	
Fluoride	< 0.10	0.10	mg/L	2018-11-02	
Nitrate (as N)	0.311	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	55.7	1.0	mg/L	2018-11-02	

Calculated Parameters

Hardness, Total (as CaCO3)	64.8	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	0.000014	0.000010	mg/L	2018-11-05	
Calcium, dissolved	22.6	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00045	0.00010	mg/L	2018-11-05	
Copper, dissolved	0.00049	0.00040	mg/L	2018-11-05	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	2.06	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.00172	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00015	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00132	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.18	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	1.1	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	1.73	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.0524	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	20.7	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (8102642-05) | Matrix: Water | Sampled: 2018-10-29 12:45, Continued

Dissolved Metals, Continued

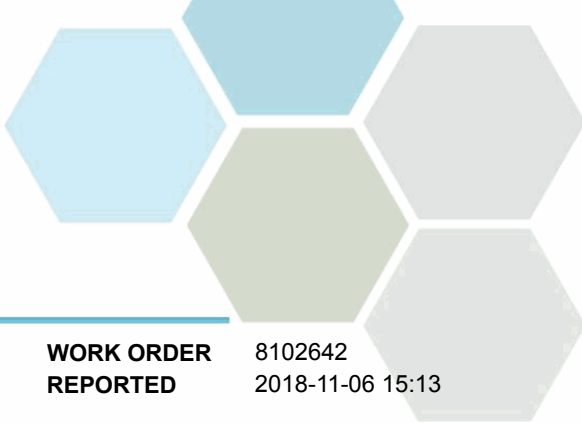
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000025	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	10.8	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	10.8	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	< 5.0	5.0	CU	2018-11-02	HT1
Conductivity (EC)	167	2.0	µS/cm	2018-11-01	
pH	7.37	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	105	2.0	mg/L	2018-11-01	
Turbidity	66.0	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.050	0.050	µg/L	2018-11-02	
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	82	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	89	50-140	%	2018-11-02	
Surrogate: Perylene-d12	100	50-140	%	2018-11-02	



TEST RESULTS

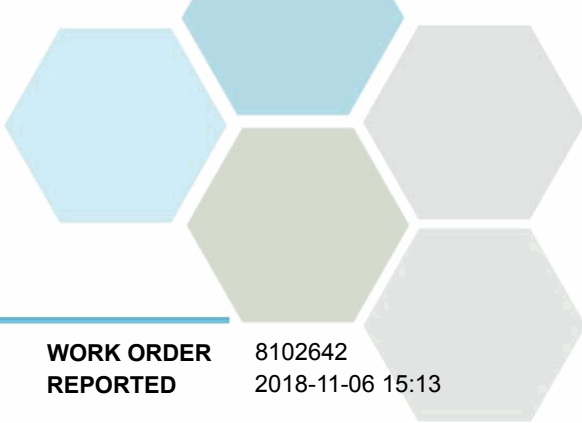
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
SB1 (8102642-05) Matrix: Water Sampled: 2018-10-29 12:45, Continued					
<i>Total Metals</i>					
Aluminum, total	1.84	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, total	0.0171	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	< 0.0050	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000023	0.000010	mg/L	2018-11-05	
Calcium, total	25.1	0.20	mg/L	2018-11-05	
Chromium, total	0.00198	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00274	0.00010	mg/L	2018-11-05	
Copper, total	0.00635	0.00040	mg/L	2018-11-05	
Iron, total	2.11	0.010	mg/L	2018-11-05	
Lead, total	0.00316	0.00020	mg/L	2018-11-05	
Lithium, total	0.00075	0.00010	mg/L	2018-11-05	
Magnesium, total	2.83	0.010	mg/L	2018-11-05	
Manganese, total	0.0735	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00015	0.00010	mg/L	2018-11-05	
Nickel, total	0.00311	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.073	0.050	mg/L	2018-11-05	
Potassium, total	0.33	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	3.6	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	1.90	0.10	mg/L	2018-11-05	
Strontium, total	0.0614	0.0010	mg/L	2018-11-05	
Sulfur, total	20.5	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	0.0888	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000153	0.000020	mg/L	2018-11-05	
Vanadium, total	0.0052	0.0010	mg/L	2018-11-05	
Zinc, total	0.0110	0.0040	mg/L	2018-11-05	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-05	

SB2 (8102642-06) | Matrix: Water | Sampled: 2018-10-29 12:30

Anions



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8102642-06) | Matrix: Water | Sampled: 2018-10-29 12:30, Continued

Anions, Continued

Chloride	13.5	0.10	mg/L	2018-11-02	
Fluoride	< 0.10	0.10	mg/L	2018-11-02	
Nitrate (as N)	0.609	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	91.6	1.0	mg/L	2018-11-02	

BCMOE Aggregate Hydrocarbons

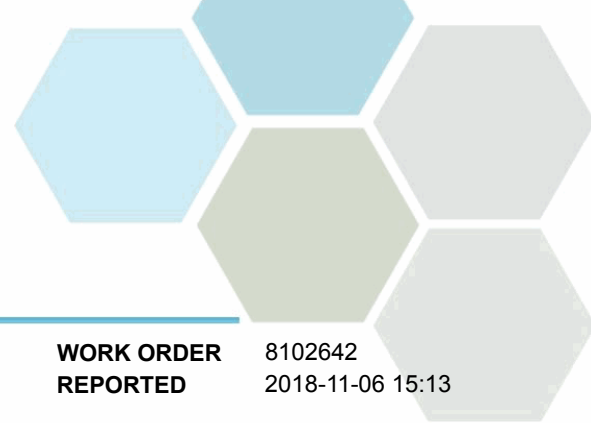
EPHw10-19	< 250	250	µg/L	2018-11-01	
EPHw19-32	< 250	250	µg/L	2018-11-01	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	68	60-140	%	2018-11-01	

Calculated Parameters

Hardness, Total (as CaCO3)	157	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0178	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	50.2	0.20	mg/L	2018-11-05	
Chromium, dissolved	0.00145	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Copper, dissolved	0.00122	0.00040	mg/L	2018-11-05	
Iron, dissolved	0.012	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	7.70	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.00062	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00061	0.00010	mg/L	2018-11-05	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.85	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	3.9	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	11.3	0.10	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8102642-06) | Matrix: Water | Sampled: 2018-10-29 12:30, Continued

Dissolved Metals, Continued

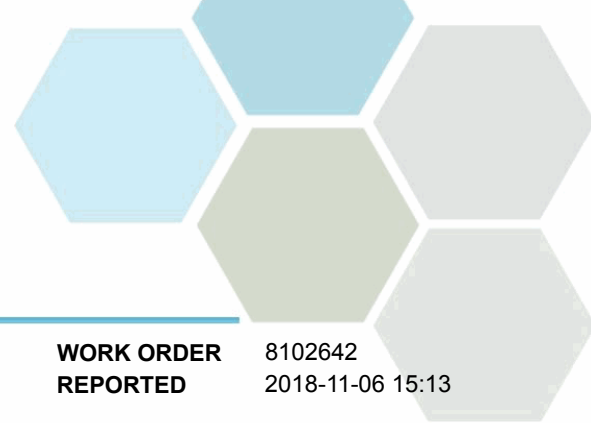
Strontium, dissolved	0.139	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	33.9	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000360	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	70.2	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	70.2	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	< 5.0	5.0	CU	2018-11-02	HT1
Conductivity (EC)	392	2.0	µS/cm	2018-11-01	
pH	7.21	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	47.0	2.0	mg/L	2018-11-01	
Turbidity	55.4	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.050	0.050	µg/L	2018-11-02	
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	



TEST RESULTS

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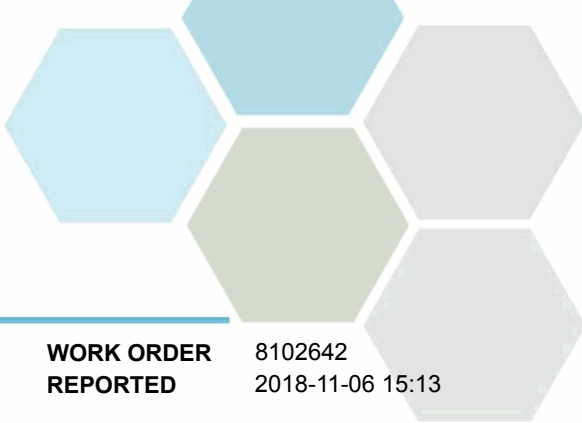
SB2 (8102642-06) | Matrix: Water | Sampled: 2018-10-29 12:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	80	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	70	50-140	%	2018-11-02	
Surrogate: Perylene-d12	95	50-140	%	2018-11-02	

Total Metals

Aluminum, total	1.46	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, total	0.0139	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0206	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000012	0.000010	mg/L	2018-11-05	
Calcium, total	52.3	0.20	mg/L	2018-11-05	
Chromium, total	0.00188	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00125	0.00010	mg/L	2018-11-05	
Copper, total	0.00501	0.00040	mg/L	2018-11-05	
Iron, total	1.71	0.010	mg/L	2018-11-05	
Lead, total	0.00056	0.00020	mg/L	2018-11-05	
Lithium, total	0.00077	0.00010	mg/L	2018-11-05	
Magnesium, total	8.50	0.010	mg/L	2018-11-05	
Manganese, total	0.0632	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00052	0.00010	mg/L	2018-11-05	
Nickel, total	0.00179	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.062	0.050	mg/L	2018-11-05	
Potassium, total	1.05	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	6.1	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	11.7	0.10	mg/L	2018-11-05	
Strontium, total	0.152	0.0010	mg/L	2018-11-05	
Sulfur, total	34.0	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	0.0806	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (8102642-06) | Matrix: Water | Sampled: 2018-10-29 12:30, Continued

Total Metals, Continued

Uranium, total	0.000477	0.000020	mg/L	2018-11-05	
Vanadium, total	0.0040	0.0010	mg/L	2018-11-05	
Zinc, total	0.0071	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00015	0.00010	mg/L	2018-11-05	

SB3 (8102642-07) | Matrix: Water | Sampled: 2018-10-29 12:10

Anions

Chloride	0.63	0.10	mg/L	2018-11-02	
Fluoride	< 0.10	0.10	mg/L	2018-11-02	
Nitrate (as N)	0.084	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	24.5	1.0	mg/L	2018-11-02	

BCMOE Aggregate Hydrocarbons

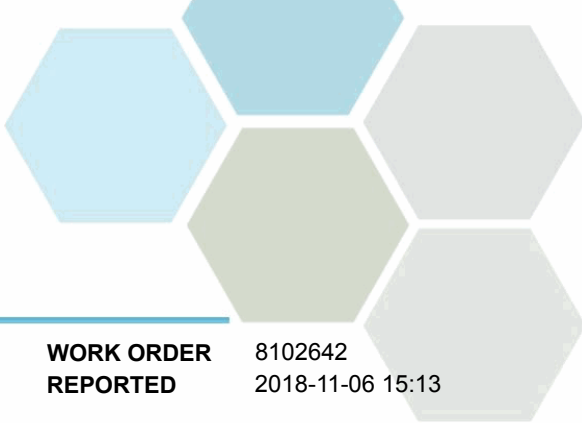
EPHw10-19	< 250	250	µg/L	2018-11-01	
EPHw19-32	< 250	250	µg/L	2018-11-01	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	63	60-140	%	2018-11-01	

Calculated Parameters

Hardness, Total (as CaCO3)	29.7	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0112	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Calcium, dissolved	9.54	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	0.00013	0.00010	mg/L	2018-11-05	
Copper, dissolved	0.00082	0.00040	mg/L	2018-11-05	
Iron, dissolved	0.012	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	1.43	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.00094	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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SB3 (8102642-07) | Matrix: Water | Sampled: 2018-10-29 12:10, Continued

Dissolved Metals, Continued

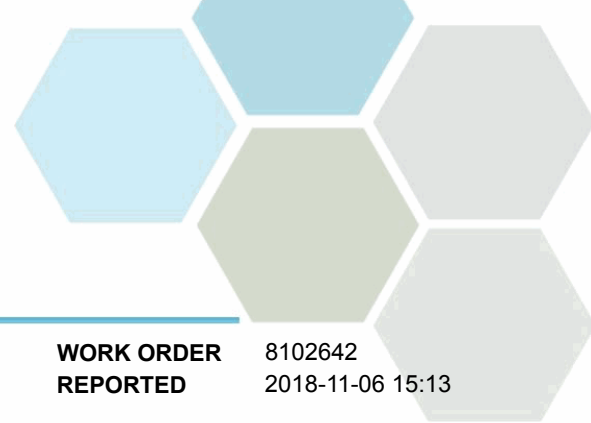
Molybdenum, dissolved	0.00031	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00065	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.20	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	1.2	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	1.30	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.0248	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	10.2	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	6.5	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	6.5	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	9.0	5.0	CU	2018-11-02	HT1
Conductivity (EC)	82.0	2.0	µS/cm	2018-11-01	
pH	6.98	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	428	2.0	mg/L	2018-11-01	
Turbidity	388	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.050	0.050	µg/L	2018-11-02	
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	



TEST RESULTS

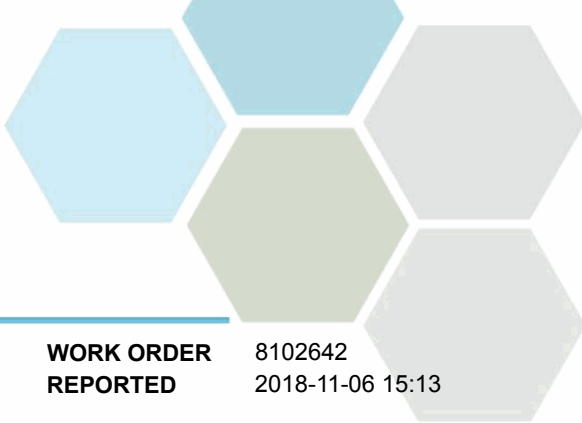
REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 8102642
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Analyte	Result	RL	Units	Analyzed	Qualifier
SB3 (8102642-07) Matrix: Water Sampled: 2018-10-29 12:10, Continued					
<i>Polycyclic Aromatic Hydrocarbons (PAH), Continued</i>					
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	52	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	78	50-140	%	2018-11-02	
Surrogate: Perylene-d12	84	50-140	%	2018-11-02	

Total Metals

Aluminum, total	9.65	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00103	0.00050	mg/L	2018-11-05	
Barium, total	0.0420	0.0050	mg/L	2018-11-05	
Beryllium, total	0.00019	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0076	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000043	0.000010	mg/L	2018-11-05	
Calcium, total	14.5	0.20	mg/L	2018-11-05	
Chromium, total	0.0170	0.00050	mg/L	2018-11-05	
Cobalt, total	0.0145	0.00010	mg/L	2018-11-05	
Copper, total	0.0325	0.00040	mg/L	2018-11-05	
Iron, total	11.4	0.010	mg/L	2018-11-05	
Lead, total	0.00462	0.00020	mg/L	2018-11-05	
Lithium, total	0.00443	0.00010	mg/L	2018-11-05	
Magnesium, total	5.97	0.010	mg/L	2018-11-05	
Manganese, total	0.230	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00038	0.00010	mg/L	2018-11-05	
Nickel, total	0.0169	0.00040	mg/L	2018-11-05	
Phosphorus, total	0.362	0.050	mg/L	2018-11-05	
Potassium, total	0.83	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	14.6	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	2.11	0.10	mg/L	2018-11-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
SB3 (8102642-07) Matrix: Water Sampled: 2018-10-29 12:10, Continued					
<i>Total Metals, Continued</i>					
Strontium, total	0.0531	0.0010	mg/L	2018-11-05	
Sulfur, total	10.6	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	0.000025	0.000020	mg/L	2018-11-05	
Thorium, total	0.00024	0.00010	mg/L	2018-11-05	
Tin, total	0.00025	0.00020	mg/L	2018-11-05	
Titanium, total	0.439	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000408	0.000020	mg/L	2018-11-05	
Vanadium, total	0.0245	0.0010	mg/L	2018-11-05	
Zinc, total	0.0303	0.0040	mg/L	2018-11-05	
Zirconium, total	0.00042	0.00010	mg/L	2018-11-05	

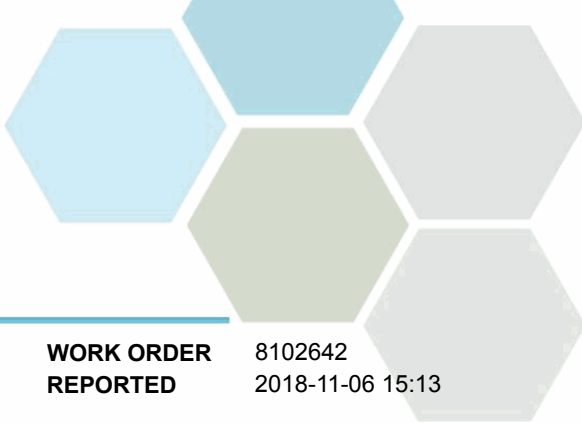
LE-1 (8102642-08) | Matrix: Water | Sampled: 2018-10-29 15:30

<i>Anions</i>					
Chloride	3460	0.10	mg/L	2018-11-02	
Fluoride	< 1.00	0.10	mg/L	2018-11-02	RA1
Nitrate (as N)	1.90	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.100	0.010	mg/L	2018-11-02	HT1, RA1
Sulfate	1820	1.0	mg/L	2018-11-02	

<i>BCMOE Aggregate Hydrocarbons</i>					
EPHw10-19	< 250	250	µg/L	2018-11-01	
EPHw19-32	< 250	250	µg/L	2018-11-01	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	79	60-140	%	2018-11-01	

<i>Calculated Parameters</i>					
Hardness, Total (as CaCO3)	3210	0.500	mg/L	N/A	

<i>Dissolved Metals</i>					
Aluminum, dissolved	0.0079	0.0050	mg/L	2018-11-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0339	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.282	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	0.000321	0.000010	mg/L	2018-11-05	
Calcium, dissolved	882	0.20	mg/L	2018-11-05	
Chromium, dissolved	0.00063	0.00050	mg/L	2018-11-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (8102642-08) | Matrix: Water | Sampled: 2018-10-29 15:30, Continued

Dissolved Metals, Continued

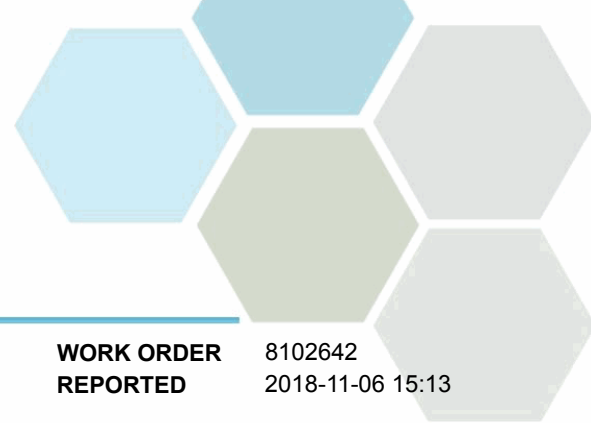
Cobalt, dissolved	0.00104	0.00010	mg/L	2018-11-05	
Copper, dissolved	0.00139	0.00040	mg/L	2018-11-05	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	0.00026	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	245	0.010	mg/L	2018-11-05	
Manganese, dissolved	6.18	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00023	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00475	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	33.2	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	5.0	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	1740	0.10	mg/L	2018-11-05	
Strontium, dissolved	4.32	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	709	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	0.00148	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000042	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	0.0199	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	25.0	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	25.0	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Colour, True	5.3	5.0	CU	2018-11-02	HT1
Conductivity (EC)	13000	2.0	µS/cm	2018-11-01	
pH	6.83	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	2.0	2.0	mg/L	2018-11-01	
Turbidity	1.90	0.10	NTU	2018-11-01	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2018-11-02	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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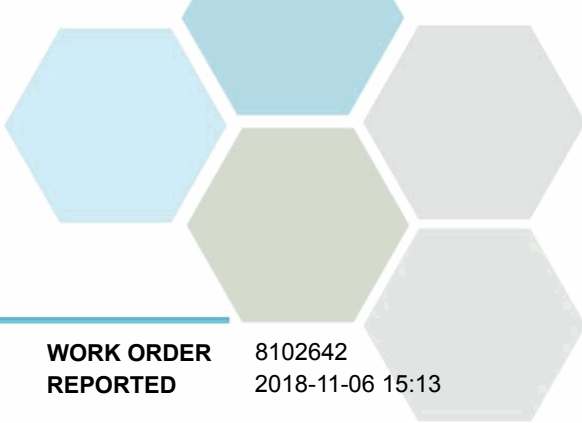
LE-1 (8102642-08) | Matrix: Water | Sampled: 2018-10-29 15:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acenaphthylene	< 0.200	0.200	µg/L	2018-11-02	
Acridine	< 0.050	0.050	µg/L	2018-11-02	
Anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-02	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-02	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-02	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Chrysene	< 0.050	0.050	µg/L	2018-11-02	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-02	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-02	
Fluorene	< 0.050	0.050	µg/L	2018-11-02	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-02	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-02	
Naphthalene	< 0.200	0.200	µg/L	2018-11-02	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-02	
Pyrene	< 0.020	0.020	µg/L	2018-11-02	
Quinoline	< 0.050	0.050	µg/L	2018-11-02	
Surrogate: Acridine-d9	78	50-140	%	2018-11-02	
Surrogate: Naphthalene-d8	80	50-140	%	2018-11-02	
Surrogate: Perylene-d12	90	50-140	%	2018-11-02	

Total Metals

Aluminum, total	0.0332	0.0050	mg/L	2018-11-05	
Antimony, total	< 0.00020	0.00020	mg/L	2018-11-05	
Arsenic, total	0.00052	0.00050	mg/L	2018-11-05	
Barium, total	0.0379	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.307	0.0050	mg/L	2018-11-05	
Cadmium, total	0.000325	0.000010	mg/L	2018-11-05	
Calcium, total	926	0.20	mg/L	2018-11-05	
Chromium, total	0.00068	0.00050	mg/L	2018-11-05	
Cobalt, total	0.00106	0.00010	mg/L	2018-11-05	
Copper, total	0.00163	0.00040	mg/L	2018-11-05	
Iron, total	0.024	0.010	mg/L	2018-11-05	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, total	0.00040	0.00010	mg/L	2018-11-05	
Magnesium, total	253	0.010	mg/L	2018-11-05	
Manganese, total	6.38	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
LE-1 (8102642-08) Matrix: Water Sampled: 2018-10-29 15:30, Continued					
<i>Total Metals, Continued</i>					
Molybdenum, total	0.00024	0.00010	mg/L	2018-11-05	
Nickel, total	0.00496	0.00040	mg/L	2018-11-05	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-05	
Potassium, total	33.4	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	5.0	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	1800	0.10	mg/L	2018-11-05	
Strontium, total	4.74	0.0010	mg/L	2018-11-05	
Sulfur, total	717	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	0.00164	0.00020	mg/L	2018-11-05	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000045	0.000020	mg/L	2018-11-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, total	0.0227	0.0040	mg/L	2018-11-05	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-05	

SW1 (8102642-09) | Matrix: Water | Sampled: 2018-10-29 14:00

Anions

Chloride	11.7	0.10	mg/L	2018-11-02	
Fluoride	< 0.10	0.10	mg/L	2018-11-02	
Nitrate (as N)	0.556	0.010	mg/L	2018-11-02	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2018-11-02	HT1
Sulfate	136	1.0	mg/L	2018-11-02	

BCMOE Aggregate Hydrocarbons

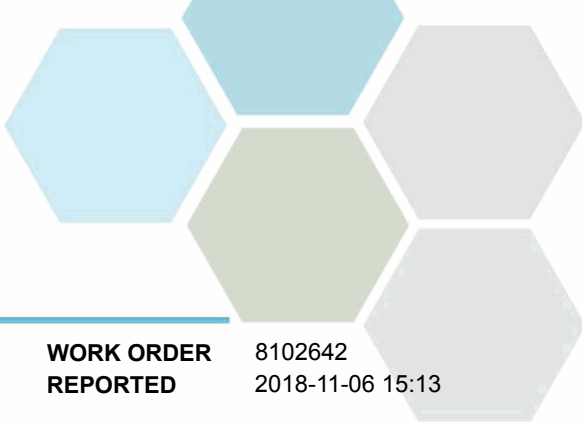
EPHw10-19	< 250	250	µg/L	2018-10-31	S09
EPHw19-32	< 250	250	µg/L	2018-10-31	S09
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	41	60-140	%	2018-10-31	S09

Calculated Parameters

Chromium, Trivalent	< 0.00100	0.00100	mg/L	N/A	
Hardness, Total (as CaCO3)	202	0.500	mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
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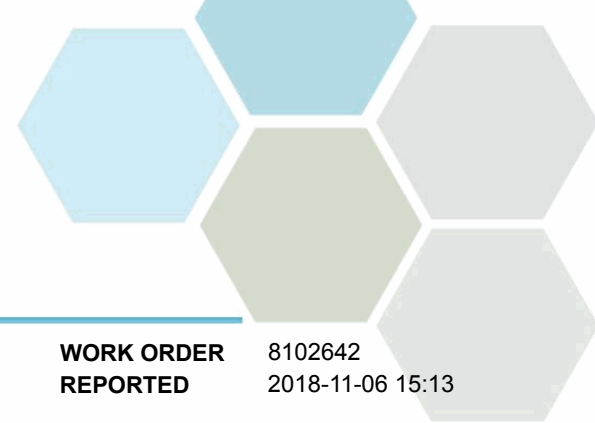
SW1 (8102642-09) | Matrix: Water | Sampled: 2018-10-29 14:00, Continued

Dissolved Metals, Continued

Antimony, dissolved	0.00022	0.00020	mg/L	2018-11-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, dissolved	0.0115	0.0050	mg/L	2018-11-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, dissolved	0.0181	0.0050	mg/L	2018-11-05	
Cadmium, dissolved	0.000012	0.000010	mg/L	2018-11-05	
Calcium, dissolved	66.1	0.20	mg/L	2018-11-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Copper, dissolved	0.00119	0.00040	mg/L	2018-11-05	
Iron, dissolved	< 0.010	0.010	mg/L	2018-11-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, dissolved	0.00016	0.00010	mg/L	2018-11-05	
Magnesium, dissolved	8.93	0.010	mg/L	2018-11-05	
Manganese, dissolved	0.00228	0.00020	mg/L	2018-11-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, dissolved	0.00099	0.00010	mg/L	2018-11-05	
Nickel, dissolved	0.00059	0.00040	mg/L	2018-11-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2018-11-05	
Potassium, dissolved	0.74	0.10	mg/L	2018-11-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, dissolved	4.5	1.0	mg/L	2018-11-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, dissolved	8.56	0.10	mg/L	2018-11-05	
Strontium, dissolved	0.163	0.0010	mg/L	2018-11-05	
Sulfur, dissolved	45.4	3.0	mg/L	2018-11-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, dissolved	0.000701	0.000020	mg/L	2018-11-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2018-11-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2018-11-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2018-11-05	

General Parameters

Alkalinity, Total (as CaCO3)	71.9	1.0	mg/L	2018-11-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Alkalinity, Bicarbonate (as CaCO3)	71.9	1.0	mg/L	2018-11-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	

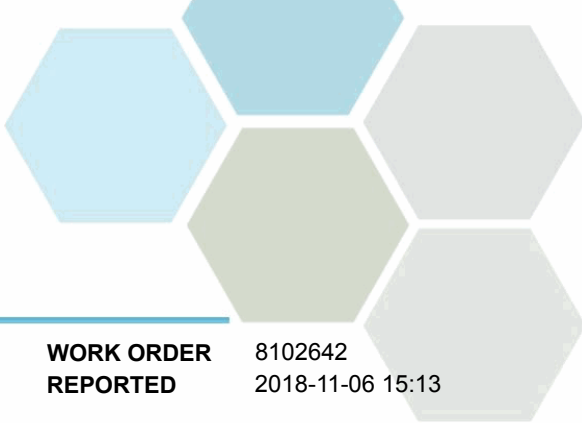


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
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Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (8102642-09) Matrix: Water Sampled: 2018-10-29 14:00, Continued					
General Parameters, Continued					
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2018-11-01	
Chromium, Hexavalent	< 0.0010	0.0010	mg/L	2018-11-02	
Colour, True	< 5.0	5.0	CU	2018-11-02	HT1
Conductivity (EC)	476	2.0	µS/cm	2018-11-01	
pH	7.61	0.10	pH units	2018-11-01	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2018-11-01	
Turbidity	1.69	0.10	NTU	2018-11-01	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2018-11-01	
Acenaphthylene	< 0.200	0.200	µg/L	2018-11-01	
Acridine	< 0.050	0.050	µg/L	2018-11-01	
Anthracene	< 0.010	0.010	µg/L	2018-11-01	
Benz(a)anthracene	< 0.010	0.010	µg/L	2018-11-01	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2018-11-01	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2018-11-01	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2018-11-01	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2018-11-01	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2018-11-01	
Chrysene	< 0.050	0.050	µg/L	2018-11-01	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2018-11-01	
Fluoranthene	< 0.030	0.030	µg/L	2018-11-01	
Fluorene	< 0.050	0.050	µg/L	2018-11-01	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2018-11-01	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-01	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2018-11-01	
Naphthalene	< 0.200	0.200	µg/L	2018-11-01	
Phenanthrene	< 0.100	0.100	µg/L	2018-11-01	
Pyrene	< 0.020	0.020	µg/L	2018-11-01	
Quinoline	< 0.050	0.050	µg/L	2018-11-01	
Surrogate: Acridine-d9	71	50-140	%	2018-11-01	
Surrogate: Naphthalene-d8	74	50-140	%	2018-11-01	
Surrogate: Perylene-d12	92	50-140	%	2018-11-01	
Total Metals					
Aluminum, total	0.0472	0.0050	mg/L	2018-11-05	
Antimony, total	0.00024	0.00020	mg/L	2018-11-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2018-11-05	
Barium, total	0.0130	0.0050	mg/L	2018-11-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2018-11-05	
Boron, total	0.0199	0.0050	mg/L	2018-11-05	
Cadmium, total	< 0.000010	0.000010	mg/L	2018-11-05	



TEST RESULTS

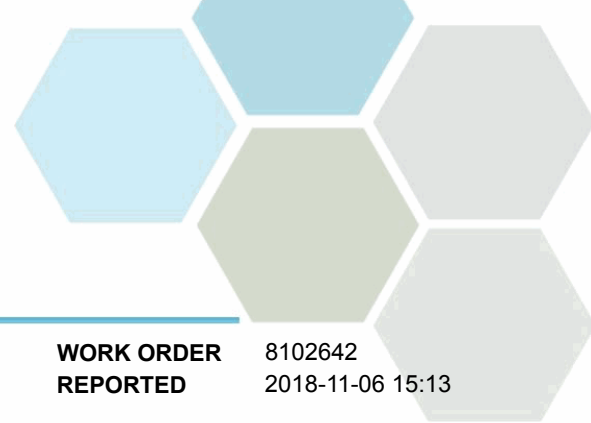
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (8102642-09) Matrix: Water Sampled: 2018-10-29 14:00, Continued					
<i>Total Metals, Continued</i>					
Calcium, total	70.1	0.20	mg/L	2018-11-05	
Chromium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Cobalt, total	< 0.00010	0.00010	mg/L	2018-11-05	
Copper, total	0.00143	0.00040	mg/L	2018-11-05	
Iron, total	0.047	0.010	mg/L	2018-11-05	
Lead, total	< 0.00020	0.00020	mg/L	2018-11-05	
Lithium, total	0.00030	0.00010	mg/L	2018-11-05	
Magnesium, total	9.28	0.010	mg/L	2018-11-05	
Manganese, total	0.00386	0.00020	mg/L	2018-11-05	
Mercury, total	< 0.000010	0.000010	mg/L	2018-11-05	
Molybdenum, total	0.00096	0.00010	mg/L	2018-11-05	
Nickel, total	0.00067	0.00040	mg/L	2018-11-05	
Phosphorus, total	< 0.050	0.050	mg/L	2018-11-05	
Potassium, total	0.77	0.10	mg/L	2018-11-05	
Selenium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Silicon, total	4.7	1.0	mg/L	2018-11-05	
Silver, total	< 0.000050	0.000050	mg/L	2018-11-05	
Sodium, total	8.85	0.10	mg/L	2018-11-05	
Strontium, total	0.177	0.0010	mg/L	2018-11-05	
Sulfur, total	48.7	3.0	mg/L	2018-11-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2018-11-05	
Thallium, total	< 0.000020	0.000020	mg/L	2018-11-05	
Thorium, total	< 0.00010	0.00010	mg/L	2018-11-05	
Tin, total	< 0.00020	0.00020	mg/L	2018-11-05	
Titanium, total	< 0.0050	0.0050	mg/L	2018-11-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2018-11-05	
Uranium, total	0.000752	0.000020	mg/L	2018-11-05	
Vanadium, total	0.0011	0.0010	mg/L	2018-11-05	
Zinc, total	0.0061	0.0040	mg/L	2018-11-05	
Zirconium, total	< 0.00010	0.00010	mg/L	2018-11-05	

Sample 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.
- RA1 The Reporting Limit has been raised due to matrix interference.
- S09 The surrogate recovery for this sample is outside of established control limits .



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analysis Description	Method Ref.	Technique	Location
Alkalinity in Water	SM 2320 B* (2011)	Titration with H2SO4	Kelowna
Anions in Water	SM 4110 B (2011)	Ion Chromatography	Kelowna
Chromium, Hexavalent in Water	SM 3500-Cr B (2011)	Spectrophotometry	Richmond
Colour, True in Water	SM 2120 C (2011)	Spectrophotometry (456 nm)	Kelowna
Conductivity in Water	SM 2510 B (2011)	Conductivity Meter	Richmond
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	Richmond
Hardness in Water	SM 2340 B* (2011)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	N/A
HEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation	N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	Richmond
pH in Water	SM 4500-H+ B (2011)	Electrometry	Richmond
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MSD (SIM)	Richmond
Solids, Total Suspended in Water	SM 2540 D* (2011)	Gravimetry (Dried at 103-105C)	Richmond
Total Metals in Water	EPA 200.2* / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
Turbidity in Water	SM 2130 B (2011)	Nephelometry	Richmond

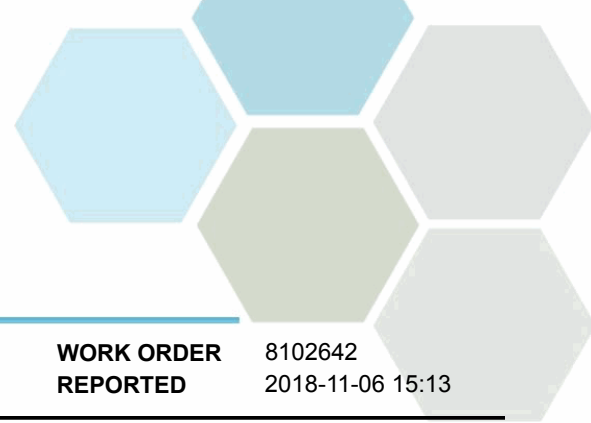
Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
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
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

The results in this report apply to the samples analyzed in accordance with the Chain of Custody 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.



APPENDIX 2: QUALITY CONTROL RESULTS

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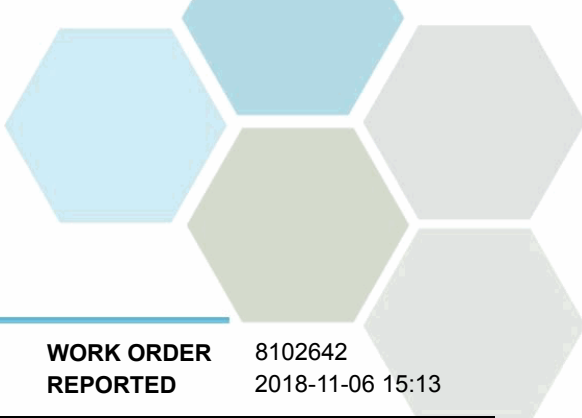
WORK ORDER REPORTED 8102642
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is 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 10-20 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	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B8K0035									
Blank (B8K0035-BLK1)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
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							
LCS (B8K0035-BS1)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
Chloride	16.1	0.10 mg/L	16.0		101	90-110			
Fluoride	4.16	0.10 mg/L	4.00		104	88-108			
Nitrate (as N)	4.02	0.010 mg/L	4.00		101	93-108			
Nitrite (as N)	2.11	0.010 mg/L	2.00		105	85-114			
Sulfate	15.7	1.0 mg/L	16.0		98	91-109			
Duplicate (B8K0035-DUP1)			Source: 8102642-02		Prepared: 2018-11-02, Analyzed: 2018-11-02				
Chloride	14.3	0.10 mg/L		14.4			< 1		10
Fluoride	< 0.10	0.10 mg/L		< 0.10					10
Nitrate (as N)	< 0.010	0.010 mg/L		< 0.010					10
Nitrite (as N)	< 0.010	0.010 mg/L		< 0.010					6
Sulfate	38.2	1.0 mg/L		38.4			< 1		6
Matrix Spike (B8K0035-MS1)			Source: 8102642-02		Prepared: 2018-11-02, Analyzed: 2018-11-02				
Chloride	30.6	0.10 mg/L	16.0	14.4	101	75-125			
Fluoride	4.02	0.10 mg/L	4.00	< 0.10	98	75-125			
Nitrate (as N)	4.03	0.010 mg/L	4.00	< 0.010	101	75-125			
Nitrite (as N)	2.10	0.010 mg/L	2.00	< 0.010	105	80-120			
Sulfate	53.9	1.0 mg/L	16.0	38.4	97	75-125			
BCMOE Aggregate Hydrocarbons, Batch B8J2347									
Blank (B8J2347-BLK1)			Prepared: 2018-10-30, Analyzed: 2018-10-31						
EPHw10-19	< 250	250 µg/L							S09
EPHw19-32	< 250	250 µg/L							S09
Surrogate: 2-Methylnonane (EPH/F2-4)	264	µg/L	444		59	60-140			S09



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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BCMOE Aggregate Hydrocarbons, Batch B8J2347, Continued

LCS (B8J2347-BS2)			Prepared: 2018-10-30, Analyzed: 2018-10-31						
EPHw10-19	13800	250 µg/L	15400	90	70-130				
EPHw19-32	18200	250 µg/L	22200	82	70-130				
Surrogate: 2-Methylnonane (EPH/F2-4)	377	µg/L	444	85	60-140				

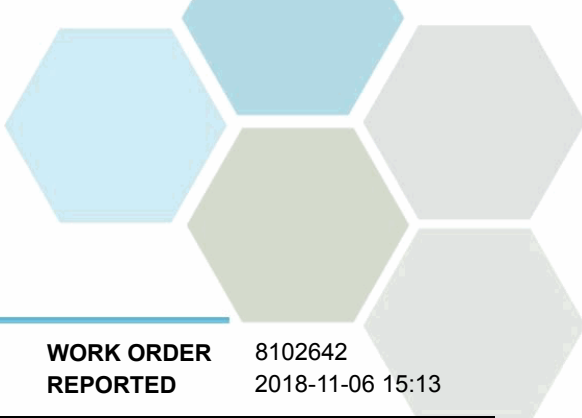
BCMOE Aggregate Hydrocarbons, Batch B8J2390

Blank (B8J2390-BLK1)			Prepared: 2018-10-31, Analyzed: 2018-11-01						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	315	µg/L	444	71	60-140				

LCS (B8J2390-BS2)			Prepared: 2018-10-31, Analyzed: 2018-11-01						
EPHw10-19	13100	250 µg/L	15400	85	70-130				
EPHw19-32	16700	250 µg/L	22200	75	70-130				
Surrogate: 2-Methylnonane (EPH/F2-4)	367	µg/L	444	83	60-140				

Dissolved Metals, Batch B8K0287

Blank (B8K0287-BLK1)			Prepared: 2018-11-05, Analyzed: 2018-11-05						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							

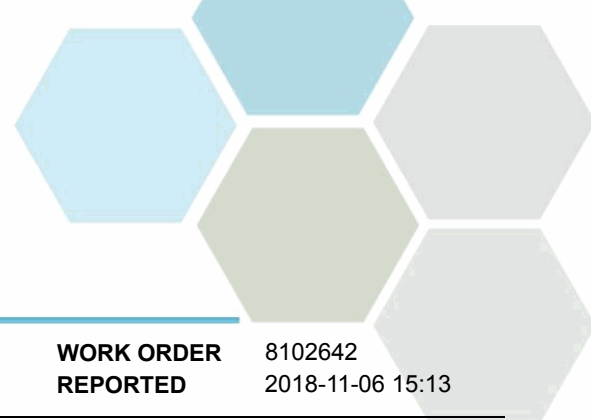


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B8K0287, Continued									
Blank (B8K0287-BLK1), Continued					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Zirconium, dissolved	< 0.00010	0.00010 mg/L							
Blank (B8K0287-BLK2)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							
Blank (B8K0287-BLK3)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B8K0287, Continued

Blank (B8K0287-BLK3), Continued

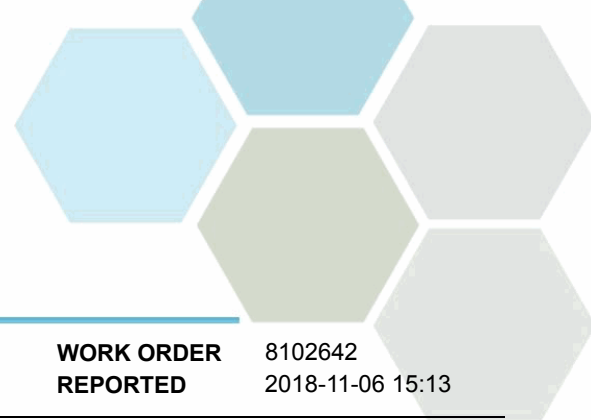
Prepared: 2018-11-05, Analyzed: 2018-11-05

Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B8K0287-BS1)

Prepared: 2018-11-05, Analyzed: 2018-11-05

Aluminum, dissolved	0.0218	0.0050 mg/L	0.0200		109	80-120			
Antimony, dissolved	0.0197	0.00020 mg/L	0.0200		98	80-120			
Arsenic, dissolved	0.0202	0.00050 mg/L	0.0200		101	80-120			
Barium, dissolved	0.0195	0.0050 mg/L	0.0200		97	80-120			
Beryllium, dissolved	0.0210	0.00010 mg/L	0.0200		105	80-120			
Bismuth, dissolved	0.0200	0.00010 mg/L	0.0200		100	80-120			
Boron, dissolved	0.0194	0.0050 mg/L	0.0200		97	80-120			
Cadmium, dissolved	0.0202	0.000010 mg/L	0.0200		101	80-120			
Calcium, dissolved	2.05	0.20 mg/L	2.00		102	80-120			
Chromium, dissolved	0.0194	0.00050 mg/L	0.0200		97	80-120			
Cobalt, dissolved	0.0200	0.00010 mg/L	0.0200		100	80-120			
Copper, dissolved	0.0191	0.00040 mg/L	0.0200		95	80-120			
Iron, dissolved	2.01	0.010 mg/L	2.00		100	80-120			
Lead, dissolved	0.0202	0.00020 mg/L	0.0200		101	80-120			
Lithium, dissolved	0.0214	0.00010 mg/L	0.0200		107	80-120			
Magnesium, dissolved	2.16	0.010 mg/L	2.00		108	80-120			
Manganese, dissolved	0.0192	0.00020 mg/L	0.0200		96	80-120			
Molybdenum, dissolved	0.0191	0.00010 mg/L	0.0200		95	80-120			
Nickel, dissolved	0.0195	0.00040 mg/L	0.0200		98	80-120			
Phosphorus, dissolved	1.96	0.050 mg/L	2.00		98	80-120			
Potassium, dissolved	1.89	0.10 mg/L	2.00		94	80-120			
Selenium, dissolved	0.0208	0.00050 mg/L	0.0200		104	80-120			
Silicon, dissolved	2.0	1.0 mg/L	2.00		102	80-120			
Silver, dissolved	0.0181	0.000050 mg/L	0.0200		90	80-120			
Sodium, dissolved	2.13	0.10 mg/L	2.00		107	80-120			
Strontium, dissolved	0.0177	0.0010 mg/L	0.0200		89	80-120			
Sulfur, dissolved	4.1	3.0 mg/L	5.00		83	80-120			
Tellurium, dissolved	0.0186	0.00050 mg/L	0.0200		93	80-120			
Thallium, dissolved	0.0199	0.000020 mg/L	0.0200		100	80-120			
Thorium, dissolved	0.0176	0.00010 mg/L	0.0200		88	80-120			
Tin, dissolved	0.0197	0.00020 mg/L	0.0200		98	80-120			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B8K0287, Continued

LCS (B8K0287-BS1), Continued

Prepared: 2018-11-05, Analyzed: 2018-11-05

Titanium, dissolved	0.0190	0.0050 mg/L	0.0200		95	80-120			
Tungsten, dissolved	0.0185	0.0010 mg/L	0.0200		93	80-120			
Uranium, dissolved	0.0186	0.000020 mg/L	0.0200		93	80-120			
Vanadium, dissolved	0.0185	0.0010 mg/L	0.0200		92	80-120			
Zinc, dissolved	0.0218	0.0040 mg/L	0.0200		109	80-120			
Zirconium, dissolved	0.0193	0.00010 mg/L	0.0200		97	80-120			

Duplicate (B8K0287-DUP1)

Source: 8102642-01

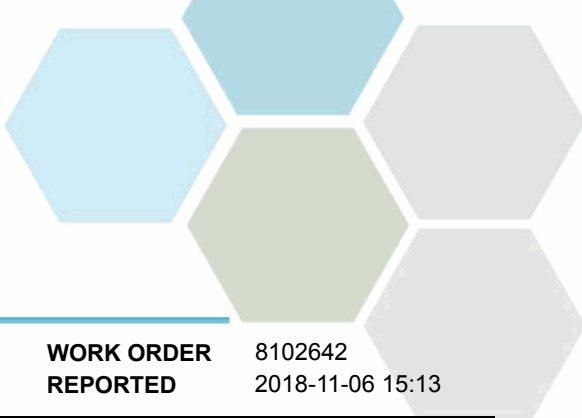
Prepared: 2018-11-05, Analyzed: 2018-11-05

Aluminum, dissolved	< 0.0050	0.0050 mg/L	< 0.0050						11
Antimony, dissolved	0.00034	0.00020 mg/L	0.00036						20
Arsenic, dissolved	0.00450	0.00050 mg/L	0.00451				< 1		8
Barium, dissolved	0.0786	0.0050 mg/L	0.0762				3		7
Beryllium, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						14
Bismuth, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Boron, dissolved	0.0642	0.0050 mg/L	0.0646				< 1		13
Cadmium, dissolved	< 0.000010	0.000010 mg/L	< 0.000010						20
Calcium, dissolved	169	0.20 mg/L	169				< 1		8
Chromium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						14
Cobalt, dissolved	0.00203	0.00010 mg/L	0.00199				2		10
Copper, dissolved	< 0.00040	0.00040 mg/L	< 0.00040						20
Iron, dissolved	3.12	0.010 mg/L	3.05				2		14
Lead, dissolved	< 0.00020	0.00020 mg/L	< 0.00020						20
Lithium, dissolved	0.0104	0.00010 mg/L	0.0103				1		14
Magnesium, dissolved	34.9	0.010 mg/L	35.1				< 1		6
Manganese, dissolved	2.08	0.00020 mg/L	2.11				1		9
Molybdenum, dissolved	0.00051	0.00010 mg/L	0.00042				21		19 RPD
Nickel, dissolved	0.00185	0.00040 mg/L	0.00169						20
Phosphorus, dissolved	< 0.050	0.050 mg/L	< 0.050						14
Potassium, dissolved	3.28	0.10 mg/L	3.42				4		8
Selenium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						20
Silicon, dissolved	11.1	1.0 mg/L	11.0				1		12
Silver, dissolved	< 0.000050	0.000050 mg/L	< 0.000050						20
Sodium, dissolved	59.0	0.10 mg/L	59.3				< 1		6
Strontium, dissolved	0.533	0.0010 mg/L	0.523				2		6
Sulfur, dissolved	21.7	3.0 mg/L	22.3				3		20
Tellurium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						20
Thallium, dissolved	< 0.000020	0.000020 mg/L	< 0.000020						13
Thorium, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Tin, dissolved	< 0.00020	0.00020 mg/L	< 0.00020						20
Titanium, dissolved	< 0.0050	0.0050 mg/L	< 0.0050						20
Tungsten, dissolved	< 0.0010	0.0010 mg/L	< 0.0010						20
Uranium, dissolved	0.00622	0.000020 mg/L	0.00624				< 1		14
Vanadium, dissolved	< 0.0010	0.0010 mg/L	< 0.0010						20
Zinc, dissolved	< 0.0040	0.0040 mg/L	< 0.0040						11
Zirconium, dissolved	0.00021	0.00010 mg/L	0.00020						20

Reference (B8K0287-SRM1)

Prepared: 2018-11-05, Analyzed: 2018-11-05

Aluminum, dissolved	0.209	0.0050 mg/L	0.233		90	79-114			
Antimony, dissolved	0.0455	0.00020 mg/L	0.0430		106	89-123			
Arsenic, dissolved	0.426	0.00050 mg/L	0.438		97	87-113			
Barium, dissolved	3.39	0.0050 mg/L	3.35		101	85-114			
Beryllium, dissolved	0.225	0.00010 mg/L	0.213		106	79-122			
Boron, dissolved	1.69	0.0050 mg/L	1.74		97	79-117			
Cadmium, dissolved	0.215	0.000010 mg/L	0.224		96	89-112			
Calcium, dissolved	7.60	0.20 mg/L	7.69		99	85-120			
Chromium, dissolved	0.434	0.00050 mg/L	0.437		99	87-113			



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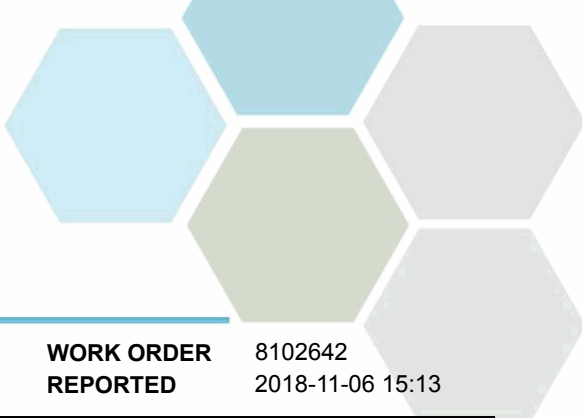
Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B8K0287, Continued									
Reference (B8K0287-SRM1), Continued					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Cobalt, dissolved	0.119	0.00010 mg/L	0.128		93	90-117			
Copper, dissolved	0.832	0.00040 mg/L	0.844		99	90-115			
Iron, dissolved	1.26	0.010 mg/L	1.29		98	86-112			
Lead, dissolved	0.109	0.00020 mg/L	0.112		97	90-113			
Lithium, dissolved	0.109	0.00010 mg/L	0.104		104	77-127			
Magnesium, dissolved	6.92	0.010 mg/L	6.92		100	84-116			
Manganese, dissolved	0.306	0.00020 mg/L	0.345		89	85-113			
Molybdenum, dissolved	0.409	0.00010 mg/L	0.426		96	87-112			
Nickel, dissolved	0.859	0.00040 mg/L	0.840		102	90-114			
Phosphorus, dissolved	0.520	0.050 mg/L	0.495		105	74-119			
Potassium, dissolved	2.86	0.10 mg/L	3.19		90	78-119			
Selenium, dissolved	0.0344	0.00050 mg/L	0.0331		104	89-123			
Sodium, dissolved	18.6	0.10 mg/L	19.1		97	81-117			
Strontium, dissolved	0.867	0.0010 mg/L	0.916		95	82-111			
Thallium, dissolved	0.0358	0.000020 mg/L	0.0393		91	90-113			
Uranium, dissolved	0.247	0.000020 mg/L	0.266		93	87-113			
Vanadium, dissolved	0.837	0.0010 mg/L	0.869		96	85-110			
Zinc, dissolved	0.893	0.0040 mg/L	0.881		101	88-114			

Dissolved Metals, Batch B8K0302

Blank (B8K0302-BLK1)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Blank (B8K0302-BLK2)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Matrix Spike (B8K0302-MS1)			Source: 8102642-04		Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, dissolved	0.000230	0.000010 mg/L	0.000250	< 0.000010	90	70-130			
Reference (B8K0302-SRM1)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, dissolved	0.00520	0.000010 mg/L	0.00489		106	80-120			
Reference (B8K0302-SRM2)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, dissolved	0.00475	0.000010 mg/L	0.00489		97	80-120			

General Parameters, Batch B8J2462

Blank (B8J2462-BLK1)					Prepared: 2018-10-31, Analyzed: 2018-10-31				
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B8J2462-BLK2)					Prepared: 2018-11-01, Analyzed: 2018-11-01				
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B8J2462-BLK3)					Prepared: 2018-11-01, Analyzed: 2018-11-01				
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							

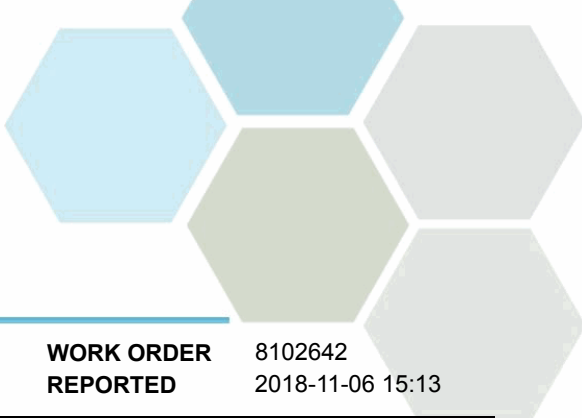


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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B8J2462, Continued									
Blank (B8J2462-BLK3), Continued			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B8J2462-BS1)			Prepared: 2018-10-31, Analyzed: 2018-10-31						
Alkalinity, Total (as CaCO3)	102	1.0 mg/L	100		102	92-106			
LCS (B8J2462-BS2)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Alkalinity, Total (as CaCO3)	104	1.0 mg/L	100		104	92-106			
LCS (B8J2462-BS3)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Alkalinity, Total (as CaCO3)	105	1.0 mg/L	100		105	92-106			
General Parameters, Batch B8K0060									
Blank (B8K0060-BLK1)			Prepared: 2018-01-11, Analyzed: 2018-01-11						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B8K0060-BS1)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Solids, Total Suspended	100	10.0 mg/L	100		100	83-107			
General Parameters, Batch B8K0066									
Blank (B8K0066-BLK1)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B8K0066-BS1)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Conductivity (EC)	148	2.0 µS/cm	147		101	90-110			
General Parameters, Batch B8K0076									
General Parameters, Batch B8K0081									
Blank (B8K0081-BLK1)			Prepared: 2018-11-01, Analyzed: 2018-11-01						
Turbidity	< 0.10	0.10 NTU							
Duplicate (B8K0081-DUP1)			Source: 8102642-02			Prepared: 2018-11-01, Analyzed: 2018-11-01			
Turbidity	7.08	0.10 NTU		7.72			9	18	
General Parameters, Batch B8K0093									
Blank (B8K0093-BLK1)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
Colour, True	< 5.0	5.0 CU							
Blank (B8K0093-BLK2)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
Colour, True	< 5.0	5.0 CU							
LCS (B8K0093-BS1)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
Colour, True	11	5.0 CU	10.0		105	85-115			
LCS (B8K0093-BS2)			Prepared: 2018-11-02, Analyzed: 2018-11-02						
Colour, True	11	5.0 CU	10.0		109	85-115			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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General Parameters, Batch B8K0093, Continued

Duplicate (B8K0093-DUP1)		Source: 8102642-04		Prepared: 2018-11-02, Analyzed: 2018-11-02					
Colour, True	8.6	5.0 CU		8.3				15	

General Parameters, Batch B8K0195

Blank (B8K0195-BLK1)		Prepared: 2018-11-02, Analyzed: 2018-11-02							
Chromium, Hexavalent	< 0.0010	0.0010 mg/L							

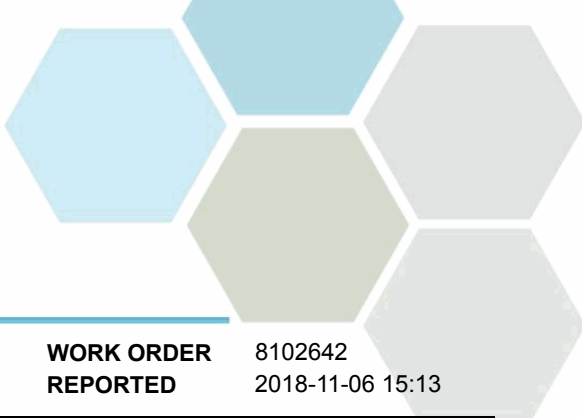
LCS (B8K0195-BS1)		Prepared: 2018-11-02, Analyzed: 2018-11-02							
Chromium, Hexavalent	0.104	0.0010 mg/L	0.100	104	90-111				

Matrix Spike (B8K0195-MS1)		Source: 8102642-09		Prepared: 2018-11-02, Analyzed: 2018-11-02					
Chromium, Hexavalent	0.0883	0.0010 mg/L	0.100	< 0.0010	87	70-116			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B8J2347

Blank (B8J2347-BLK1)		Prepared: 2018-10-30, Analyzed: 2018-11-02							
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
2-Chloronaphthalene	< 0.100	0.100 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
1-Methylnaphthalene	< 0.100	0.100 µg/L							
2-Methylnaphthalene	< 0.100	0.100 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.43	µg/L	4.44	77	50-140				
Surrogate: Naphthalene-d8	3.51	µg/L	4.44	79	50-140				
Surrogate: Perylene-d12	5.15	µg/L	4.44	116	50-140				

LCS (B8J2347-BS1)		Prepared: 2018-10-30, Analyzed: 2018-11-01							
Acenaphthene	3.81	0.050 µg/L	4.40	87	58-125				
Acenaphthylene	4.05	0.200 µg/L	4.40	92	54-128				
Acridine	3.37	0.050 µg/L	4.44	76	50-112				
Anthracene	4.02	0.010 µg/L	4.44	91	66-125				
Benz(a)anthracene	3.71	0.010 µg/L	4.44	83	59-123				
Benzo(a)pyrene	4.06	0.010 µg/L	4.40	92	62-116				
Benzo(b+j)fluoranthene	8.06	0.050 µg/L	8.89	91	69-121				
Benzo(g,h,i)perylene	3.76	0.050 µg/L	4.40	85	58-129				
Benzo(k)fluoranthene	4.12	0.050 µg/L	4.44	93	67-128				
2-Chloronaphthalene	3.15	0.100 µg/L	4.44	71	50-140				
Chrysene	3.67	0.050 µg/L	4.42	83	58-125				
Dibenz(a,h)anthracene	3.91	0.010 µg/L	4.42	89	58-126				
Fluoranthene	3.84	0.030 µg/L	4.36	88	67-133				



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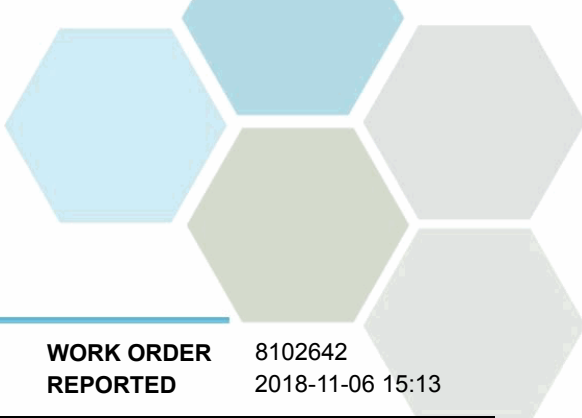
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B8J2347, Continued									
LCS (B8J2347-BS1), Continued					Prepared: 2018-10-30, Analyzed: 2018-11-01				
Fluorene	3.73	0.050 µg/L	4.40		85	55-122			
Indeno(1,2,3-cd)pyrene	3.84	0.050 µg/L	4.44		86	62-126			
1-Methylnaphthalene	3.20	0.100 µg/L	4.38		73	53-125			
2-Methylnaphthalene	3.15	0.100 µg/L	4.36		72	52-122			
Naphthalene	3.49	0.200 µg/L	4.44		79	50-130			
Phenanthrene	4.06	0.100 µg/L	4.40		92	67-127			
Pyrene	3.90	0.020 µg/L	4.44		88	68-133			
Quinoline	5.89	0.050 µg/L	4.44		132	51-140			
Surrogate: Acridine-d9	3.50	µg/L	4.44		79	50-140			
Surrogate: Naphthalene-d8	2.91	µg/L	4.44		65	50-140			
Surrogate: Perylene-d12	4.02	µg/L	4.44		90	50-140			
LCS Dup (B8J2347-BSD1)					Prepared: 2018-10-30, Analyzed: 2018-10-31				
Acenaphthene	3.77	0.050 µg/L	4.40		86	58-125	1	16	
Acenaphthylene	4.00	0.200 µg/L	4.40		91	54-128	1	16	
Acridine	3.71	0.050 µg/L	4.44		83	50-112	10	26	
Anthracene	4.12	0.010 µg/L	4.44		93	66-125	2	14	
Benz(a)anthracene	3.84	0.010 µg/L	4.44		86	59-123	4	23	
Benzo(a)pyrene	4.23	0.010 µg/L	4.40		96	62-116	4	16	
Benzo(b+j)fluoranthene	8.36	0.050 µg/L	8.89		94	69-121	4	14	
Benzo(g,h,i)perylene	3.91	0.050 µg/L	4.40		89	58-129	4	25	
Benzo(k)fluoranthene	3.85	0.050 µg/L	4.44		87	67-128	7	18	
2-Chloronaphthalene	3.05	0.100 µg/L	4.44		69	50-140	3	30	
Chrysene	3.81	0.050 µg/L	4.42		86	58-125	4	24	
Dibenz(a,h)anthracene	4.11	0.010 µg/L	4.42		93	58-126	5	23	
Fluoranthene	4.05	0.030 µg/L	4.36		93	67-133	5	18	
Fluorene	3.74	0.050 µg/L	4.40		85	55-122	< 1	16	
Indeno(1,2,3-cd)pyrene	3.94	0.050 µg/L	4.44		89	62-126	3	22	
1-Methylnaphthalene	3.01	0.100 µg/L	4.38		69	53-125	6	16	
2-Methylnaphthalene	2.95	0.100 µg/L	4.36		68	52-122	7	17	
Naphthalene	3.27	0.200 µg/L	4.44		74	50-130	7	18	
Phenanthrene	4.14	0.100 µg/L	4.40		94	67-127	2	14	
Pyrene	4.11	0.020 µg/L	4.44		93	68-133	5	18	
Quinoline	6.05	0.050 µg/L	4.44		136	51-140	3	12	
Surrogate: Acridine-d9	3.83	µg/L	4.44		86	50-140			
Surrogate: Naphthalene-d8	2.94	µg/L	4.44		66	50-140			
Surrogate: Perylene-d12	4.23	µg/L	4.44		95	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B8J2390

Blank (B8J2390-BLK1)			Prepared: 2018-10-31, Analyzed: 2018-11-01						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
2-Chloronaphthalene	< 0.100	0.100 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							

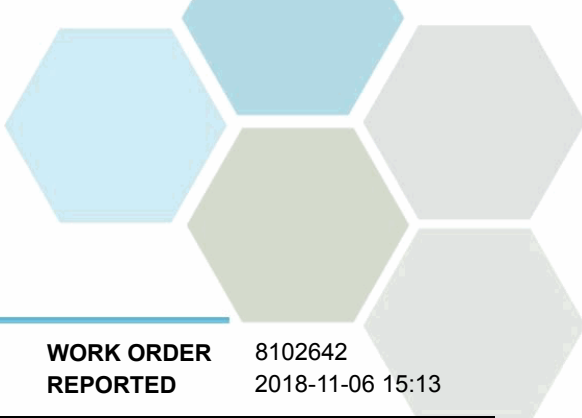


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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B8J2390, Continued									
Blank (B8J2390-BLK1), Continued					Prepared: 2018-10-31, Analyzed: 2018-11-01				
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
1-Methylnaphthalene	< 0.100	0.100 µg/L							
2-Methylnaphthalene	< 0.100	0.100 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	2.73	µg/L	4.44		62	50-140			
Surrogate: Naphthalene-d8	2.58	µg/L	4.44		58	50-140			
Surrogate: Perylene-d12	3.20	µg/L	4.44		72	50-140			
LCS (B8J2390-BS1)					Prepared: 2018-10-31, Analyzed: 2018-11-01				
Acenaphthene	5.07	0.050 µg/L	4.40		115	58-125			
Acenaphthylene	5.20	0.200 µg/L	4.40		118	54-128			
Acridine	3.93	0.050 µg/L	4.44		88	50-112			
Anthracene	5.02	0.010 µg/L	4.44		113	66-125			
Benz(a)anthracene	4.95	0.010 µg/L	4.44		111	59-123			
Benzo(a)pyrene	4.87	0.010 µg/L	4.40		111	62-116			
Benzo(b+j)fluoranthene	10.3	0.050 µg/L	8.89		116	69-121			
Benzo(g,h,i)perylene	3.57	0.050 µg/L	4.40		81	58-129			
Benzo(k)fluoranthene	4.65	0.050 µg/L	4.44		105	67-128			
2-Chloronaphthalene	4.47	0.100 µg/L	4.44		101	50-140			
Chrysene	5.02	0.050 µg/L	4.42		113	58-125			
Dibenz(a,h)anthracene	4.08	0.010 µg/L	4.42		92	58-126			
Fluoranthene	5.24	0.030 µg/L	4.36		120	67-133			
Fluorene	4.95	0.050 µg/L	4.40		113	55-122			
Indeno(1,2,3-cd)pyrene	3.91	0.050 µg/L	4.44		88	62-126			
1-Methylnaphthalene	4.37	0.100 µg/L	4.38		100	53-125			
2-Methylnaphthalene	4.39	0.100 µg/L	4.36		101	52-122			
Naphthalene	4.53	0.200 µg/L	4.44		102	50-130			
Phenanthrene	5.39	0.100 µg/L	4.40		123	67-127			
Pyrene	5.33	0.020 µg/L	4.44		120	68-133			
Quinoline	6.22	0.050 µg/L	4.44		140	51-140			
Surrogate: Acridine-d9	3.36	µg/L	4.44		76	50-140			
Surrogate: Naphthalene-d8	3.94	µg/L	4.44		89	50-140			
Surrogate: Perylene-d12	4.30	µg/L	4.44		97	50-140			
LCS Dup (B8J2390-BSD1)					Prepared: 2018-10-31, Analyzed: 2018-11-01				
Acenaphthene	5.10	0.050 µg/L	4.40		116	58-125	< 1	16	
Acenaphthylene	5.11	0.200 µg/L	4.40		116	54-128	2	16	
Acridine	4.61	0.050 µg/L	4.44		104	50-112	16	26	
Anthracene	5.08	0.010 µg/L	4.44		114	66-125	1	14	
Benz(a)anthracene	5.01	0.010 µg/L	4.44		113	59-123	1	23	
Benzo(a)pyrene	5.02	0.010 µg/L	4.40		114	62-116	3	16	
Benzo(b+j)fluoranthene	10.5	0.050 µg/L	8.89		118	69-121	1	14	
Benzo(g,h,i)perylene	3.56	0.050 µg/L	4.40		81	58-129	< 1	25	
Benzo(k)fluoranthene	4.27	0.050 µg/L	4.44		96	67-128	8	18	
2-Chloronaphthalene	4.21	0.100 µg/L	4.44		95	50-140	6	30	
Chrysene	5.05	0.050 µg/L	4.42		114	58-125	< 1	24	
Dibenz(a,h)anthracene	4.08	0.010 µg/L	4.42		92	58-126	< 1	23	
Fluoranthene	5.25	0.030 µg/L	4.36		121	67-133	< 1	18	
Fluorene	4.99	0.050 µg/L	4.40		113	55-122	< 1	16	
Indeno(1,2,3-cd)pyrene	3.96	0.050 µg/L	4.44		89	62-126	1	22	
1-Methylnaphthalene	4.02	0.100 µg/L	4.38		92	53-125	8	16	
2-Methylnaphthalene	4.05	0.100 µg/L	4.36		93	52-122	8	17	
Naphthalene	4.09	0.200 µg/L	4.44		92	50-130	10	18	



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B8J2390, Continued

LCS Dup (B8J2390-BSD1), Continued

Prepared: 2018-10-31, Analyzed: 2018-11-01

Phenanthrene	5.47	0.100 µg/L	4.40		124	67-127	1	14	
Pyrene	5.37	0.020 µg/L	4.44		121	68-133	< 1	18	
Quinoline	6.22	0.050 µg/L	4.44		140	51-140	< 1	12	
Surrogate: Acridine-d9	4.04	µg/L	4.44		91	50-140			
Surrogate: Naphthalene-d8	3.56	µg/L	4.44		80	50-140			
Surrogate: Perylene-d12	4.33	µg/L	4.44		97	50-140			

Total Metals, Batch B8K0262

Blank (B8K0262-BLK1)

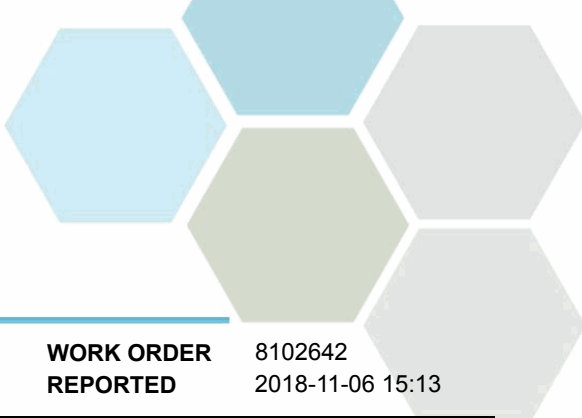
Prepared: 2018-11-03, Analyzed: 2018-11-05

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							

Blank (B8K0262-BLK2)

Prepared: 2018-11-03, Analyzed: 2018-11-05

Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B8K0262, Continued

Blank (B8K0262-BLK2), Continued

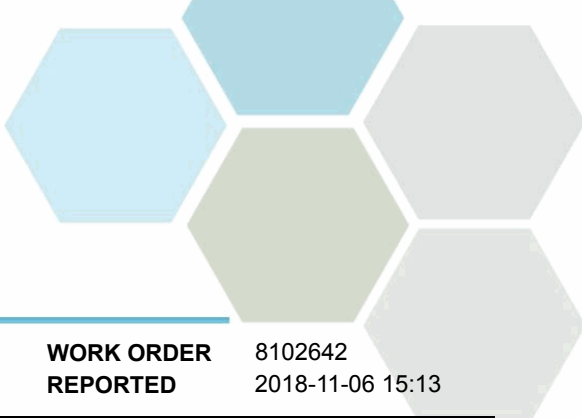
Prepared: 2018-11-03, Analyzed: 2018-11-05

Boron, total	< 0.0050	0.0050 mg/L
Cadmium, total	< 0.000010	0.000010 mg/L
Calcium, total	< 0.20	0.20 mg/L
Chromium, total	< 0.00050	0.00050 mg/L
Cobalt, total	< 0.00010	0.00010 mg/L
Copper, total	< 0.00040	0.00040 mg/L
Iron, total	< 0.010	0.010 mg/L
Lead, total	< 0.00020	0.00020 mg/L
Lithium, total	< 0.00010	0.00010 mg/L
Magnesium, total	< 0.010	0.010 mg/L
Manganese, total	< 0.00020	0.00020 mg/L
Molybdenum, total	< 0.00010	0.00010 mg/L
Nickel, total	< 0.00040	0.00040 mg/L
Phosphorus, total	< 0.050	0.050 mg/L
Potassium, total	< 0.10	0.10 mg/L
Selenium, total	< 0.00050	0.00050 mg/L
Silicon, total	< 1.0	1.0 mg/L
Silver, total	< 0.000050	0.000050 mg/L
Sodium, total	< 0.10	0.10 mg/L
Strontium, total	< 0.0010	0.0010 mg/L
Sulfur, total	< 3.0	3.0 mg/L
Tellurium, total	< 0.00050	0.00050 mg/L
Thallium, total	< 0.000020	0.000020 mg/L
Thorium, total	< 0.00010	0.00010 mg/L
Tin, total	< 0.00020	0.00020 mg/L
Titanium, total	< 0.0050	0.0050 mg/L
Tungsten, total	< 0.0010	0.0010 mg/L
Uranium, total	< 0.000020	0.000020 mg/L
Vanadium, total	< 0.0010	0.0010 mg/L
Zinc, total	< 0.0040	0.0040 mg/L
Zirconium, total	< 0.00010	0.00010 mg/L

Blank (B8K0262-BLK3)

Prepared: 2018-11-03, Analyzed: 2018-11-05

Aluminum, total	< 0.0050	0.0050 mg/L
Antimony, total	< 0.00020	0.00020 mg/L
Arsenic, total	< 0.00050	0.00050 mg/L
Barium, total	< 0.0050	0.0050 mg/L
Beryllium, total	< 0.00010	0.00010 mg/L
Bismuth, total	< 0.00010	0.00010 mg/L
Boron, total	< 0.0050	0.0050 mg/L
Cadmium, total	< 0.000010	0.000010 mg/L
Calcium, total	< 0.20	0.20 mg/L
Chromium, total	< 0.00050	0.00050 mg/L
Cobalt, total	< 0.00010	0.00010 mg/L
Copper, total	< 0.00040	0.00040 mg/L
Iron, total	< 0.010	0.010 mg/L
Lead, total	< 0.00020	0.00020 mg/L
Lithium, total	< 0.00010	0.00010 mg/L
Magnesium, total	< 0.010	0.010 mg/L
Manganese, total	< 0.00020	0.00020 mg/L
Molybdenum, total	< 0.00010	0.00010 mg/L
Nickel, total	< 0.00040	0.00040 mg/L
Phosphorus, total	< 0.050	0.050 mg/L
Potassium, total	< 0.10	0.10 mg/L
Selenium, total	< 0.00050	0.00050 mg/L
Silicon, total	< 1.0	1.0 mg/L

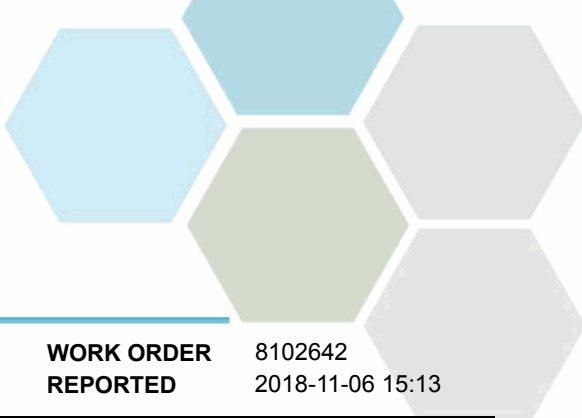


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B8K0262, Continued									
Blank (B8K0262-BLK3), Continued					Prepared: 2018-11-03, Analyzed: 2018-11-05				
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							
LCS (B8K0262-BS1)									
					Prepared: 2018-11-03, Analyzed: 2018-11-05				
Aluminum, total	0.0222	0.0050 mg/L	0.0200		111	80-120			
Antimony, total	0.0202	0.00020 mg/L	0.0200		101	80-120			
Arsenic, total	0.0206	0.00050 mg/L	0.0200		103	80-120			
Barium, total	0.0215	0.0050 mg/L	0.0200		107	80-120			
Beryllium, total	0.0222	0.00010 mg/L	0.0200		111	80-120			
Bismuth, total	0.0209	0.00010 mg/L	0.0200		105	80-120			
Boron, total	0.0212	0.0050 mg/L	0.0200		106	80-120			
Cadmium, total	0.0208	0.000010 mg/L	0.0200		104	80-120			
Calcium, total	2.37	0.20 mg/L	2.00		118	80-120			
Chromium, total	0.0203	0.00050 mg/L	0.0200		101	80-120			
Cobalt, total	0.0198	0.00010 mg/L	0.0200		99	80-120			
Copper, total	0.0201	0.00040 mg/L	0.0200		100	80-120			
Iron, total	2.11	0.010 mg/L	2.00		105	80-120			
Lead, total	0.0211	0.00020 mg/L	0.0200		105	80-120			
Lithium, total	0.0239	0.00010 mg/L	0.0200		119	80-120			
Magnesium, total	2.38	0.010 mg/L	2.00		119	80-120			
Manganese, total	0.0204	0.00020 mg/L	0.0200		102	80-120			
Molybdenum, total	0.0196	0.00010 mg/L	0.0200		98	80-120			
Nickel, total	0.0208	0.00040 mg/L	0.0200		104	80-120			
Phosphorus, total	2.03	0.050 mg/L	2.00		102	80-120			
Potassium, total	2.12	0.10 mg/L	2.00		106	80-120			
Selenium, total	0.0237	0.00050 mg/L	0.0200		118	80-120			
Silicon, total	2.1	1.0 mg/L	2.00		103	80-120			
Silver, total	0.0169	0.000050 mg/L	0.0200		85	80-120			
Sodium, total	2.38	0.10 mg/L	2.00		119	80-120			
Strontium, total	0.0199	0.0010 mg/L	0.0200		99	80-120			
Sulfur, total	5.0	3.0 mg/L	5.00		100	80-120			
Tellurium, total	0.0196	0.00050 mg/L	0.0200		98	80-120			
Thallium, total	0.0196	0.000020 mg/L	0.0200		98	80-120			
Thorium, total	0.0180	0.00010 mg/L	0.0200		90	80-120			
Tin, total	0.0200	0.00020 mg/L	0.0200		100	80-120			
Titanium, total	0.0194	0.0050 mg/L	0.0200		97	80-120			
Tungsten, total	0.0167	0.0010 mg/L	0.0200		83	80-120			
Uranium, total	0.0200	0.000020 mg/L	0.0200		100	80-120			
Vanadium, total	0.0197	0.0010 mg/L	0.0200		98	80-120			
Zinc, total	0.0241	0.0040 mg/L	0.0200		120	80-120			
Zirconium, total	0.0193	0.00010 mg/L	0.0200		97	80-120			
Duplicate (B8K0262-DUP1)									
					Source: 8102642-01 Prepared: 2018-11-03, Analyzed: 2018-11-05				
Aluminum, total	0.119	0.0050 mg/L		0.110			8	20	



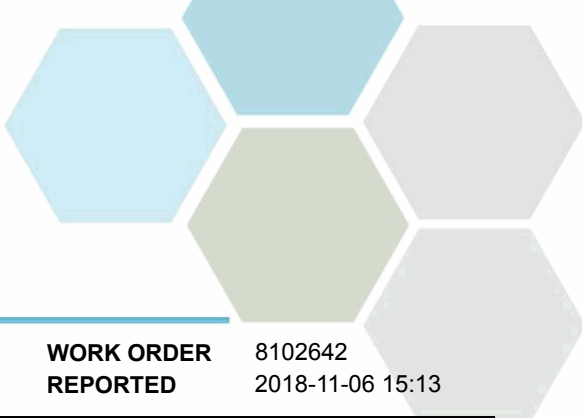
APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B8K0262, Continued									
Duplicate (B8K0262-DUP1), Continued		Source: 8102642-01		Prepared: 2018-11-03, Analyzed: 2018-11-05					
Antimony, total	0.00087	0.00020 mg/L		0.00070				20	
Arsenic, total	0.00520	0.00050 mg/L		0.00484			7	15	
Barium, total	0.0950	0.0050 mg/L		0.0906			5	9	
Beryllium, total	< 0.00010	0.00010 mg/L		< 0.00010				16	
Bismuth, total	< 0.00010	0.00010 mg/L		< 0.00010				20	
Boron, total	0.0731	0.0050 mg/L		0.0711			3	20	
Cadmium, total	0.000059	0.000010 mg/L		0.000036			50	20	RPD
Calcium, total	182	0.20 mg/L		170			7	12	
Chromium, total	0.00061	0.00050 mg/L		< 0.00050				12	
Cobalt, total	0.00322	0.00010 mg/L		0.00305			6	13	
Copper, total	0.00164	0.00040 mg/L		0.00143				20	
Iron, total	3.75	0.010 mg/L		3.58			5	18	
Lead, total	0.00070	0.00020 mg/L		0.00064				20	
Lithium, total	0.0121	0.00010 mg/L		0.0120			1	19	
Magnesium, total	36.8	0.010 mg/L		35.7			3	10	
Manganese, total	2.28	0.00020 mg/L		2.18			4	13	
Molybdenum, total	0.00140	0.00010 mg/L		0.00125			11	20	
Nickel, total	0.00713	0.00040 mg/L		0.00696			2	20	
Phosphorus, total	< 0.050	0.050 mg/L		< 0.050				20	
Potassium, total	3.41	0.10 mg/L		3.25			5	13	
Selenium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Silicon, total	11.7	1.0 mg/L		11.0			6	11	
Silver, total	< 0.000050	0.000050 mg/L		< 0.000050				18	
Sodium, total	62.7	0.10 mg/L		60.2			4	10	
Strontium, total	0.582	0.0010 mg/L		0.557			5	9	
Sulfur, total	23.8	3.0 mg/L		23.5			1	20	
Tellurium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Thallium, total	0.000037	0.000020 mg/L		0.000035				20	
Thorium, total	< 0.00010	0.00010 mg/L		< 0.00010				18	
Tin, total	0.00109	0.00020 mg/L		0.00098			11	20	
Titanium, total	0.0060	0.0050 mg/L		0.0055				20	
Tungsten, total	< 0.0010	0.0010 mg/L		< 0.0010				20	
Uranium, total	0.00657	0.000020 mg/L		0.00644			2	14	
Vanadium, total	< 0.0010	0.0010 mg/L		< 0.0010				17	
Zinc, total	0.0094	0.0040 mg/L		0.0093				8	
Zirconium, total	0.00019	0.00010 mg/L		0.00017				20	

Reference (B8K0262-SRM1)		Prepared: 2018-11-03, Analyzed: 2018-11-05							
Aluminum, total	0.290	0.0050 mg/L	0.303	96	82-114				
Antimony, total	0.0525	0.00020 mg/L	0.0511	103	88-115				
Arsenic, total	0.118	0.00050 mg/L	0.118	100	88-111				
Barium, total	0.810	0.0050 mg/L	0.823	98	83-110				
Beryllium, total	0.0528	0.00010 mg/L	0.0496	107	80-119				
Boron, total	3.76	0.0050 mg/L	3.45	109	80-118				
Cadmium, total	0.0494	0.000010 mg/L	0.0495	100	90-110				
Calcium, total	12.0	0.20 mg/L	11.6	103	85-113				
Chromium, total	0.243	0.00050 mg/L	0.250	97	88-111				
Cobalt, total	0.0366	0.00010 mg/L	0.0377	97	90-114				
Copper, total	0.545	0.00040 mg/L	0.486	112	90-117				
Iron, total	0.525	0.010 mg/L	0.488	107	90-116				
Lead, total	0.216	0.00020 mg/L	0.204	106	90-110				
Lithium, total	0.451	0.00010 mg/L	0.403	112	79-118				
Magnesium, total	4.26	0.010 mg/L	3.79	112	88-116				
Manganese, total	0.106	0.00020 mg/L	0.109	97	88-108				
Molybdenum, total	0.202	0.00010 mg/L	0.198	102	88-110				
Nickel, total	0.246	0.00040 mg/L	0.249	99	90-112				



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 8102642
2018-11-06 15:13

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B8K0262, Continued									
Reference (B8K0262-SRM1), Continued					Prepared: 2018-11-03, Analyzed: 2018-11-05				
Phosphorus, total	0.232	0.050 mg/L	0.227		102	72-118			
Potassium, total	7.91	0.10 mg/L	7.21		110	87-116			
Selenium, total	0.136	0.00050 mg/L	0.121		113	90-122			
Sodium, total	8.19	0.10 mg/L	7.54		109	86-118			
Strontium, total	0.362	0.0010 mg/L	0.375		96	86-110			
Thallium, total	0.0877	0.000020 mg/L	0.0805		109	90-113			
Uranium, total	0.0295	0.000020 mg/L	0.0306		96	88-112			
Vanadium, total	0.399	0.0010 mg/L	0.386		103	87-110			
Zinc, total	2.59	0.0040 mg/L	2.49		104	90-113			

Total Metals, Batch B8K0301

Blank (B8K0301-BLK1)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, total	< 0.000010	0.000010 mg/L							
Reference (B8K0301-SRM1)					Prepared: 2018-11-05, Analyzed: 2018-11-05				
Mercury, total	0.00510	0.000010 mg/L	0.00489		104	80-120			

QC Qualifiers:

RPD Relative percent difference (RPD) of duplicate analysis are outside of control limits for unknown reason(s).
S09 The surrogate recovery for this sample is outside of established control limits .

Client information	Project information	Laboratory information	COC information
Allterra Construction 2158 Millstream Road Victoria, BC V9B 6H4 Phone: (250) 508-0726 Fax:	Number: [none] Sample count: 9 TAT: 5	CARO Analytical Services #110 - 4011 Viking Way Richmond, BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: October 2018 Shipped via: Harbour Air Tracking #: SDG:

#		Analyses	Containers
# 1	MW6 10/29/2018 11:30 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 2	MW3S 10/29/2018 13:30 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
# 3	MW3D 10/29/2018 13:45 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)

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# 4	MW2 10/29/2018 14:45 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)	
# 5	SB1 10/29/2018 12:45 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)	
# 6	SB2 10/29/2018 12:30 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)	
# 7	SB3 10/29/2018 12:10 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)	

# 8	LE-1 10/29/2018 15:30 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
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# 9	SW1 10/29/2018 14:00 Grab / Water	Analyses Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss ICPMS, Low (RMD) TAT: 5 Mercury, total CVAFS Reg & Low (RMD) TAT: 5 Metals, dissolved, All, Low (RMD) TAT: 5 Metals, total, All, Low +Cr6 (RMD) TAT: 5 pH in Water (RMD) TAT: 5 Solids, Total Suspended (RMD) TAT: 5 Turbidity (RMD) TAT: 5	Containers C03_250 mL Glass (EPH/PAH) (1) C05_125 mL Plastic (Metals) (1) C06_40 mL Vial (Mercury) (1) C09_125 mL Plastic (CN/Cr6) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)
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Relinquished by	Date/Time	Accepted by	Date/Time