

From: SPOMO1701@outlook.com
To: Environmental.Compliance ENV:EX; marty@chholdings.ca
Subject: SPO MO1701-Status Update July 30, 2019
Date: July 30, 2019 22:26:37
Attachments: [July 30, 2019 CHH Progress Report.pdf](#)
[June 2019 Surface Water Quality DATA-CHH.pdf](#)
[June 2019 Groundwater Quality DATA-CHH.pdf](#)
[COA CHH June 2019.pdf](#)
[COA CHH June 2019.xlsx](#)

- ***Please find information regarding the Leachate reporting requirements for the July 30, 2019 reporting period as per SPILL PREVENTION ORDER: MO1701 Section 1d***

Total Leachate Collected= 1.20 m³

Total Leachate Stored= 6.10 m³

Total Leachate Transported= Approximately 32.90 m³ (Leachate removal occurred this reporting period. Manifests to follow in the forthcoming status update.)

- ***Sampling was conducted on JULY 30 , 2019 as per Section 6biii of File 311372 August 11, 2017 letter. Laboratory results are pending. Tabulated results and COAs for the June 2019 sampling period are attached.***

Sampling Summary JULY 30, 2019:

1. *SHA-SW1*
2. *SHA-SW2 (No Flow)*
3. *MW6*
4. *MW3*
5. *MW2*
6. *SHA-LE-1*
7. *SHA-LD-1 (Dry)*
8. *SB-1 (Dry)*
9. *SB-2*
10. *SB-3 (Dry)*

- ***Attached is the QP Progress Report for July 30, 2019 as per File 311372 August 11, 2017 letter.***

Thank you



FIELD REVIEW REPORT		DATE: JULY 30, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 49	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 21°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: = 1.20 m³
 - Total leachate stored = 6.10 m³
 - Total leachate transported = 32.90 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: JULY 30, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 49	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 21°C	PAGE: 2 of 3



SMA - looking south



SMA - looking north



Contact water containment Pond



Leak and leachate detection works



FIELD REVIEW REPORT		DATE: JULY 30, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 49	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 21°C	PAGE: 3 of 3



PEA – liner near NE corner



PEA– NW corner



PEA north face



PEA ditch

Table 1: Analytical Results for Nutrients			SHA-LE-1	SHA-SW-1
Laboratory ID			9070051-06	9070051-07
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	LE-1	SW1
Date Sampled/Time			2019-06-30	2019-06-30
Physical Tests				
Colour, True (Colour Units)	15 TCU	15 ⁽¹⁾ units absolute, or 5 units above background (30-day average)	7.8	5.9
Total Suspended Solids (mg/L)	-	25 mg/L above background (24-hr during clear flow)	<2.0	<2.0
pH	7-10.5	6.5-9	7.25	7.87
Conductivity (uS/cm)	-	-	13800	608
Hardness (as CaCO3)	-	-	3820	295
Turbidity (NTU)	Δ1 NTU	8 NTU above background (24-hr during clear flow)	0.22	0.2
Anions and Nutrients mg/L				
Alkalinity Total (as CaCO3)	<10 high sensitivity to acid inputs		35.1	196
Acid Sensitivity	10-20 moderate sensitivity to acid inputs >20 low sensitivity to acid inputs		Low	Low
Chloride (Cl)	250 mg/L	600 mg/L (instant max), 150 mg/L (30-day average)	3990	31.2
Fluoride (F)	1.5 mg/L (instant max) 1.0 mg/L (30-day average)	0.4 (Hardness <10mg/L)	<1.00	<0.10
		Hardness-Dependent AW (Hardness is >10mg/L) ⁽³⁾	0.28	0.31
Nitrate (as N)	45 mg/L	32.8 mg/L (instant maximum) 3.0 mg/L (30-day average)	1.91	0.303
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	<0.100
Sulfate (SO4) H 0-30 mg/L	500 mg/L	128 mg/L 30-day average)		
H 31 - 75 mg/L		218 mg/L (30-day average)		
H 76 - 180 mg/L		309 mg/L (30-day average)		
H 181 - 250 mg/L		429 mg/L (30-day average)		
H > 250 mg/L		TBD	1790	97.6

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals			SHA-LE-1	SHA-SW-1
Laboratory ID			9070051-06	9070051-07
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	LE-1	SW1
Date Sampled/Time			2019-06-30	2019-06-30
Physical Tests				
Hardness (as CaCO ₃) (mg/L)	-	-	3820	295
pH	7-10.5	6.5-9	7.25	7.87
Total Metals (mg/L)				
Aluminum (Al)-Total	0.2	-	0.0142	0.0497
Antimony (Sb)-Total	-	-	<0.00020	<0.00020
Arsenic (As)-Total	0.01	0.005	0.00054	<0.00050
Barium (Ba)-Total	-	-	0.0144	0.0199
Beryllium (Be)-Total	-	-	<0.00010	<0.00010
Bismuth, total	-	-	<0.00010	<0.00010
Boron (B)-Total	5	1.2	0.237	0.0193
Cadmium (Cd)-Total	-	-	0.000965	0.000012
Calcium (Ca)-Total	-	-	1150	102
Chromium (Cr)-Total	-	-	0.00104	0.00076
Chromium (Cr(III))	-	-	-	-
Chromium (Cr(VI))	-	-	-	-
Cobalt (Co)-Total	-	0.110 (Short Term), 0.004 (Long Term Average)	0.00113	0.00019
Copper (Cu)-Total	0.5	Hardness-Dependent ⁽¹⁾	0.00227	0.00185
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant)	0.3611	0.0237
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	0.1528	0.0118
Iron (Fe)-Total	-	1	<0.010	0.053
Lead (Pb)-Total	0.01	Hardness-Dependent ⁽¹⁾	<0.00020	<0.00020
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	8.4313	0.3236
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	0.3322	0.0159
Lithium (Li)-Total	-	-	0.00051	0.00025
Magnesium (Mg)-Total	-	-	285	13.3
Manganese (Mn)-Total	-	Hardness-Dependent ⁽¹⁾	26.3	0.0619
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	42.6	3.8
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	17.4	1.9
Mercury (Hg)-Total	0.001	0.00002	0.00001	<0.000010
Molybdenum (Mo)-Total	0.25	≤1 (instant max) 2 (30-d average)	0.00032	0.00095
Nickel (Ni)-Total	-	0.025 (Hardness-Dependent ⁽¹⁾ BCAWQG to protect AW ⁽²⁾ ≤60mg/L)	0.009	0.00105
		Calculated Hardness-Dependent ⁽¹⁾ BCAWQG to protect AW ⁽²⁾ ≤180 mg/L CaCO ₃	1.522	0.217
Phosphorus(P)-Total	-	-	<0.050	<0.050
Potassium (K)-Total	-	-	27.3	1.06
Selenium (Se)-Total	0.01	0.002	<0.00050	<0.00050
Silicon (Si)-Total	-	-	7.8	6.5
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)	0.000134	<0.000050
Sodium (Na)-Total	-	-	2170	14.6
Strontium (Sr)-Total	-	-	5.42	0.279
Sulfur (S)-Total	-	-	796	35.7
Tellurium (Te)-Total	-	-	<0.00050	<0.00050
Thallium (Tl)-Total	-	-	0.00003	<0.000020
Thorium (Th)-Total	-	-	<0.00010	<0.00010
Tin (Sn)-Total	-	-	<0.00020	<0.00020
Titanium (Ti)-Total	-	-	<0.00050	<0.00050
Uranium (U)-Total	-	-	0.000085	0.00181
Vanadium (V)-Total	-	-	<0.0010	0.0013
Zinc (Zn)-Total	5.0	Hardness >90 mg/L	0.0229	<0.0040
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	2.831	0.187
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	2.805	0.161
Zirconium (Zr)-Total	-	-	<0.00010	<0.00010

Table 3: Analytical Results for Dissolved Metals			SHA-LE-1	SHA-SW-1
Laboratory ID			9070051-06	9070051-07
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	LE-1	SW1
Date Sampled/Time			2019-06-30	2019-06-30
Physical Tests				
Hardness (as CaCO ₃) (mg/L)	-	-	3820	295
pH	7-10.5	6.5-9	7.25	7.87
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	0.0076	<0.0050
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (instant max)	0.260	0.844
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (30-d Mean)	0.249	1.370
Antimony (Sb)-Dissolved	-	-	<0.00020	<0.00020
Arsenic (As)-Dissolved	-	-	<0.00050	<0.00050
Barium (Ba)-Dissolved	-	-	0.0131	0.0184
Beryllium (Be)-Dissolved	-	-	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	-	-	<0.00010	<0.00010
Boron (B)-Dissolved	-	-	0.227	0.0176
Cadmium (Cd)-Dissolved	-	Hardness-Dependent⁽³⁾	0.000895	<0.000010
		Calculated Hardness-Dependent ^(a) BCAWQG to protect AW (short-term max) $e[1.03 * \ln(Hss) - 5.274]$ ug/L H<455mg/L	Hardness exceeds 455mg/L	0.00179
		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
Calcium (Ca)-Dissolved	-	up to 4, highly sensitive to acid inputs 4 to 8, moderately sensitive over 8 low sensitivity	1080	97.8
			Low	Low
Chromium (Cr)-Dissolved	-	-	0.00115	0.00061
Cobalt (Co)-Dissolved	-	-	0.00107	<0.00010
Copper (Cu)-Dissolved	-	-	0.00206	0.00115
Iron (Fe)-Dissolved	-	0.35	<0.010	<0.010
Lead (Pb)-Dissolved	-	-	<0.00020	<0.00020
Lithium, dissolved	-	-	0.0004	0.00016
Magnesium (Mg)-Dissolved	-	-	268	12.2
Manganese (Mn)-Dissolved	-	-	24.9	0.0283
Mercury (Hg)-Dissolved	-	-	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved	-	-	0.00031	0.00086
Nickel (Ni)-Dissolved	-	-	0.00857	0.00076
Phosphorus (P)-Dissolved	-	-	<0.050	<0.050
Potassium (K)-Dissolved	-	-	26	1.01
Selenium (Se)-Dissolved	-	-	<0.00050	<0.00050
Silicon (Si)-Dissolved	-	-	7.6	6.3
Silver (Ag)-Dissolved	-	-	0.000122	<0.000050
Sodium (Na)-Dissolved	-	-	2020	13
Strontium (Sr)-dissolved	-	-	5.17	0.268
Sulfur (S)-Dissolved	-	-	747	32.7
Tellurium (Te)-Dissolved	-	-	<0.00050	<0.00050
Thallium (Tl)-Dissolved	-	-	0.000026	<0.000020
Thorium (Th)-Dissolved	-	-	<0.00010	<0.00010
Tin (Sn)-Dissolved	-	-	<0.00020	<0.00020
Titanium (Ti)-Dissolved	-	-	<0.0050	<0.0050
Uranium (U)-Dissolved	-	-	0.000076	0.00173
Vanadium (V)-Dissolved	-	-	<0.0010	<0.0010
Zinc (Zn)-Dissolved	-	-	0.0214	<0.0040
Zirconium (Zr)-Dissolved	-	-	<0.00010	<0.00010

Notes: Refer to Table Endnotes (attached)

Table 4: Analytical Results for Hydrocarbons and PAHs			SHA-LE-1	SHA-SW-1
Laboratory ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	9070051-06	9070051-07
Sample ID			LE-1	SW1
Date Sampled/ Time			2019-06-30	2019-06-30
Hydrocarbons ug/L				
LEPH	-	-	293	<250
HEPH	-	-	<250	<250
Polycyclic Aromatic				
Acenaphthene	-	6 (LONG TERM)	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200
Acridine	-	3 (LONG TERM), 0.05 (PHOTOTOXIC)	<0.050	<0.050
Anthracene	-	4 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010
Benz(a)anthracene	0.01	0.1 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010
Benzo(a)pyrene	-	0.01 (LONG TERM)	<0.010	<0.010
Benzo(b)fluoranthene	-	-	-	-
Benzo(b+j)fluoranthene	-	-	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.050	<0.050
Benzo(k)fluoranthene	-	-	<0.050	<0.050
2-Chloronaphthalene	-	-	<0.100	<0.100
Chrysene	-	-	<0.050	<0.050
Dibenz(a,h)anthracene	-	-	<0.010	<0.010
Fluoranthene	-	4 (LONG TERM), 0.2 (PHOTOTOXIC)	<0.030	<0.030
Fluorene	-	12 (LONG TERM)	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	-	-	<0.050	<0.050
1-Methylnaphthalene	-	-	<0.100	<0.100
2-Methylnaphthalene	-	-	<0.100	<0.100
Naphthalene	-	1 (LONG TERM)	<0.200	<0.200
Phenanthrene	-	0.3 (LONG TERM)	<0.100	<0.100
Pyrene	-	0.02 (PHOTOTOXIC)	<0.020	<0.020
Quinoline	-	-	<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

Table 1: Analytical Results for Nutrients

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-3S	MW-3D	MW-2	SB2
	As-built Well Depths		47m	23m	46m	43m	3.28m
Sample ID			9070051-01	9070051-02	9070051-03	9070051-04	9070051-05
Date Sampled	Aquatic Life	Drinking Water	MW6	MW3S	MW3D	MW2	SB2
			2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30
Physical Tests							
Colour, True (TCU)	-	-	9	6	8.5	9.6	5.8
Conductivity (uS/cm)	-	-	1200	356	235	280	1510
Hardness (as CaCO3) mg/L	-	-	581	155	106	129	544
pH (pH Units)	-	-	7.61	7.88	7.85	7.93	7.64
Total Suspended Solids mg/L			12.3	5	9.4	22.8	37.3
Turbidity (NTU)	-	-	37.7	2.6	4.46	11.4	31.5
Anions and Nutrients mg/L							
Alkalinity, Total (as CaCO3)	-	-	598	127	104	122	223
Chloride (Cl)	1500	250	37.2	15.7	2.65	5.83	234
Fluoride (F)	2 (H < 50)	1.5	0.13	0.11	0.16	0.15	<0.10
	3 (H ≥ 50)						
Nitrate (as N)	400	10	<0.010	<0.010	<0.010	<0.010	0.285
Nitrite (as N) ⁽¹⁾ Cl <2 mg/L	0.2	3.2					
Cl 2 - <4 mg/L	0.4				<0.010		
Cl 4 - <6 mg/L	0.6					<0.010	
Cl 6 - <8 mg/L	0.8						
Cl 8 - <10 mg/L	1						
Cl ≥ 10 mg/L	2						
Sulfate (SO4)	1000	500	62.5	40.2	19.3	15.6	218

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-3S	MW-3D	MW-2	SB2
	As-built Well Depths		47m	23m	46m	43m	3.28m
Sample ID			9070051-01	9070051-02	9070051-03	9070051-04	9070051-05
Date Sampled	Aquatic Life	Drinking Water	MW6	MW3S	MW3D	MW2	SB2
Physical Tests mg/L			2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30
Hardness (as CaCO3)	-	-	581	155	106	129	544
Total Metals mg/L							
Aluminum (Al)-Total	-	-	0.0837	<0.0050	0.0465	0.354	1.62
Antimony (Sb)-Total	-	-	0.00072	<0.00020	<0.00020	0.00029	<0.00020
Arsenic (As)-Total	-	-	0.00641	0.0015	0.00172	0.0023	<0.00050
Barium (Ba)-Total	-	-	0.113	0.034	0.0215	0.0322	0.0388
Beryllium (Be)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)- Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Total	-	-	0.0717	0.0259	0.0253	0.0215	0.0371
Cadmium (Cd)-Total	-	-	0.000045	<0.000010	0.000094	0.00005	0.000016
Calcium (Ca)-Total	-	-	193	53.9	35.2	39.7	186
Chromium (Cr)-Total	-	-	0.00085	<0.00050	0.00054	0.00096	0.0024
Cobalt (Co)-Total	-	-	0.00372	0.0006	0.00045	0.00067	0.00153
Copper (Cu)-Total	-	-	0.00139	<0.00040	0.00061	0.00072	0.00682
Iron (Fe)-Total	-	-	5.77	0.185	0.253	0.89	2.03
Lead (Pb)-Total	-	-	0.00045	<0.00020	<0.00020	0.00054	0.00059
Lithium (Li)-Total	-	-	0.0109	0.00012	0.00014	0.00016	0.0009
Magnesium (Mg)-Total	-	-	34.5	7.41	5.42	7.36	25.9
Manganese (Mn)-Total	-	-	2.07	0.437	0.387	0.516	0.079
Mercury (Hg)-Total	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	-	-	0.00123	0.00698	0.00672	0.00424	0.00119
Nickel (Ni)-Total	-	-	0.00771	0.00132	0.00142	0.00142	0.00236
Phosphorus(P)-Total	-	-	<0.050	0.087	0.141	0.192	0.067
Potassium (K)-Total	-	-	3.43	1.06	0.68	0.78	3.23
Selenium (Se)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)-Total	-	-	12.9	6.2	6.2	7.2	9.3
Silver (Ag)-Total	-	-	<0.000050	<0.000050	0.000057	<0.000050	<0.000050
Sodium (Na)-Total	-	-	51.9	14.5	10.2	8.85	109
Strontium (Sr)-Total	-	-	0.673	0.258	0.204	0.176	0.645
Sulfur (S)-Total	-	-	19.1	14.1	6.8	5.3	81.4
Tellurium (Te)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Total	-	-	0.000059	<0.000020	0.000025	0.000025	<0.000020
Thorium (Th)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	-	-	0.0009	<0.00020	0.00023	<0.00020	<0.00020
Titanium (Ti)-Total	-	-	<0.0050	<0.0050	<0.0050	0.0158	0.108
Uranium (U)-Total	-	-	0.00574	0.00107	0.000648	0.000803	0.00365
Vanadium (V)-Total	-	-	<0.0010	<0.0010	0.0012	0.0023	0.0052
Zinc (Zn)-Total	-	-	0.008	<0.0040	<0.0040	<0.0040	0.0066
Zirconium (Zr)-Total	-	-	0.00014	<0.00010	0.00015	0.00014	0.00012

Notes: Refer to Table Endnotes (attached)

Table 3: Analytical Results for Dissolved Metals

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-3S	MW-3D	MW-2	SB2
As-built Well Depths			47m	23m	46m	43m	3.28m
Sample ID			9070051-01	9070051-02	9070051-03	9070051-04	9070051-05
Date Sampled			MW6	MW3S	MW3D	MW2	SB2
Physical Tests mg/L			2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30
Hardness (as CaCO3)	-	-	581	155	106	129	544
Dissolved Metals mg/L							
Aluminum (Al)-Dissolved	-	9.5	<0.0050	0.043	<0.0050	0.0052	<0.0050
Antimony (Sb)-Dissolved	0.2	0.006	0.00036	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Dissolved	0.05	0.01	0.00463	0.00137	0.00153	0.0021	<0.00050
Barium (Ba)-Dissolved	10	1	0.0763	0.0309	0.0218	0.0306	0.0304
Beryllium (Be)-Dissolved	0.053	-	<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	50	5	0.0634	0.0212	0.022	0.0219	0.0345
Cadmium (Cd)-Dissolved	0.0001 (H<30) 0.0003 (H=30 -<90) 0.0005 (H=90-<150) 0.0006 (H=150-<210)	0.005			<0.000010	<0.000010	0.000012
Calcium (Ca)-Dissolved	-	-	179	50.5	34.1	40.2	178
Chromium (Cr)-Dissolved	0.01	0.05	0.00063	<0.00050	0.00057	0.0007	0.00094
Cobalt (Co)-Dissolved	0.04	-	0.00176	0.00059	0.00035	0.00029	<0.00010
Copper (Cu)-Dissolved	0.02 (H<50) 0.03 (H=50-<75) 0.04 (H=75-<100) 0.05 (H=100-<125) 0.06 (H=125-<150) 0.07 (H=150-<175) 0.08 (H=175-<200) 0.09 (H=200)	1			<0.00040	<0.00040	
Iron (Fe)-Dissolved	-	6.5	<0.00040				0.00105
Lead (Pb)-Dissolved	0.04 (H<50) 0.05 (H=50-<100) 0.06 (H=100-<200) 0.11 (H=200-<300) 0.16 (H=300)	0.01	3.77	0.199	0.188	0.317	0.011
Lithium (Li)-Dissolved	-	-					
Magnesium (Mg)-Dissolved	-	100					
Manganese (Mn)-Dissolved	-	0.55					
Mercury (Hg)-Dissolved	0.001	0.001					
Molybdenum (Mo)-Dissolved	10	0.25					
Nickel (Ni)-Dissolved	0.25 (H<60) 0.65 (H=60-<120) 1.1 (H=120-<180) 1.5 (H=180)	-			0.00087	0.00054	
Phosphorus(P)-Dissolved	-	-	0.00135				0.00073
Potassium (K)-Dissolved	-	-	<0.050	0.093	0.138	0.166	<0.050
Selenium (Se)-Dissolved	0.01	0.01	3.23	1	0.66	0.74	2.93
Silicon (Si)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver (Ag)-Dissolved	0.0005 (H<=100) 0.015 (H=100)	-	12.3	6.3	6.3	6.9	6.6
Sodium (Na)-Dissolved	-	200	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Strontium (Sr)-Dissolved	-	-	48.6	13.5	9.61	8.42	102
Sulfur (S)-Dissolved	-	-	0.639	0.246	0.201	0.176	0.622
Tellurium (Te)-Dissolved	-	-	18	13.6	7	5.6	78.2
Thallium (Tl)-Dissolved	0.003	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thorium (Th)-Dissolved	-	-	<0.000020	0.00003	<0.000020	<0.000020	<0.000020
Tin (Sn)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	1	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Uranium (U)-Dissolved	3	0.02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Dissolved	-	-	0.00569	0.00104	0.000603	0.000768	0.00344
Zinc (Zn)-Dissolved	0.075 (H<90) 0.150 (H=90-<100) 0.900 (H=100-<200) 1.650 (H=200-<300) 2.4 (H=300-<400)	5	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium (Zr)-Dissolved	-	-	0.00019	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Refer to Table Endnotes (attached)

Table 4: Analytical Results for Hydrocarbons and PAHs

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-3S	MW-3D	MW-2	SB2
	As-built Well Depths		47m	23m	46m	43m	3.28m
Sample ID			9070051-01	9070051-02	9070051-03	9070051-04	9070051-05
Date Sampled	Aquatic Life	Drinking Water	MW6	MW3S	MW3D	MW2	SB2
			2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30
Turbidity (NTU)	-	-	37.7	2.6	4.46	11.4	31.5
Hydrocarbons ug/L							
EPH10-19	5000	5000	<250	<250	<250	<250	<250
EPH10-19 (SG)	5000	5000	-	-	-	-	-
EPH19-32	-	-	<250	<250	<250	<250	<250
EPH19-32 (SG)	-	-	-	-	-	-	-
LEPH	500	-	<250	<250	<250	<250	<250
HEPH	-	-	<250	<250	<250	<250	<250
Polycyclic Aromatic Hydrocarbons ug/L							
Acenaphthene	60	-	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	0.5	-	<0.050	0.609	1.47	1.1	<0.050
Anthracene	1	-	<0.010	<0.020	<0.015	<0.010	<0.010
Benz(a)anthracene	1	-	<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
Benzo(b)fluoranthene	-	-	-	-	-	-	-
Benzo(b+j)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	<0.100
Chrysene	1	-	<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	2	-	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	120	-	<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	10	-	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	3	-	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	0.2	-	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	34	-	<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

not the original data. Please refer to PDF / Hardcopy report.

LAB ID		9070051-01	9070051-02	9070051-03	9070051-04	9070051-05	9070051-06	9070051-07
CLIENT ID		MW6	MW3S	MW3D	MW2	SB2	LE-1	SW1
DATE SAMPLED		2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30
DATE RECEIVED		2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02
MATRIX		Water	Water	Water	Water	Water	Water	Water
General Method	Analyte							
Anions	Chloride	37.2	15.7	2.65	5.83	234	3990	31.2
Anions	Fluoride	0.13	0.11	0.16	0.15	<0.10	<1.00	<0.10
Anions	Nitrate (as N)	<0.010	<0.010	<0.010	<0.010	0.285	1.91	0.303
Anions	Nitrite (as N)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<0.100
Anions	Sulfate	62.5	40.2	19.3	15.6	218	1790	97.6
Calculated Parameters	Hardness, Total (as CaCO3)	581	155	106	129	544	3820	295
General Parameters	Colour, True	9	6	8.5	9.6	5.8	7.8	5.9
General Parameters	Alkalinity, Total (as CaCO3)	598	127	104	122	223	35.1	196
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	598	127	104	122	223	35.1	196
General Parameters	Alkalinity, Carbonate (as CaCO3)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Solids, Total Suspended	12.3	5	9.4	22.8	37.3	<2.0	<2.0
General Parameters	Turbidity	37.7	2.6	4.46	11.4	31.5	0.22	0.2
General Parameters	pH	7.61	7.88	7.85	7.93	7.64	7.25	7.87
General Parameters	Conductivity (EC)	1200	356	235	280	1510	13800	608
BCMOE Aggregate Hydrocarbons	EPHw10-19	<250	<250	<250	<250	<250	293	<250
BCMOE Aggregate Hydrocarbons	EPHw19-32	<250	<250	<250	<250	<250	<250	<250
BCMOE Aggregate Hydrocarbons	LEPHw	<250	<250	<250	<250	<250	293	<250
BCMOE Aggregate Hydrocarbons	HEPHw	<250	<250	<250	<250	<250	<250	<250
Polycyclic Aromatic Hydrocarbons (PAH)	Acenaphthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Acenaphthylene	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Polycyclic Aromatic Hydrocarbons (PAH)	Acridine	<0.050	0.609	1.47	1.1	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Anthracene	<0.010	<0.020	<0.015	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons (PAH)	Benz(a)anthracene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons (PAH)	Benzo(a)pyrene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons (PAH)	Benzo(b+j)fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Benzo(g,h,i)perylene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Benzo(k)fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	2-Chloronaphthalene	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Chrysene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Dibenz(a,h)anthracene	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons (PAH)	Fluoranthene	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Polycyclic Aromatic Hydrocarbons (PAH)	Fluorene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	Indeno(1,2,3-cd)pyrene	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Polycyclic Aromatic Hydrocarbons (PAH)	1-Methylnaphthalene	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	2-Methylnaphthalene	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Naphthalene	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Polycyclic Aromatic Hydrocarbons (PAH)	Phenanthrene	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Pyrene	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Polycyclic Aromatic Hydrocarbons (PAH)	Quinoline	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Aluminum, dissolved	<0.0050	0.043	<0.0050	0.0052	<0.0050	0.0076	<0.0050
Dissolved Metals	Antimony, dissolved	0.00036	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Arsenic, dissolved	0.00463	0.00137	0.00153	0.0021	<0.00050	<0.00050	<0.00050
Dissolved Metals	Barium, dissolved	0.0763	0.0309	0.0218	0.0306	0.0304	0.0131	0.0184
Dissolved Metals	Beryllium, dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Bismuth, dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Boron, dissolved	0.0634	0.0212	0.022	0.0219	0.0345	0.227	0.0176
Dissolved Metals	Cadmium, dissolved	<0.000010	0.000063	<0.000010	<0.000010	0.000012	0.000895	<0.000010
Dissolved Metals	Calcium, dissolved	179	50.5	34.1	40.2	178	1080	97.8
Dissolved Metals	Chromium, dissolved	0.00063	<0.00050	0.00057	0.0007	0.00094	0.00115	0.00061
Dissolved Metals	Cobalt, dissolved	0.00176	0.00059	0.00035	0.00029	<0.00010	0.00107	<0.00010
Dissolved Metals	Copper, dissolved	<0.00040	<0.00040	<0.00040	<0.00040	0.00105	0.00206	0.00115
Dissolved Metals	Iron, dissolved	3.77	0.199	0.188	0.317	0.011	<0.010	<0.010
Dissolved Metals	Lead, dissolved	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Lithium, dissolved	0.00997	<0.00010	<0.00010	<0.00010	0.0002	0.0004	0.00016
Dissolved Metals	Magnesium, dissolved	32.7	6.93	5.09	6.85	23.8	268	12.2
Dissolved Metals	Manganese, dissolved	1.96	0.41	0.369	0.494	0.00115	24.9	0.0283
Dissolved Metals	Mercury, dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Molybdenum, dissolved	0.00048	0.00652	0.00591	0.0038	0.00105	0.00031	0.00086

not the original data. Please refer to PDF / Hardcopy report.

LAB ID	9070051-01	9070051-02	9070051-03	9070051-04	9070051-05	9070051-06	9070051-07	
CLIENT ID	MW6	MW3S	MW3D	MW2	SB2	LE-1	SW1	
DATE SAMPLED	2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30	2019-06-30	
DATE RECEIVED	2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02	2019-07-02	
MATRIX	Water	Water	Water	Water	Water	Water	Water	
General Method	Analyte							
Dissolved Metals	Nickel, dissolved	0.00135	0.00131	0.00087	0.00054	0.00073	0.00857	0.00076
Dissolved Metals	Phosphorus, dissolved	<0.050	0.093	0.138	0.166	<0.050	<0.050	<0.050
Dissolved Metals	Potassium, dissolved	3.23	1	0.66	0.74	2.93	26	1.01
Dissolved Metals	Selenium, dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals	Silicon, dissolved	12.3	6.3	6.3	6.9	6.6	7.6	6.3
Dissolved Metals	Silver, dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000122	<0.000050
Dissolved Metals	Sodium, dissolved	48.6	13.5	9.61	8.42	102	2020	13
Dissolved Metals	Strontium, dissolved	0.639	0.246	0.201	0.176	0.622	5.17	0.268
Dissolved Metals	Sulfur, dissolved	18	13.6	7	5.6	78.2	747	32.7
Dissolved Metals	Tellurium, dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals	Thallium, dissolved	<0.000020	0.00003	<0.000020	<0.000020	<0.000020	0.000026	<0.000020
Dissolved Metals	Thorium, dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Tin, dissolved	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals	Titanium, dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Tungsten, dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Uranium, dissolved	0.00569	0.00104	0.000603	0.000768	0.00344	0.000076	0.00173
Dissolved Metals	Vanadium, dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Zinc, dissolved	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0214	<0.0040
Dissolved Metals	Zirconium, dissolved	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Aluminum, total	0.0837	<0.0050	0.0465	0.354	1.62	0.0142	0.0497
Total Metals	Antimony, total	0.00072	<0.00020	<0.00020	0.00029	<0.00020	<0.00020	<0.00020
Total Metals	Arsenic, total	0.00641	0.0015	0.00172	0.0023	<0.00050	0.00054	<0.00050
Total Metals	Barium, total	0.113	0.034	0.0215	0.0322	0.0388	0.0144	0.0199
Total Metals	Beryllium, total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Bismuth, total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Boron, total	0.0717	0.0259	0.0253	0.0215	0.0371	0.237	0.0193
Total Metals	Cadmium, total	0.000045	<0.000010	0.000094	0.00005	0.000016	0.000965	0.000012
Total Metals	Calcium, total	193	53.9	35.2	39.7	186	1150	102
Total Metals	Chromium, total	0.00085	<0.00050	0.00054	0.00096	0.0024	0.00104	0.00076
Total Metals	Cobalt, total	0.00372	0.0006	0.00045	0.00067	0.00153	0.00113	0.00019
Total Metals	Copper, total	0.00139	<0.00040	0.00061	0.00072	0.00682	0.00227	0.00185
Total Metals	Iron, total	5.77	0.185	0.253	0.89	2.03	<0.010	0.053
Total Metals	Lead, total	0.00045	<0.00020	<0.00020	0.00054	0.00059	<0.00020	<0.00020
Total Metals	Lithium, total	0.0109	0.00012	0.00014	0.00016	0.0009	0.00051	0.00025
Total Metals	Magnesium, total	34.5	7.41	5.42	7.36	25.9	285	13.3
Total Metals	Manganese, total	2.07	0.437	0.387	0.516	0.079	26.3	0.0819
Total Metals	Mercury, total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010
Total Metals	Molybdenum, total	0.00123	0.00698	0.00672	0.00424	0.00119	0.00032	0.00095
Total Metals	Nickel, total	0.00771	0.00132	0.00142	0.00142	0.00236	0.009	0.00105
Total Metals	Phosphorus, total	<0.050	0.087	0.141	0.192	0.067	<0.050	<0.050
Total Metals	Potassium, total	3.43	1.06	0.68	0.78	3.23	27.3	1.06
Total Metals	Selenium, total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Silicon, total	12.9	6.2	6.2	7.2	9.3	7.8	6.5
Total Metals	Silver, total	<0.000050	<0.000050	0.000057	<0.000050	<0.000050	0.000134	<0.000050
Total Metals	Sodium, total	51.9	14.5	10.2	8.85	109	2170	14.6
Total Metals	Strontium, total	0.673	0.258	0.204	0.176	0.645	5.42	0.279
Total Metals	Sulfur, total	19.1	14.1	6.8	5.3	81.4	796	35.7
Total Metals	Tellurium, total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Thallium, total	0.000059	<0.000020	0.000025	0.000025	<0.000020	0.00003	<0.000020
Total Metals	Thorium, total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Tin, total	0.0009	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	<0.00020
Total Metals	Titanium, total	<0.0050	<0.0050	<0.0050	<0.0158	0.108	<0.0050	<0.0050
Total Metals	Tungsten, total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Uranium, total	0.00574	0.00107	0.000648	0.000803	0.00365	0.000085	0.00181
Total Metals	Vanadium, total	<0.0010	<0.0010	0.0012	0.0023	0.0052	<0.0010	0.0013
Total Metals	Zinc, total	0.008	<0.0040	<0.0040	<0.0040	0.0066	0.0229	<0.0040
Total Metals	Zirconium, total	0.00014	<0.00010	0.00015	0.00014	0.00012	<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 9070051

RECEIVED / TEMP 2019-07-02 13:15 / 8°C

REPORTED 2019-07-12 17:30

COC NUMBER June 2019

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.

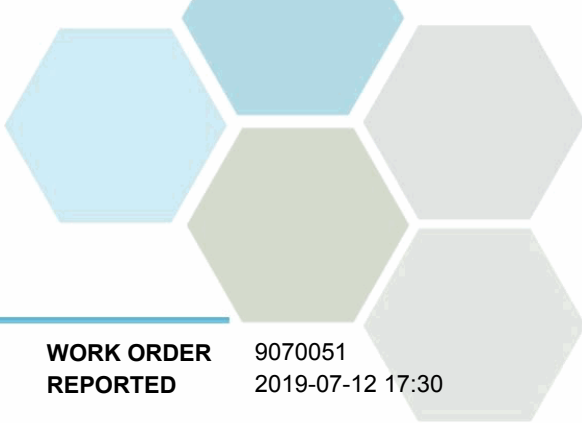
If you have any questions or concerns, please contact me at bshaw@caro.ca

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

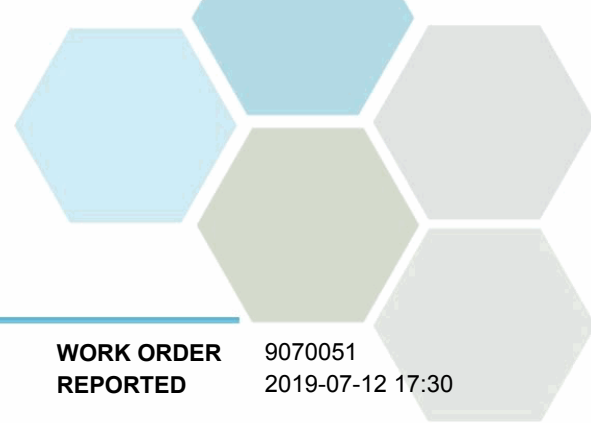


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9070051-01) Matrix: Water Sampled: 2019-06-30 12:00					
Anions					
Chloride	37.2	0.10	mg/L	2019-07-03	
Fluoride	0.13	0.10	mg/L	2019-07-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-07-03	
Sulfate	62.5	1.0	mg/L	2019-07-03	
BCMOE Aggregate Hydrocarbons					
EPHw10-19	< 250	250	µg/L	2019-07-11	
EPHw19-32	< 250	250	µg/L	2019-07-11	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	87	60-126	%	2019-07-11	
Calculated Parameters					
Hardness, Total (as CaCO3)	581	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Antimony, dissolved	0.00036	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	0.00463	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0763	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0634	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Calcium, dissolved	179	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00063	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	0.00176	0.00010	mg/L	2019-07-07	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-07-07	
Iron, dissolved	3.77	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	0.00997	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	32.7	0.010	mg/L	2019-07-07	
Manganese, dissolved	1.96	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00048	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00135	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-07-07	
Potassium, dissolved	3.23	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	12.3	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	48.6	0.10	mg/L	2019-07-07	

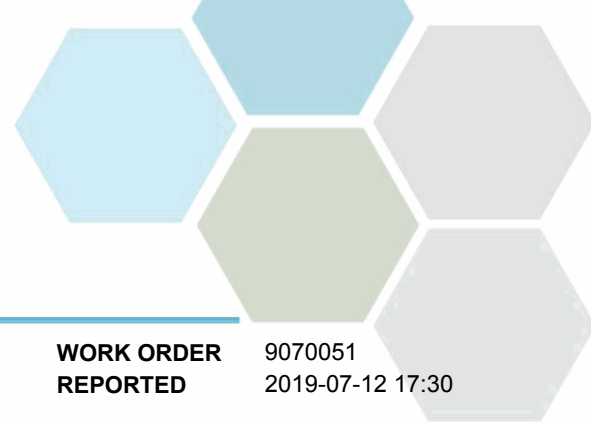


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9070051-01) Matrix: Water Sampled: 2019-06-30 12:00, Continued					
<i>Dissolved Metals, Continued</i>					
Strontium, dissolved	0.639	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	18.0	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.00569	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	0.00019	0.00010	mg/L	2019-07-07	
<i>General Parameters</i>					
Alkalinity, Total (as CaCO3)	598	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	598	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	9.0	5.0	CU	2019-07-03	
Conductivity (EC)	1200	2.0	µS/cm	2019-07-04	
pH	7.61	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	12.3	2.0	mg/L	2019-07-03	
Turbidity	37.7	0.10	NTU	2019-07-03	
<i>Polycyclic Aromatic Hydrocarbons (PAH)</i>					
Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	< 0.050	0.050	µg/L	2019-07-11	
Anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	

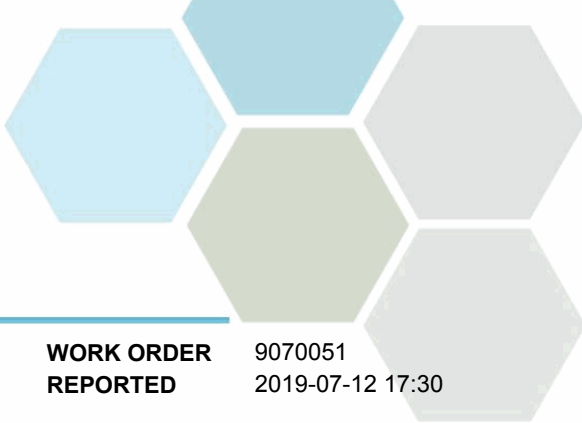


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9070051-01) Matrix: Water Sampled: 2019-06-30 12:00, Continued					
<i>Polycyclic Aromatic Hydrocarbons (PAH), Continued</i>					
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	87	50-140	%	2019-07-11	
Surrogate: Naphthalene-d8	98	50-140	%	2019-07-11	
Surrogate: Perylene-d12	89	50-140	%	2019-07-11	
Total Metals					
Aluminum, total	0.0837	0.0050	mg/L	2019-07-07	
Antimony, total	0.00072	0.00020	mg/L	2019-07-07	
Arsenic, total	0.00641	0.00050	mg/L	2019-07-07	
Barium, total	0.113	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0717	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000045	0.000010	mg/L	2019-07-07	
Calcium, total	193	0.20	mg/L	2019-07-07	
Chromium, total	0.00085	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00372	0.00010	mg/L	2019-07-07	
Copper, total	0.00139	0.00040	mg/L	2019-07-07	
Iron, total	5.77	0.010	mg/L	2019-07-07	
Lead, total	0.00045	0.00020	mg/L	2019-07-07	
Lithium, total	0.0109	0.00010	mg/L	2019-07-07	
Magnesium, total	34.5	0.010	mg/L	2019-07-07	
Manganese, total	2.07	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00123	0.00010	mg/L	2019-07-07	
Nickel, total	0.00771	0.00040	mg/L	2019-07-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-07-07	
Potassium, total	3.43	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	12.9	1.0	mg/L	2019-07-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, total	51.9	0.10	mg/L	2019-07-07	
Strontium, total	0.673	0.0010	mg/L	2019-07-07	
Sulfur, total	19.1	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	0.000059	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	0.00090	0.00020	mg/L	2019-07-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (9070051-01) | Matrix: Water | Sampled: 2019-06-30 12:00, Continued

Total Metals, Continued

Uranium, total	0.00574	0.000020	mg/L	2019-07-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, total	0.0080	0.0040	mg/L	2019-07-07	
Zirconium, total	0.00014	0.00010	mg/L	2019-07-07	

MW3S (9070051-02) | Matrix: Water | Sampled: 2019-06-30 13:15

Anions

Chloride	15.7	0.10	mg/L	2019-07-03	
Fluoride	0.11	0.10	mg/L	2019-07-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-07-03	
Sulfate	40.2	1.0	mg/L	2019-07-03	

BCMOE Aggregate Hydrocarbons

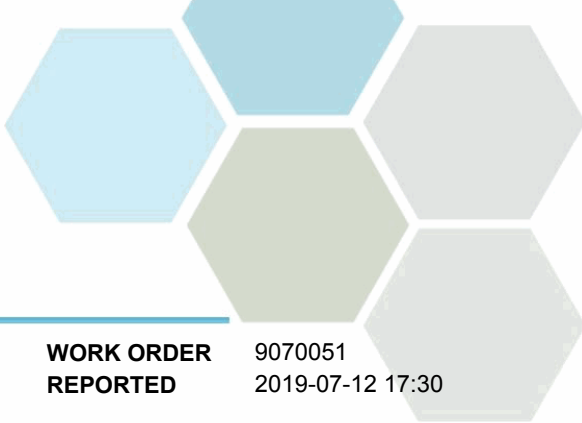
EPHw10-19	< 250	250	µg/L	2019-07-11	
EPHw19-32	< 250	250	µg/L	2019-07-11	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	86	60-126	%	2019-07-11	

Calculated Parameters

Hardness, Total (as CaCO3)	155	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0430	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	0.00137	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0309	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0212	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	0.000063	0.000010	mg/L	2019-07-07	
Calcium, dissolved	50.5	0.20	mg/L	2019-07-07	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	0.00059	0.00010	mg/L	2019-07-07	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-07-07	
Iron, dissolved	0.199	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	6.93	0.010	mg/L	2019-07-07	
Manganese, dissolved	0.410	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (9070051-02) | Matrix: Water | Sampled: 2019-06-30 13:15, Continued

Dissolved Metals, Continued

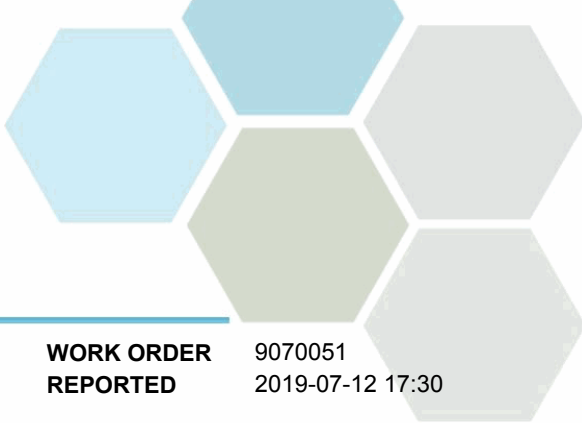
Molybdenum, dissolved	0.00652	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00131	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	0.093	0.050	mg/L	2019-07-07	
Potassium, dissolved	1.00	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	6.3	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	13.5	0.10	mg/L	2019-07-07	
Strontium, dissolved	0.246	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	13.6	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	0.000030	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.00104	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

Alkalinity, Total (as CaCO3)	127	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	127	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	6.0	5.0	CU	2019-07-03	
Conductivity (EC)	356	2.0	µS/cm	2019-07-04	
pH	7.88	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	5.0	2.0	mg/L	2019-07-03	
Turbidity	2.60	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	0.609	0.050	µg/L	2019-07-11	
Anthracene	< 0.020	0.010	µg/L	2019-07-11	RA1
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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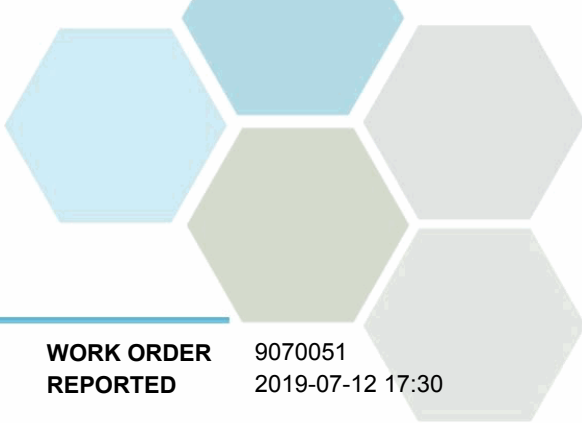
MW3S (9070051-02) | Matrix: Water | Sampled: 2019-06-30 13:15, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	85	50-140	%	2019-07-11	
Surrogate: Naphthalene-d8	117	50-140	%	2019-07-11	
Surrogate: Perylene-d12	116	50-140	%	2019-07-11	

Total Metals

Aluminum, total	< 0.0050	0.0050	mg/L	2019-07-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, total	0.00150	0.00050	mg/L	2019-07-07	
Barium, total	0.0340	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0259	0.0050	mg/L	2019-07-07	
Cadmium, total	< 0.000010	0.000010	mg/L	2019-07-07	
Calcium, total	53.9	0.20	mg/L	2019-07-07	
Chromium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00060	0.00010	mg/L	2019-07-07	
Copper, total	< 0.00040	0.00040	mg/L	2019-07-07	
Iron, total	0.185	0.010	mg/L	2019-07-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, total	0.00012	0.00010	mg/L	2019-07-07	
Magnesium, total	7.41	0.010	mg/L	2019-07-07	
Manganese, total	0.437	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00698	0.00010	mg/L	2019-07-07	
Nickel, total	0.00132	0.00040	mg/L	2019-07-07	
Phosphorus, total	0.087	0.050	mg/L	2019-07-07	
Potassium, total	1.06	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	6.2	1.0	mg/L	2019-07-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, total	14.5	0.10	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
MW3S (9070051-02) Matrix: Water Sampled: 2019-06-30 13:15, Continued					
<i>Total Metals, Continued</i>					
Strontium, total	0.258	0.0010	mg/L	2019-07-07	
Sulfur, total	14.1	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.00107	0.000020	mg/L	2019-07-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-07-07	

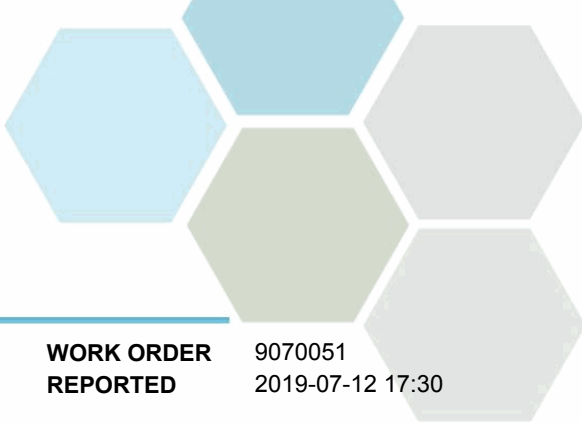
MW3D (9070051-03) | Matrix: Water | Sampled: 2019-06-30 13:30

<i>Anions</i>					
Chloride	2.65	0.10	mg/L	2019-07-03	
Fluoride	0.16	0.10	mg/L	2019-07-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-07-03	
Sulfate	19.3	1.0	mg/L	2019-07-03	

<i>BCMOE Aggregate Hydrocarbons</i>					
EPHw10-19	< 250	250	µg/L	2019-07-11	
EPHw19-32	< 250	250	µg/L	2019-07-11	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	86	60-126	%	2019-07-11	

<i>Calculated Parameters</i>					
Hardness, Total (as CaCO3)	106	0.500	mg/L	N/A	

<i>Dissolved Metals</i>					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	0.00153	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0218	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0220	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Calcium, dissolved	34.1	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00057	0.00050	mg/L	2019-07-07	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3D (9070051-03) | Matrix: Water | Sampled: 2019-06-30 13:30, Continued

Dissolved Metals, Continued

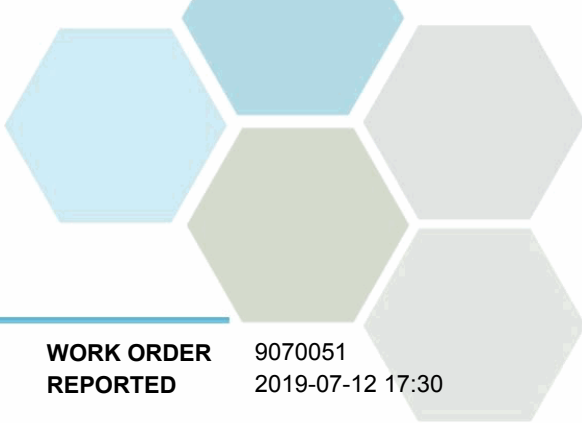
Cobalt, dissolved	0.00035	0.00010	mg/L	2019-07-07	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-07-07	
Iron, dissolved	0.188	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	5.09	0.010	mg/L	2019-07-07	
Manganese, dissolved	0.369	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00591	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00087	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	0.138	0.050	mg/L	2019-07-07	
Potassium, dissolved	0.66	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	6.3	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	9.61	0.10	mg/L	2019-07-07	
Strontium, dissolved	0.201	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	7.0	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.000603	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

Alkalinity, Total (as CaCO3)	104	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	104	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	8.5	5.0	CU	2019-07-03	
Conductivity (EC)	235	2.0	µS/cm	2019-07-04	
pH	7.85	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	9.4	2.0	mg/L	2019-07-03	
Turbidity	4.46	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
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TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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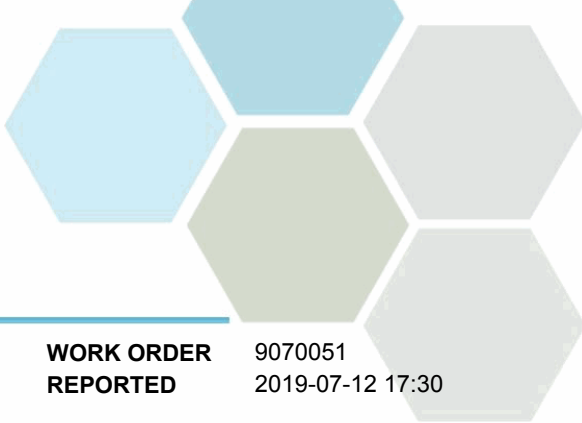
MW3D (9070051-03) | Matrix: Water | Sampled: 2019-06-30 13:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	1.47	0.050	µg/L	2019-07-11	
Anthracene	< 0.015	0.010	µg/L	2019-07-11	RA1
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	85	50-140	%	2019-07-11	
Surrogate: Naphthalene-d8	121	50-140	%	2019-07-11	
Surrogate: Perylene-d12	119	50-140	%	2019-07-11	

Total Metals

Aluminum, total	0.0465	0.0050	mg/L	2019-07-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, total	0.00172	0.00050	mg/L	2019-07-07	
Barium, total	0.0215	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0253	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000094	0.000010	mg/L	2019-07-07	
Calcium, total	35.2	0.20	mg/L	2019-07-07	
Chromium, total	0.00054	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00045	0.00010	mg/L	2019-07-07	
Copper, total	0.00061	0.00040	mg/L	2019-07-07	
Iron, total	0.253	0.010	mg/L	2019-07-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, total	0.00014	0.00010	mg/L	2019-07-07	
Magnesium, total	5.42	0.010	mg/L	2019-07-07	
Manganese, total	0.387	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	



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Analyte	Result	RL	Units	Analyzed	Qualifier
MW3D (9070051-03) Matrix: Water Sampled: 2019-06-30 13:30, Continued					
<i>Total Metals, Continued</i>					
Molybdenum, total	0.00672	0.00010	mg/L	2019-07-07	
Nickel, total	0.00142	0.00040	mg/L	2019-07-07	
Phosphorus, total	0.141	0.050	mg/L	2019-07-07	
Potassium, total	0.68	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	6.2	1.0	mg/L	2019-07-07	
Silver, total	0.000057	0.000050	mg/L	2019-07-07	
Sodium, total	10.2	0.10	mg/L	2019-07-07	
Strontium, total	0.204	0.0010	mg/L	2019-07-07	
Sulfur, total	6.8	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	0.000025	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	0.00023	0.00020	mg/L	2019-07-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.000648	0.000020	mg/L	2019-07-07	
Vanadium, total	0.0012	0.0010	mg/L	2019-07-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, total	0.00015	0.00010	mg/L	2019-07-07	

MW2 (9070051-04) | Matrix: Water | Sampled: 2019-06-30 14:30

<i>Anions</i>					
Chloride	5.83	0.10	mg/L	2019-07-03	
Fluoride	0.15	0.10	mg/L	2019-07-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-07-03	
Sulfate	15.6	1.0	mg/L	2019-07-03	

BCMOE Aggregate Hydrocarbons

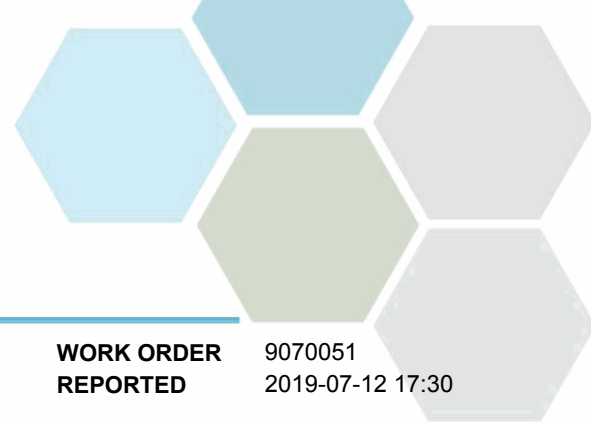
EPHw10-19	< 250	250	µg/L	2019-07-11	
EPHw19-32	< 250	250	µg/L	2019-07-11	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	82	60-126	%	2019-07-11	

Calculated Parameters

Hardness, Total (as CaCO3)	129	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0052	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	



TEST RESULTS

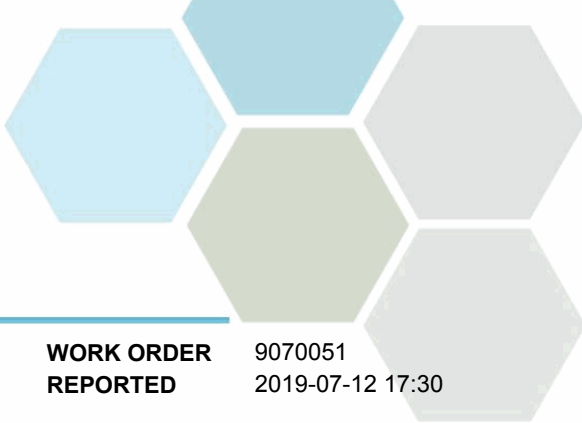
REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (9070051-04) Matrix: Water Sampled: 2019-06-30 14:30, Continued					
<i>Dissolved Metals, Continued</i>					
Arsenic, dissolved	0.00210	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0306	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0219	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Calcium, dissolved	40.2	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00070	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	0.00029	0.00010	mg/L	2019-07-07	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-07-07	
Iron, dissolved	0.317	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	6.85	0.010	mg/L	2019-07-07	
Manganese, dissolved	0.494	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00380	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00054	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	0.166	0.050	mg/L	2019-07-07	
Potassium, dissolved	0.74	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	6.9	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	8.42	0.10	mg/L	2019-07-07	
Strontium, dissolved	0.176	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	5.6	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.000768	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

Alkalinity, Total (as CaCO3)	122	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	122	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	



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Analyte	Result	RL	Units	Analyzed	Qualifier
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MW2 (9070051-04) | Matrix: Water | Sampled: 2019-06-30 14:30, Continued

General Parameters, Continued

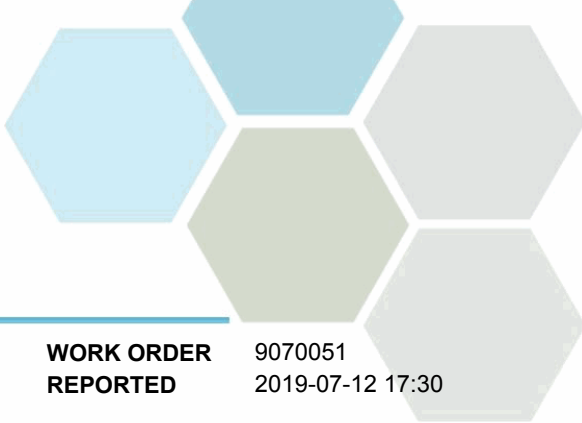
Colour, True	9.6	5.0	CU	2019-07-03	
Conductivity (EC)	280	2.0	µS/cm	2019-07-04	
pH	7.93	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	22.8	2.0	mg/L	2019-07-03	
Turbidity	11.4	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	1.10	0.050	µg/L	2019-07-11	
Anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	90	50-140	%	2019-07-11	
Surrogate: Naphthalene-d8	123	50-140	%	2019-07-11	
Surrogate: Perylene-d12	119	50-140	%	2019-07-11	

Total Metals

Aluminum, total	0.354	0.0050	mg/L	2019-07-07	
Antimony, total	0.00029	0.00020	mg/L	2019-07-07	
Arsenic, total	0.00230	0.00050	mg/L	2019-07-07	
Barium, total	0.0322	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0215	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000050	0.000010	mg/L	2019-07-07	
Calcium, total	39.7	0.20	mg/L	2019-07-07	
Chromium, total	0.00096	0.00050	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (9070051-04) Matrix: Water Sampled: 2019-06-30 14:30, Continued					
<i>Total Metals, Continued</i>					
Cobalt, total	0.00067	0.00010	mg/L	2019-07-07	
Copper, total	0.00072	0.00040	mg/L	2019-07-07	
Iron, total	0.890	0.010	mg/L	2019-07-07	
Lead, total	0.00054	0.00020	mg/L	2019-07-07	
Lithium, total	0.00016	0.00010	mg/L	2019-07-07	
Magnesium, total	7.36	0.010	mg/L	2019-07-07	
Manganese, total	0.516	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00424	0.00010	mg/L	2019-07-07	
Nickel, total	0.00142	0.00040	mg/L	2019-07-07	
Phosphorus, total	0.192	0.050	mg/L	2019-07-07	
Potassium, total	0.78	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	7.2	1.0	mg/L	2019-07-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, total	8.85	0.10	mg/L	2019-07-07	
Strontium, total	0.176	0.0010	mg/L	2019-07-07	
Sulfur, total	5.3	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	0.000025	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, total	0.0158	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.000803	0.000020	mg/L	2019-07-07	
Vanadium, total	0.0023	0.0010	mg/L	2019-07-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, total	0.00014	0.00010	mg/L	2019-07-07	

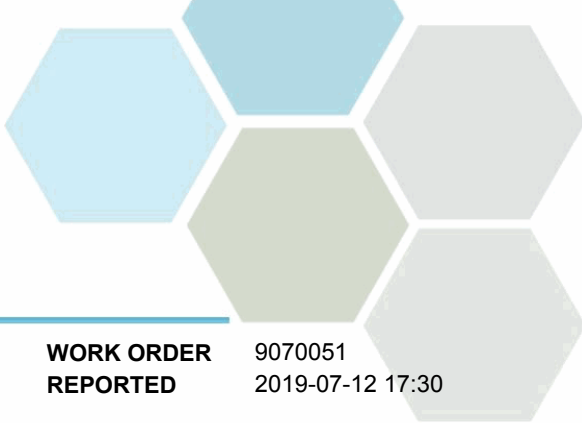
SB2 (9070051-05) | Matrix: Water | Sampled: 2019-06-30 12:30

Anions

Chloride	234	0.10	mg/L	2019-07-03	
Fluoride	< 0.10	0.10	mg/L	2019-07-03	
Nitrate (as N)	0.285	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-07-03	
Sulfate	218	1.0	mg/L	2019-07-03	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2019-07-11	
EPHw19-32	< 250	250	µg/L	2019-07-11	
LEPHw	< 250	250	µg/L	N/A	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (9070051-05) | Matrix: Water | Sampled: 2019-06-30 12:30, Continued

BCMOE Aggregate Hydrocarbons, Continued

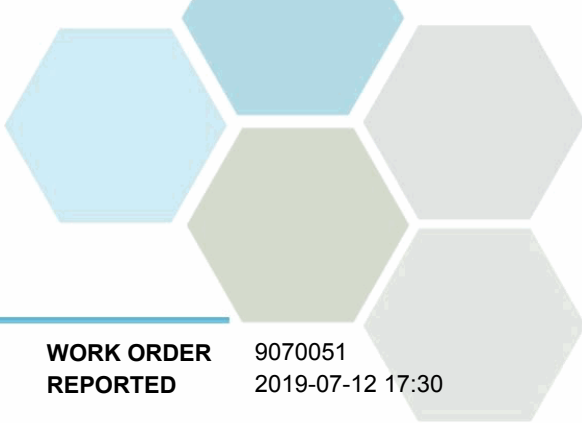
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	80	60-126	%	2019-07-11	

Calculated Parameters

Hardness, Total (as CaCO3)	544	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0304	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0345	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	0.000012	0.000010	mg/L	2019-07-07	
Calcium, dissolved	178	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00094	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Copper, dissolved	0.00105	0.00040	mg/L	2019-07-07	
Iron, dissolved	0.011	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	0.00020	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	23.8	0.010	mg/L	2019-07-07	
Manganese, dissolved	0.00115	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00105	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00073	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-07-07	
Potassium, dissolved	2.93	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	6.6	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	102	0.10	mg/L	2019-07-07	
Strontium, dissolved	0.622	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	78.2	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.00344	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (9070051-05) | Matrix: Water | Sampled: 2019-06-30 12:30, Continued

Dissolved Metals, Continued

Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

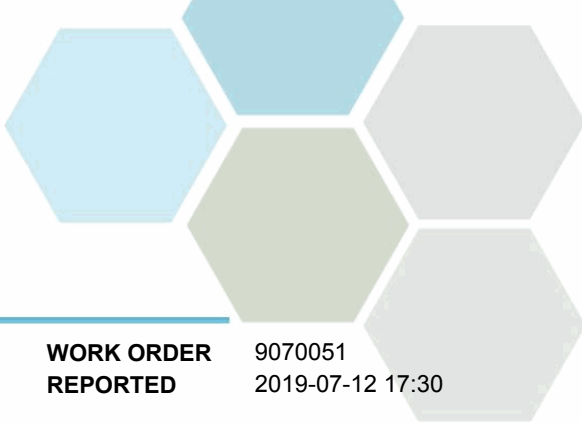
Alkalinity, Total (as CaCO3)	223	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	223	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	5.8	5.0	CU	2019-07-03	
Conductivity (EC)	1510	2.0	µS/cm	2019-07-04	
pH	7.64	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	37.3	2.0	mg/L	2019-07-03	
Turbidity	31.5	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	< 0.050	0.050	µg/L	2019-07-11	
Anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	82	50-140	%	2019-07-11	
Surrogate: Naphthalene-d8	99	50-140	%	2019-07-11	
Surrogate: Perylene-d12	114	50-140	%	2019-07-11	

Total Metals

Aluminum, total	1.62	0.0050	mg/L	2019-07-07	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

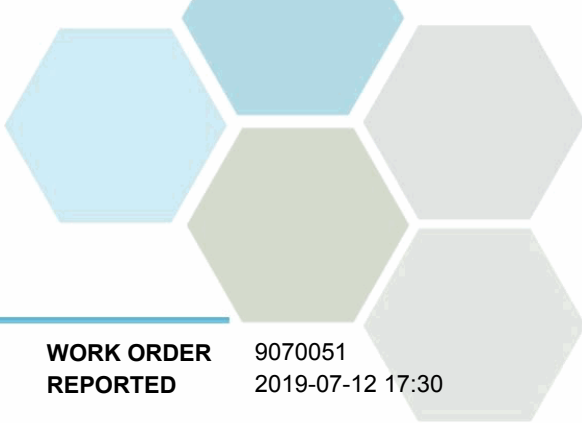
WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
SB2 (9070051-05) Matrix: Water Sampled: 2019-06-30 12:30, Continued					
<i>Total Metals, Continued</i>					
Antimony, total	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-07-07	
Barium, total	0.0388	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0371	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000016	0.000010	mg/L	2019-07-07	
Calcium, total	186	0.20	mg/L	2019-07-07	
Chromium, total	0.00240	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00153	0.00010	mg/L	2019-07-07	
Copper, total	0.00682	0.00040	mg/L	2019-07-07	
Iron, total	2.03	0.010	mg/L	2019-07-07	
Lead, total	0.00059	0.00020	mg/L	2019-07-07	
Lithium, total	0.00090	0.00010	mg/L	2019-07-07	
Magnesium, total	25.9	0.010	mg/L	2019-07-07	
Manganese, total	0.0790	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00119	0.00010	mg/L	2019-07-07	
Nickel, total	0.00236	0.00040	mg/L	2019-07-07	
Phosphorus, total	0.067	0.050	mg/L	2019-07-07	
Potassium, total	3.23	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	9.3	1.0	mg/L	2019-07-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, total	109	0.10	mg/L	2019-07-07	
Strontium, total	0.645	0.0010	mg/L	2019-07-07	
Sulfur, total	81.4	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, total	0.108	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.00365	0.000020	mg/L	2019-07-07	
Vanadium, total	0.0052	0.0010	mg/L	2019-07-07	
Zinc, total	0.0066	0.0040	mg/L	2019-07-07	
Zirconium, total	0.00012	0.00010	mg/L	2019-07-07	

LE-1 (9070051-06) | Matrix: Water | Sampled: 2019-06-30 15:00

Anions

Chloride	3990	0.10	mg/L	2019-07-03	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9070051-06) | Matrix: Water | Sampled: 2019-06-30 15:00, Continued

Anions, Continued

Fluoride	< 1.00	0.10	mg/L	2019-07-03	RA1
Nitrate (as N)	1.91	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.100	0.010	mg/L	2019-07-03	RA1
Sulfate	1790	1.0	mg/L	2019-07-03	

BCMOE Aggregate Hydrocarbons

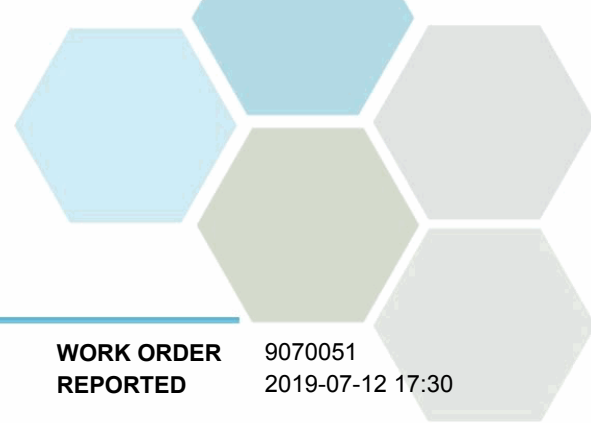
EPHw10-19	293	250	µg/L	2019-07-09	
EPHw19-32	< 250	250	µg/L	2019-07-09	
LEPHw	293	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	74	60-126	%	2019-07-09	

Calculated Parameters

Hardness, Total (as CaCO3)	3820	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0076	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0131	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.227	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	0.000895	0.000010	mg/L	2019-07-07	
Calcium, dissolved	1080	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00115	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	0.00107	0.00010	mg/L	2019-07-07	
Copper, dissolved	0.00206	0.00040	mg/L	2019-07-07	
Iron, dissolved	< 0.010	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	0.00040	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	268	0.010	mg/L	2019-07-07	
Manganese, dissolved	24.9	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00031	0.00010	mg/L	2019-07-07	
Nickel, dissolved	0.00857	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-07-07	
Potassium, dissolved	26.0	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	7.6	1.0	mg/L	2019-07-07	
Silver, dissolved	0.000122	0.000050	mg/L	2019-07-07	
Sodium, dissolved	2020	0.10	mg/L	2019-07-07	
Strontium, dissolved	5.17	0.0010	mg/L	2019-07-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9070051-06) | Matrix: Water | Sampled: 2019-06-30 15:00, Continued

Dissolved Metals, Continued

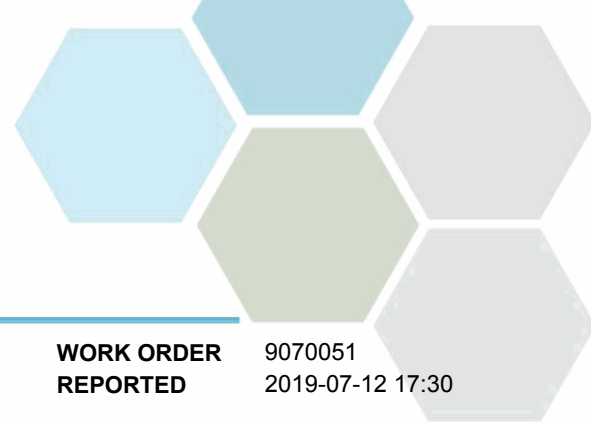
Sulfur, dissolved	747	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	0.000026	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.000076	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	0.0214	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

Alkalinity, Total (as CaCO3)	35.1	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	35.1	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	7.8	5.0	CU	2019-07-03	
Conductivity (EC)	13800	2.0	µS/cm	2019-07-04	
pH	7.25	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-07-03	
Turbidity	0.22	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	< 0.050	0.050	µg/L	2019-07-11	
Anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	

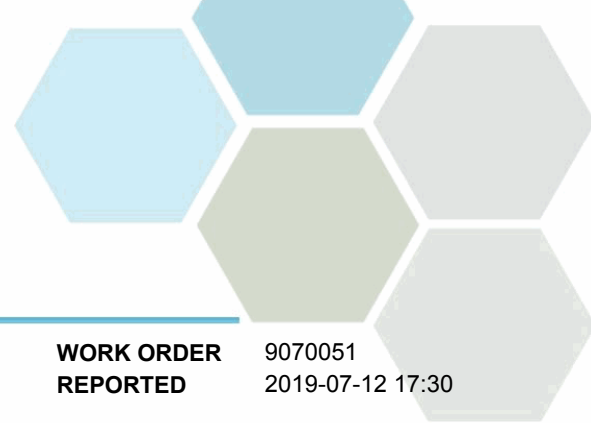


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL	Units	Analyzed	Qualifier
LE-1 (9070051-06) Matrix: Water Sampled: 2019-06-30 15:00, Continued					
<i>Polycyclic Aromatic Hydrocarbons (PAH), Continued</i>					
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	45	50-140	%	2019-07-11	S02
Surrogate: Naphthalene-d8	74	50-140	%	2019-07-11	
Surrogate: Perylene-d12	68	50-140	%	2019-07-11	
Total Metals					
Aluminum, total	0.0142	0.0050	mg/L	2019-07-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, total	0.00054	0.00050	mg/L	2019-07-07	
Barium, total	0.0144	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.237	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000965	0.000010	mg/L	2019-07-07	
Calcium, total	1150	0.20	mg/L	2019-07-07	
Chromium, total	0.00104	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00113	0.00010	mg/L	2019-07-07	
Copper, total	0.00227	0.00040	mg/L	2019-07-07	
Iron, total	< 0.010	0.010	mg/L	2019-07-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, total	0.00051	0.00010	mg/L	2019-07-07	
Magnesium, total	285	0.010	mg/L	2019-07-07	
Manganese, total	26.3	0.00020	mg/L	2019-07-07	
Mercury, total	0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00032	0.00010	mg/L	2019-07-07	
Nickel, total	0.00900	0.00040	mg/L	2019-07-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-07-07	
Potassium, total	27.3	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	7.8	1.0	mg/L	2019-07-07	
Silver, total	0.000134	0.000050	mg/L	2019-07-07	
Sodium, total	2170	0.10	mg/L	2019-07-07	
Strontium, total	5.42	0.0010	mg/L	2019-07-07	
Sulfur, total	796	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	0.000030	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.000085	0.000020	mg/L	2019-07-07	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9070051-06) | Matrix: Water | Sampled: 2019-06-30 15:00, Continued

Total Metals, Continued

Vanadium, total	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, total	0.0229	0.0040	mg/L	2019-07-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-07-07	

SW1 (9070051-07) | Matrix: Water | Sampled: 2019-06-30 14:00

Anions

Chloride	31.2	0.10	mg/L	2019-07-03	
Fluoride	< 0.10	0.10	mg/L	2019-07-03	
Nitrate (as N)	0.303	0.010	mg/L	2019-07-03	
Nitrite (as N)	< 0.100	0.010	mg/L	2019-07-03	
Sulfate	97.6	1.0	mg/L	2019-07-03	

BCMOE Aggregate Hydrocarbons

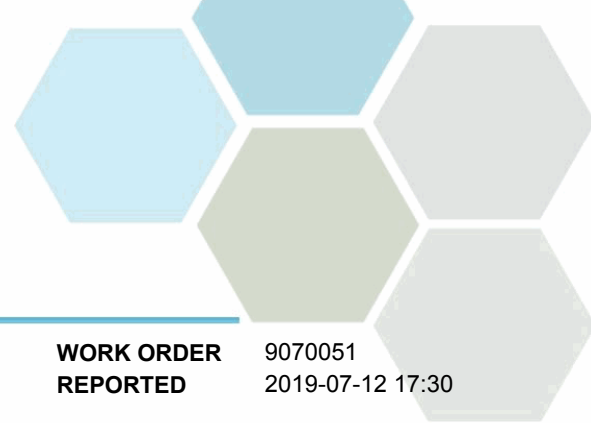
EPHw10-19	< 250	250	µg/L	2019-07-10	
EPHw19-32	< 250	250	µg/L	2019-07-10	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	64	60-126	%	2019-07-10	

Calculated Parameters

Hardness, Total (as CaCO3)	295	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Barium, dissolved	0.0184	0.0050	mg/L	2019-07-07	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, dissolved	0.0176	0.0050	mg/L	2019-07-07	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Calcium, dissolved	97.8	0.20	mg/L	2019-07-07	
Chromium, dissolved	0.00061	0.00050	mg/L	2019-07-07	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Copper, dissolved	0.00115	0.00040	mg/L	2019-07-07	
Iron, dissolved	< 0.010	0.010	mg/L	2019-07-07	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, dissolved	0.00016	0.00010	mg/L	2019-07-07	
Magnesium, dissolved	12.2	0.010	mg/L	2019-07-07	
Manganese, dissolved	0.0283	0.00020	mg/L	2019-07-07	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-07-07	
Molybdenum, dissolved	0.00086	0.00010	mg/L	2019-07-07	



TEST RESULTS

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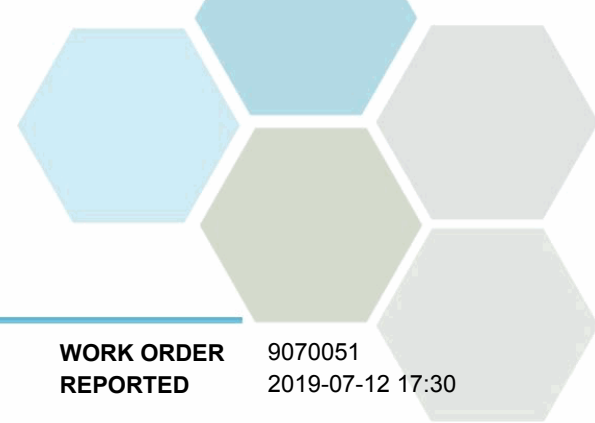
Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (9070051-07) Matrix: Water Sampled: 2019-06-30 14:00, Continued					
<i>Dissolved Metals, Continued</i>					
Nickel, dissolved	0.00076	0.00040	mg/L	2019-07-07	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-07-07	
Potassium, dissolved	1.01	0.10	mg/L	2019-07-07	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, dissolved	6.3	1.0	mg/L	2019-07-07	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, dissolved	13.0	0.10	mg/L	2019-07-07	
Strontium, dissolved	0.268	0.0010	mg/L	2019-07-07	
Sulfur, dissolved	32.7	3.0	mg/L	2019-07-07	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, dissolved	0.00173	0.000020	mg/L	2019-07-07	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-07-07	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-07-07	

General Parameters

Alkalinity, Total (as CaCO3)	196	1.0	mg/L	2019-07-04	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Bicarbonate (as CaCO3)	196	1.0	mg/L	2019-07-04	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-07-04	
Colour, True	5.9	5.0	CU	2019-07-03	
Conductivity (EC)	608	2.0	µS/cm	2019-07-04	
pH	7.87	0.10	pH units	2019-07-04	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-07-03	
Turbidity	0.20	0.10	NTU	2019-07-03	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-07-11	
Acenaphthylene	< 0.200	0.200	µg/L	2019-07-11	
Acridine	< 0.050	0.050	µg/L	2019-07-11	
Anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-07-11	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-07-11	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-07-11	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-07-11	



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Analyte	Result	RL	Units	Analyzed	Qualifier
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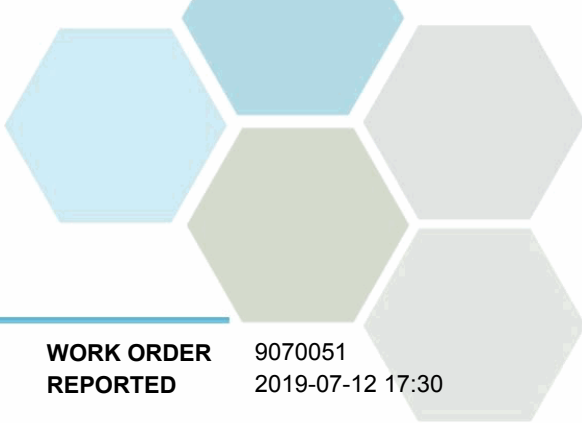
SW1 (9070051-07) | Matrix: Water | Sampled: 2019-06-30 14:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Chrysene	< 0.050	0.050	µg/L	2019-07-11	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-07-11	
Fluoranthene	< 0.030	0.030	µg/L	2019-07-11	
Fluorene	< 0.050	0.050	µg/L	2019-07-11	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-07-11	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-07-11	
Naphthalene	< 0.200	0.200	µg/L	2019-07-11	
Phenanthrene	< 0.100	0.100	µg/L	2019-07-11	
Pyrene	< 0.020	0.020	µg/L	2019-07-11	
Quinoline	< 0.050	0.050	µg/L	2019-07-11	
Surrogate: Acridine-d9	36	50-140	%	2019-07-11	S02
Surrogate: Naphthalene-d8	71	50-140	%	2019-07-11	
Surrogate: Perylene-d12	52	50-140	%	2019-07-11	

Total Metals

Aluminum, total	0.0497	0.0050	mg/L	2019-07-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-07-07	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-07-07	
Barium, total	0.0199	0.0050	mg/L	2019-07-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-07-07	
Boron, total	0.0193	0.0050	mg/L	2019-07-07	
Cadmium, total	0.000012	0.000010	mg/L	2019-07-07	
Calcium, total	102	0.20	mg/L	2019-07-07	
Chromium, total	0.00076	0.00050	mg/L	2019-07-07	
Cobalt, total	0.00019	0.00010	mg/L	2019-07-07	
Copper, total	0.00185	0.00040	mg/L	2019-07-07	
Iron, total	0.053	0.010	mg/L	2019-07-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-07-07	
Lithium, total	0.00025	0.00010	mg/L	2019-07-07	
Magnesium, total	13.3	0.010	mg/L	2019-07-07	
Manganese, total	0.0819	0.00020	mg/L	2019-07-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-07-04	
Molybdenum, total	0.00095	0.00010	mg/L	2019-07-07	
Nickel, total	0.00105	0.00040	mg/L	2019-07-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-07-07	
Potassium, total	1.06	0.10	mg/L	2019-07-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Silicon, total	6.5	1.0	mg/L	2019-07-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-07-07	
Sodium, total	14.6	0.10	mg/L	2019-07-07	
Strontium, total	0.279	0.0010	mg/L	2019-07-07	



TEST RESULTS

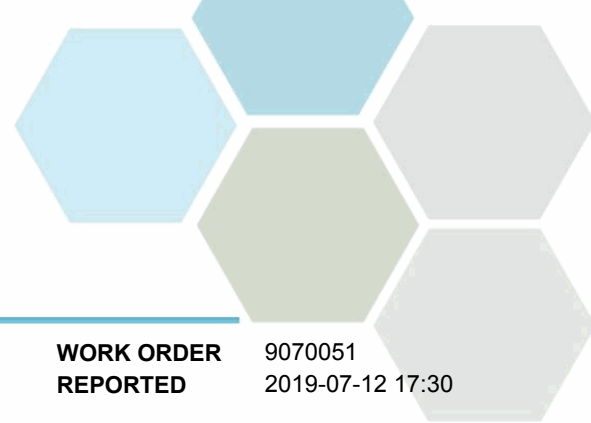
REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (9070051-07) Matrix: Water Sampled: 2019-06-30 14:00, Continued					
<i>Total Metals, Continued</i>					
Sulfur, total	35.7	3.0	mg/L	2019-07-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-07-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-07-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-07-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-07-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-07-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-07-07	
Uranium, total	0.00181	0.000020	mg/L	2019-07-07	
Vanadium, total	0.0013	0.0010	mg/L	2019-07-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-07-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-07-07	

Sample Qualifiers:

- 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.



APPENDIX 1: SUPPORTING INFORMATION

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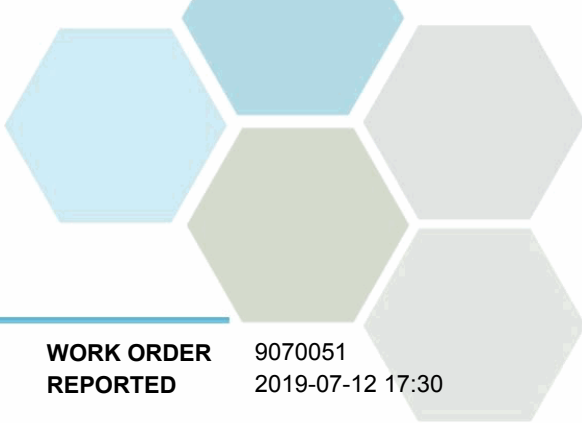
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Analysis Description	Method Ref.	Technique	Location
Alkalinity in Water	SM 2320 B* (2017)	Titration with H2SO4	Kelowna
Anions in Water	SM 4110 B (2017)	Ion Chromatography	Kelowna
Colour, True in Water	SM 2120 C (2017)	Spectrophotometry (456 nm)	Kelowna
Conductivity in Water	SM 2510 B (2017)	Conductivity Meter	Kelowna
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 (2017)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	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 (2017)	Electrometry	Kelowna
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* (2017)	Gravimetry (Dried at 103-105C)	Kelowna
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 (2017)	Nephelometry	Kelowna

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



APPENDIX 1: SUPPORTING INFORMATION

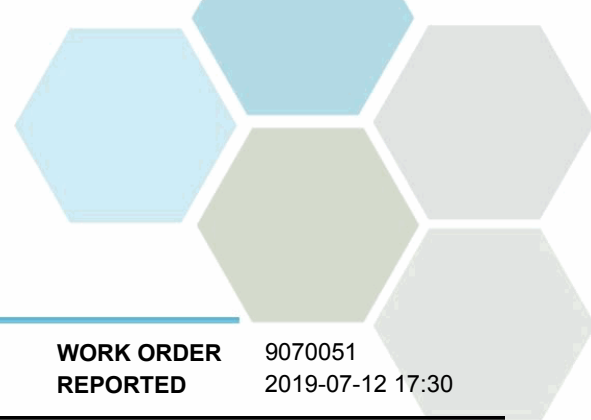
REPORTED TO Allterra Construction
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General Comments:

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.

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any **Bold** and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager: bshaw@caro.ca



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

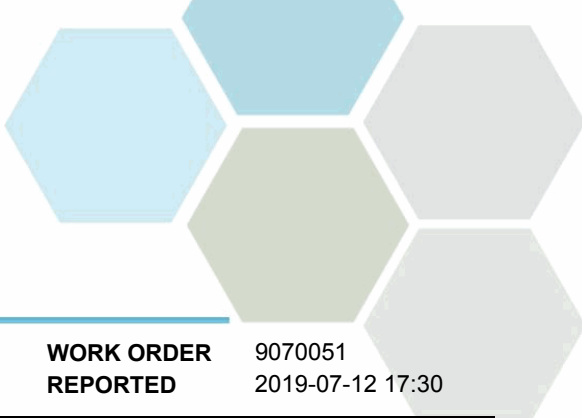
WORK ORDER REPORTED 9070051
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the 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 B9G0132									
Blank (B9G0132-BLK1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
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 (B9G0132-BS1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Chloride	16.1	0.10 mg/L	16.0		100	90-110			
Fluoride	4.00	0.10 mg/L	4.00		100	88-108			
Nitrate (as N)	4.04	0.010 mg/L	4.00		101	90-110			
Nitrite (as N)	1.91	0.010 mg/L	2.00		96	85-115			
Sulfate	16.0	1.0 mg/L	16.0		100	90-110			
Duplicate (B9G0132-DUP1)			Source: 9070051-01		Prepared: 2019-07-03, Analyzed: 2019-07-03				
Chloride	37.1	0.10 mg/L		37.2			< 1		10
Fluoride	0.13	0.10 mg/L		0.13					10
Nitrate (as N)	< 0.010	0.010 mg/L		< 0.010					10
Nitrite (as N)	< 0.010	0.010 mg/L		< 0.010					15
Sulfate	62.3	1.0 mg/L		62.5			< 1		10
Matrix Spike (B9G0132-MS1)			Source: 9070051-01		Prepared: 2019-07-03, Analyzed: 2019-07-03				
Chloride	54.0	0.10 mg/L	16.0	37.2	105	75-125			
Fluoride	4.06	0.10 mg/L	4.00	0.13	98	75-125			
Nitrate (as N)	4.02	0.010 mg/L	4.00	< 0.010	100	75-125			
Nitrite (as N)	1.82	0.010 mg/L	2.00	< 0.010	91	80-120			
Sulfate	78.6	1.0 mg/L	16.0	62.5	101	75-125			
BCMOE Aggregate Hydrocarbons, Batch B9G0656									
Blank (B9G0656-BLK1)			Prepared: 2019-07-09, Analyzed: 2019-07-09						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	311	µg/L	444		70	60-126			



APPENDIX 2: QUALITY CONTROL RESULTS

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WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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BCMOE Aggregate Hydrocarbons, Batch B9G0656, Continued

LCS (B9G0656-BS2)			Prepared: 2019-07-09, Analyzed: 2019-07-09						
EPHw10-19	13000	250 µg/L	15400	85	70-117				
EPHw19-32	19900	250 µg/L	22100	90	70-113				
Surrogate: 2-Methylnonane (EPH/F2-4)	320	µg/L	444	72	60-126				

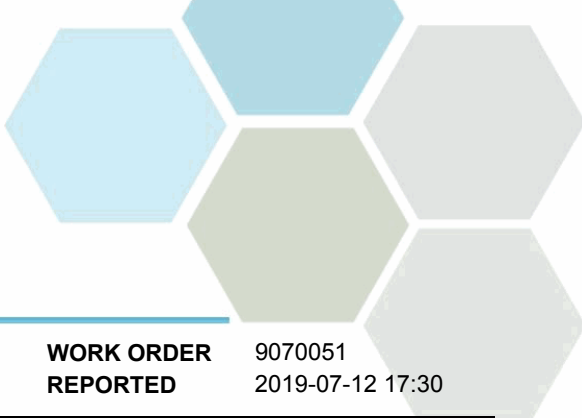
BCMOE Aggregate Hydrocarbons, Batch B9G0760

Blank (B9G0760-BLK1)			Prepared: 2019-07-09, Analyzed: 2019-07-10						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	314	µg/L	444	71	60-126				

LCS (B9G0760-BS2)			Prepared: 2019-07-09, Analyzed: 2019-07-10						
EPHw10-19	13500	250 µg/L	15500	88	70-117				
EPHw19-32	23300	250 µg/L	22200	105	70-113				
Surrogate: 2-Methylnonane (EPH/F2-4)	363	µg/L	444	82	60-126				

Dissolved Metals, Batch B9G0513

Blank (B9G0513-BLK1)			Prepared: 2019-07-07, Analyzed: 2019-07-07						
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
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WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B9G0513, Continued

Blank (B9G0513-BLK1), Continued

Prepared: 2019-07-07, Analyzed: 2019-07-07

Zirconium, dissolved	< 0.00010	0.00010 mg/L							
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Blank (B9G0513-BLK2)

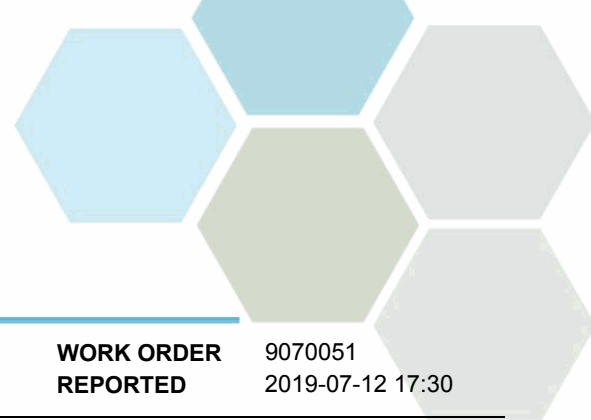
Prepared: 2019-07-07, Analyzed: 2019-07-07

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							

LCS (B9G0513-BS1)

Prepared: 2019-07-07, Analyzed: 2019-07-07

Aluminum, dissolved	0.0211	0.0050 mg/L	0.0200	106	80-120
Antimony, dissolved	0.0201	0.00020 mg/L	0.0200	101	80-120
Arsenic, dissolved	0.0198	0.00050 mg/L	0.0200	99	80-120
Barium, dissolved	0.0196	0.0050 mg/L	0.0200	98	80-120
Beryllium, dissolved	0.0210	0.00010 mg/L	0.0200	105	80-120
Bismuth, dissolved	0.0215	0.00010 mg/L	0.0200	107	80-120
Boron, dissolved	0.0193	0.0050 mg/L	0.0200	97	80-120
Cadmium, dissolved	0.0204	0.000010 mg/L	0.0200	102	80-120
Calcium, dissolved	2.05	0.20 mg/L	2.00	102	80-120
Chromium, dissolved	0.0192	0.00050 mg/L	0.0200	96	80-120
Cobalt, dissolved	0.0193	0.00010 mg/L	0.0200	96	80-120
Copper, dissolved	0.0203	0.00040 mg/L	0.0200	101	80-120
Iron, dissolved	1.88	0.010 mg/L	2.00	94	80-120
Lead, dissolved	0.0215	0.00020 mg/L	0.0200	107	80-120



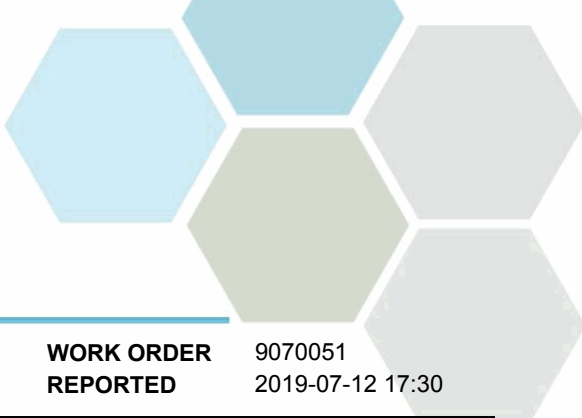
APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B9G0513, Continued									
LCS (B9G0513-BS1), Continued					Prepared: 2019-07-07, Analyzed: 2019-07-07				
Lithium, dissolved	0.0211	0.00010 mg/L	0.0200		106	80-120			
Magnesium, dissolved	1.92	0.010 mg/L	2.00		96	80-120			
Manganese, dissolved	0.0196	0.00020 mg/L	0.0200		98	80-120			
Molybdenum, dissolved	0.0191	0.00010 mg/L	0.0200		95	80-120			
Nickel, dissolved	0.0200	0.00040 mg/L	0.0200		100	80-120			
Phosphorus, dissolved	1.96	0.050 mg/L	2.00		98	80-120			
Potassium, dissolved	2.09	0.10 mg/L	2.00		104	80-120			
Selenium, dissolved	0.0207	0.00050 mg/L	0.0200		104	80-120			
Silicon, dissolved	2.0	1.0 mg/L	2.00		101	80-120			
Silver, dissolved	0.0202	0.000050 mg/L	0.0200		101	80-120			
Sodium, dissolved	1.86	0.10 mg/L	2.00		93	80-120			
Strontium, dissolved	0.0196	0.0010 mg/L	0.0200		98	80-120			
Sulfur, dissolved	4.6	3.0 mg/L	5.00		91	80-120			
Tellurium, dissolved	0.0206	0.00050 mg/L	0.0200		103	80-120			
Thallium, dissolved	0.0215	0.000020 mg/L	0.0200		108	80-120			
Thorium, dissolved	0.0203	0.00010 mg/L	0.0200		102	80-120			
Tin, dissolved	0.0203	0.00020 mg/L	0.0200		101	80-120			
Titanium, dissolved	0.0197	0.0050 mg/L	0.0200		99	80-120			
Tungsten, dissolved	0.0200	0.0010 mg/L	0.0200		100	80-120			
Uranium, dissolved	0.0229	0.000020 mg/L	0.0200		114	80-120			
Vanadium, dissolved	0.0188	0.0010 mg/L	0.0200		94	80-120			
Zinc, dissolved	0.0215	0.0040 mg/L	0.0200		107	80-120			
Zirconium, dissolved	0.0212	0.00010 mg/L	0.0200		106	80-120			

Duplicate (B9G0513-DUP1)		Source: 9070051-06		Prepared: 2019-07-07, Analyzed: 2019-07-07					
Aluminum, dissolved	0.0071	0.0050 mg/L		0.0076					11
Antimony, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Arsenic, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					8
Barium, dissolved	0.0129	0.0050 mg/L		0.0131					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	0.219	0.0050 mg/L		0.227			3		13
Cadmium, dissolved	0.000901	0.000010 mg/L		0.000895			< 1		20
Calcium, dissolved	1060	0.20 mg/L		1080			2		8
Chromium, dissolved	0.00075	0.00050 mg/L		0.00115					14
Cobalt, dissolved	0.00105	0.00010 mg/L		0.00107			2		10
Copper, dissolved	0.00206	0.00040 mg/L		0.00206			< 1		20
Iron, dissolved	< 0.010	0.010 mg/L		< 0.010					14
Lead, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20
Lithium, dissolved	0.00036	0.00010 mg/L		0.00040					14
Magnesium, dissolved	265	0.010 mg/L		268			1		6
Manganese, dissolved	23.9	0.00020 mg/L		24.9			4		9
Molybdenum, dissolved	0.00027	0.00010 mg/L		0.00031					19
Nickel, dissolved	0.00844	0.00040 mg/L		0.00857			2		20
Phosphorus, dissolved	< 0.050	0.050 mg/L		< 0.050					14
Potassium, dissolved	25.9	0.10 mg/L		26.0			< 1		8
Selenium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					20
Silicon, dissolved	7.7	1.0 mg/L		7.6			< 1		12
Silver, dissolved	0.000117	0.000050 mg/L		0.000122					20
Sodium, dissolved	2020	0.10 mg/L		2020			< 1		6
Strontium, dissolved	5.13	0.0010 mg/L		5.17			< 1		6
Sulfur, dissolved	746	3.0 mg/L		747			< 1		20
Tellurium, dissolved	< 0.00050	0.00050 mg/L		< 0.00050					20
Thallium, dissolved	0.000027	0.000020 mg/L		0.000026					13
Thorium, dissolved	< 0.00010	0.00010 mg/L		< 0.00010					20
Tin, dissolved	< 0.00020	0.00020 mg/L		< 0.00020					20



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9070051
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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 B9G0513, Continued

Duplicate (B9G0513-DUP1), Continued		Source: 9070051-06		Prepared: 2019-07-07, Analyzed: 2019-07-07					
Titanium, dissolved	< 0.0050	0.0050	mg/L	< 0.0050					20
Tungsten, dissolved	< 0.0010	0.0010	mg/L	< 0.0010					20
Uranium, dissolved	0.000078	0.000020	mg/L	0.000076					14
Vanadium, dissolved	< 0.0010	0.0010	mg/L	< 0.0010					20
Zinc, dissolved	0.0214	0.0040	mg/L	0.0214			< 1		11
Zirconium, dissolved	< 0.00010	0.00010	mg/L	< 0.00010					20

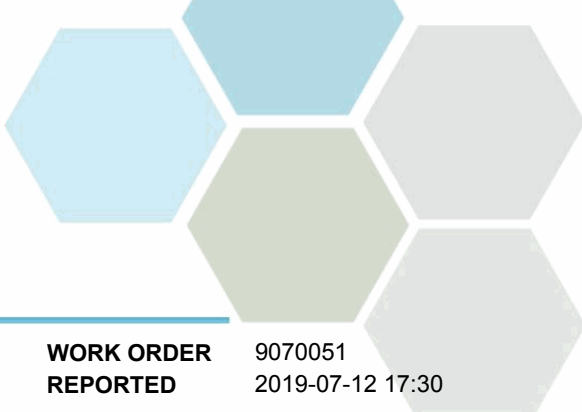
Reference (B9G0513-SRM1)		Prepared: 2019-07-07, Analyzed: 2019-07-07							
Aluminum, dissolved	0.214	0.0050	mg/L	0.235	91	79-114			
Antimony, dissolved	0.0456	0.00020	mg/L	0.0431	106	89-123			
Arsenic, dissolved	0.447	0.00050	mg/L	0.423	106	87-113			
Barium, dissolved	3.12	0.0050	mg/L	3.30	94	85-114			
Beryllium, dissolved	0.218	0.00010	mg/L	0.209	104	79-122			
Boron, dissolved	1.54	0.0050	mg/L	1.65	93	79-117			
Cadmium, dissolved	0.229	0.000010	mg/L	0.221	104	89-112			
Calcium, dissolved	7.47	0.20	mg/L	7.72	97	85-120			
Chromium, dissolved	0.424	0.00050	mg/L	0.434	98	87-113			
Cobalt, dissolved	0.125	0.00010	mg/L	0.124	101	90-117			
Copper, dissolved	0.843	0.00040	mg/L	0.815	103	90-115			
Iron, dissolved	1.24	0.010	mg/L	1.27	97	86-112			
Lead, dissolved	0.115	0.00020	mg/L	0.110	105	90-113			
Lithium, dissolved	0.103	0.00010	mg/L	0.100	103	77-127			
Magnesium, dissolved	6.29	0.010	mg/L	6.59	95	84-116			
Manganese, dissolved	0.331	0.00020	mg/L	0.342	97	85-113			
Molybdenum, dissolved	0.412	0.00010	mg/L	0.404	102	87-112			
Nickel, dissolved	0.843	0.00040	mg/L	0.835	101	90-114			
Phosphorus, dissolved	0.497	0.050	mg/L	0.499	100	74-119			
Potassium, dissolved	3.09	0.10	mg/L	2.88	107	78-119			
Selenium, dissolved	0.0361	0.00050	mg/L	0.0324	112	89-123			
Sodium, dissolved	16.6	0.10	mg/L	18.0	92	81-117			
Strontium, dissolved	0.913	0.0010	mg/L	0.935	98	82-111			
Thallium, dissolved	0.0407	0.000020	mg/L	0.0385	106	90-113			
Uranium, dissolved	0.245	0.000020	mg/L	0.258	95	87-113			
Vanadium, dissolved	0.826	0.0010	mg/L	0.873	95	85-110			
Zinc, dissolved	0.924	0.0040	mg/L	0.848	109	88-114			

Dissolved Metals, Batch B9G0559

Blank (B9G0559-BLK1)		Prepared: 2019-07-07, Analyzed: 2019-07-07							
Mercury, dissolved	< 0.000010	0.000010	mg/L						
Blank (B9G0559-BLK2)		Prepared: 2019-07-07, Analyzed: 2019-07-07							
Mercury, dissolved	< 0.000010	0.000010	mg/L						
Reference (B9G0559-SRM1)		Prepared: 2019-07-07, Analyzed: 2019-07-07							
Mercury, dissolved	0.00450	0.000010	mg/L	0.00489	92	80-120			
Reference (B9G0559-SRM2)		Prepared: 2019-07-07, Analyzed: 2019-07-07							
Mercury, dissolved	0.00412	0.000010	mg/L	0.00489	84	80-120			

General Parameters, Batch B9G0176

Blank (B9G0176-BLK1)		Prepared: 2019-07-03, Analyzed: 2019-07-03							
Colour, True	< 5.0	5.0	CU						

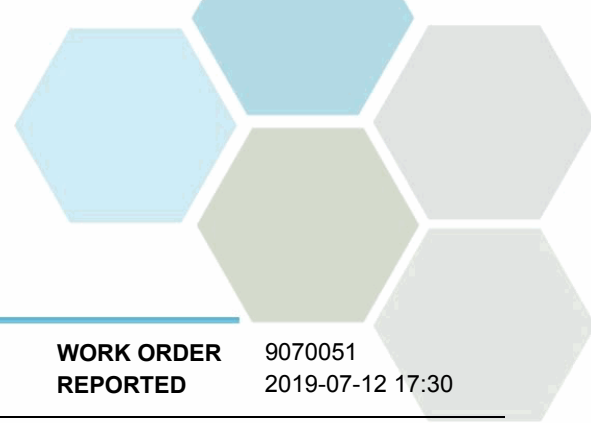


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B9G0176, Continued									
LCS (B9G0176-BS1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Colour, True	19	5.0 CU	20.0		97	85-115			
General Parameters, Batch B9G0177									
Blank (B9G0177-BLK1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Turbidity	< 0.10	0.10 NTU							
LCS (B9G0177-BS1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Turbidity	36.7	0.10 NTU	40.0		92	90-110			
General Parameters, Batch B9G0207									
Blank (B9G0207-BLK1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Solids, Total Suspended	< 2.0	2.0 mg/L							
Blank (B9G0207-BLK2)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B9G0207-BS1)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Solids, Total Suspended	98.0	10.0 mg/L	100		98	85-115			
LCS (B9G0207-BS2)			Prepared: 2019-07-03, Analyzed: 2019-07-03						
Solids, Total Suspended	99.0	10.0 mg/L	100		99	85-115			
General Parameters, Batch B9G0254									
Blank (B9G0254-BLK1)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
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							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Blank (B9G0254-BLK2)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
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							
Conductivity (EC)	< 2.0	2.0 µS/cm							
Blank (B9G0254-BLK3)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
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							
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B9G0254-BS1)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Alkalinity, Total (as CaCO3)	93.2	1.0 mg/L	100		93	80-120			
LCS (B9G0254-BS2)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Alkalinity, Total (as CaCO3)	98.8	1.0 mg/L	100		99	80-120			



APPENDIX 2: QUALITY CONTROL RESULTS

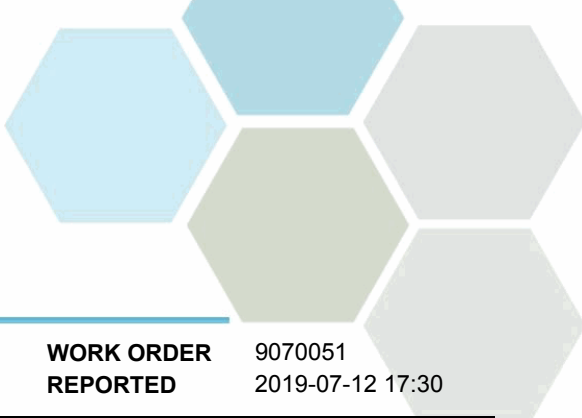
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B9G0254, Continued									
LCS (B9G0254-BS3)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Alkalinity, Total (as CaCO ₃)	98.9	1.0 mg/L	100		99	80-120			
LCS (B9G0254-BS4)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Conductivity (EC)	1400	2.0 µS/cm	1410		99	95-104			
LCS (B9G0254-BS5)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Conductivity (EC)	1390	2.0 µS/cm	1410		99	95-104			
LCS (B9G0254-BS6)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
Conductivity (EC)	1400	2.0 µS/cm	1410		99	95-104			
Reference (B9G0254-SRM1)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
pH	6.99	0.10 pH units	7.01		100	98-102			
Reference (B9G0254-SRM2)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
pH	6.97	0.10 pH units	7.01		99	98-102			
Reference (B9G0254-SRM3)			Prepared: 2019-07-04, Analyzed: 2019-07-04						
pH	6.97	0.10 pH units	7.01		99	98-102			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B9G0656

Blank (B9G0656-BLK1)			Prepared: 2019-07-09, Analyzed: 2019-07-11						
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	<	µg/L	4.38			50-140			S02
Surrogate: Naphthalene-d8	4.03	µg/L	4.44		91	50-140			
Surrogate: Perylene-d12	3.32	µg/L	4.44		75	50-140			
LCS (B9G0656-BS1)			Prepared: 2019-07-09, Analyzed: 2019-07-11						
Acenaphthene	4.87	0.050 µg/L	4.40		111	55-137			
Acenaphthylene	5.47	0.200 µg/L	4.40		124	53-140			
Acridine	< 0.050	0.050 µg/L	4.44			50-120			SPK
Anthracene	3.99	0.010 µg/L	4.44		90	64-130			
Benz(a)anthracene	4.41	0.010 µg/L	4.44		99	57-140			
Benzo(a)pyrene	4.44	0.010 µg/L	4.40		101	63-133			
Benzo(b+j)fluoranthene	8.81	0.050 µg/L	8.89		99	60-129			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B9G0656, Continued

LCS (B9G0656-BS1), Continued

Prepared: 2019-07-09, Analyzed: 2019-07-11

Benzo(g,h,i)perylene	4.59	0.050 µg/L	4.40		104	52-139			
Benzo(k)fluoranthene	4.85	0.050 µg/L	4.44		109	50-138			
2-Chloronaphthalene	4.80	0.100 µg/L	4.44		108	50-139			
Chrysene	4.30	0.050 µg/L	4.42		97	59-140			
Dibenz(a,h)anthracene	4.49	0.010 µg/L	4.42		101	53-136			
Fluoranthene	4.13	0.030 µg/L	4.36		95	67-135			
Fluorene	4.84	0.050 µg/L	4.40		110	57-134			
Indeno(1,2,3-cd)pyrene	4.72	0.050 µg/L	4.44		106	52-129			
1-Methylnaphthalene	5.20	0.100 µg/L	4.38		119	50-140			
2-Methylnaphthalene	5.35	0.100 µg/L	4.36		123	50-140			
Naphthalene	6.10	0.200 µg/L	4.44		137	50-140			
Phenanthrene	4.70	0.100 µg/L	4.40		107	61-134			
Pyrene	4.02	0.020 µg/L	4.44		90	66-131			
Quinoline	4.34	0.050 µg/L	4.44		98	50-140			
Surrogate: Acridine-d9	<	µg/L	4.38			50-140			S02
Surrogate: Naphthalene-d8	5.84	µg/L	4.44		131	50-140			
Surrogate: Perylene-d12	4.02	µg/L	4.44		90	50-140			

LCS Dup (B9G0656-BSD1)

Prepared: 2019-07-09, Analyzed: 2019-07-11

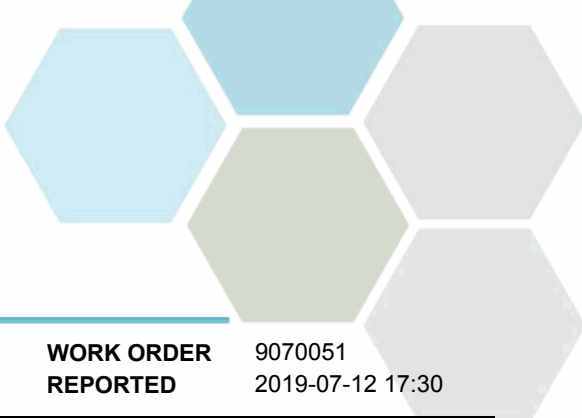
Acenaphthene	4.66	0.050 µg/L	4.40		106	55-137	4	18	
Acenaphthylene	5.22	0.200 µg/L	4.40		119	53-140	5	20	
Acridine	< 0.050	0.050 µg/L	4.44			50-120		30	SPK
Anthracene	3.83	0.010 µg/L	4.44		86	64-130	4	15	
Benz(a)anthracene	4.26	0.010 µg/L	4.44		96	57-140	3	25	
Benzo(a)pyrene	4.27	0.010 µg/L	4.40		97	63-133	4	18	
Benzo(b+j)fluoranthene	8.40	0.050 µg/L	8.89		95	60-129	5	17	
Benzo(g,h,i)perylene	4.41	0.050 µg/L	4.40		100	52-139	4	22	
Benzo(k)fluoranthene	4.29	0.050 µg/L	4.44		96	50-138	12	26	
2-Chloronaphthalene	4.55	0.100 µg/L	4.44		102	50-139	5	23	
Chrysene	4.14	0.050 µg/L	4.42		94	59-140	4	23	
Dibenz(a,h)anthracene	4.37	0.010 µg/L	4.42		99	53-136	3	21	
Fluoranthene	3.94	0.030 µg/L	4.36		91	67-135	5	18	
Fluorene	4.67	0.050 µg/L	4.40		106	57-134	3	18	
Indeno(1,2,3-cd)pyrene	4.52	0.050 µg/L	4.44		102	52-129	4	21	
1-Methylnaphthalene	4.94	0.100 µg/L	4.38		113	50-140	5	20	
2-Methylnaphthalene	5.09	0.100 µg/L	4.36		117	50-140	5	21	
Naphthalene	5.82	0.200 µg/L	4.44		131	50-140	5	22	
Phenanthrene	4.52	0.100 µg/L	4.40		103	61-134	4	17	
Pyrene	3.85	0.020 µg/L	4.44		87	66-131	4	19	
Quinoline	4.82	0.050 µg/L	4.44		108	50-140	11	14	
Surrogate: Acridine-d9	<	µg/L	4.38			50-140			S02
Surrogate: Naphthalene-d8	5.74	µg/L	4.44		129	50-140			
Surrogate: Perylene-d12	4.15	µg/L	4.44		93	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B9G0760

Blank (B9G0760-BLK1)

Prepared: 2019-07-09, Analyzed: 2019-07-11

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							

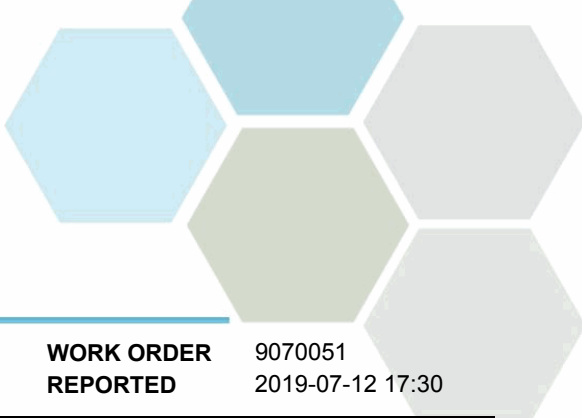


APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9G0760, Continued									
Blank (B9G0760-BLK1), Continued					Prepared: 2019-07-09, Analyzed: 2019-07-11				
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	3.36	µg/L	4.38		77	50-140			
Surrogate: Naphthalene-d8	4.72	µg/L	4.44		106	50-140			
Surrogate: Perylene-d12	5.37	µg/L	4.44		121	50-140			
LCS (B9G0760-BS1)					Prepared: 2019-07-09, Analyzed: 2019-07-11				
Acenaphthene	4.41	0.050 µg/L	4.40		100	55-137			
Acenaphthylene	4.50	0.200 µg/L	4.40		102	53-140			
Acridine	3.52	0.050 µg/L	4.44		79	50-120			
Anthracene	4.36	0.010 µg/L	4.44		98	64-130			
Benz(a)anthracene	4.84	0.010 µg/L	4.44		109	57-140			
Benzo(a)pyrene	4.79	0.010 µg/L	4.40		109	63-133			
Benzo(b+j)fluoranthene	9.52	0.050 µg/L	8.89		107	60-129			
Benzo(g,h,i)perylene	4.51	0.050 µg/L	4.40		103	52-139			
Benzo(k)fluoranthene	4.65	0.050 µg/L	4.44		105	50-138			
2-Chloronaphthalene	3.87	0.100 µg/L	4.44		87	50-139			
Chrysene	4.75	0.050 µg/L	4.42		107	59-140			
Dibenz(a,h)anthracene	4.63	0.010 µg/L	4.42		105	53-136			
Fluoranthene	5.42	0.030 µg/L	4.36		124	67-135			
Fluorene	4.23	0.050 µg/L	4.40		96	57-134			
Indeno(1,2,3-cd)pyrene	4.34	0.050 µg/L	4.44		98	52-129			
1-Methylnaphthalene	4.26	0.100 µg/L	4.38		97	50-140			
2-Methylnaphthalene	4.34	0.100 µg/L	4.36		100	50-140			
Naphthalene	4.26	0.200 µg/L	4.44		96	50-140			
Phenanthrene	4.96	0.100 µg/L	4.40		113	61-134			
Pyrene	5.43	0.020 µg/L	4.44		122	66-131			
Quinoline	5.44	0.050 µg/L	4.44		122	50-140			
Surrogate: Acridine-d9	3.45	µg/L	4.38		79	50-140			
Surrogate: Naphthalene-d8	4.60	µg/L	4.44		103	50-140			
Surrogate: Perylene-d12	4.97	µg/L	4.44		112	50-140			
LCS Dup (B9G0760-BSD1)					Prepared: 2019-07-09, Analyzed: 2019-07-11				
Acenaphthene	4.25	0.050 µg/L	4.40		97	55-137	4	18	
Acenaphthylene	4.29	0.200 µg/L	4.40		98	53-140	5	20	
Acridine	3.58	0.050 µg/L	4.44		80	50-120	2	30	
Anthracene	4.22	0.010 µg/L	4.44		95	64-130	3	15	
Benz(a)anthracene	5.08	0.010 µg/L	4.44		114	57-140	5	25	
Benzo(a)pyrene	4.59	0.010 µg/L	4.40		104	63-133	4	18	
Benzo(b+j)fluoranthene	9.28	0.050 µg/L	8.89		104	60-129	3	17	
Benzo(g,h,i)perylene	4.72	0.050 µg/L	4.40		107	52-139	5	22	
Benzo(k)fluoranthene	4.57	0.050 µg/L	4.44		103	50-138	2	26	
2-Chloronaphthalene	3.68	0.100 µg/L	4.44		83	50-139	5	23	
Chrysene	4.96	0.050 µg/L	4.42		112	59-140	4	23	
Dibenz(a,h)anthracene	5.00	0.010 µg/L	4.42		113	53-136	8	21	



APPENDIX 2: QUALITY CONTROL RESULTS

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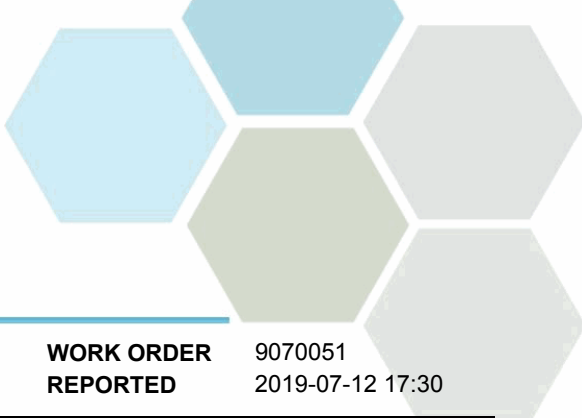
Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9G0760, Continued									
LCS Dup (B9G0760-BSD1), Continued					Prepared: 2019-07-09, Analyzed: 2019-07-11				
Fluoranthene	5.23	0.030 µg/L	4.36		120	67-135	4	18	
Fluorene	4.10	0.050 µg/L	4.40		93	57-134	3	18	
Indeno(1,2,3-cd)pyrene	4.51	0.050 µg/L	4.44		101	52-129	4	21	
1-Methylnaphthalene	3.96	0.100 µg/L	4.38		90	50-140	7	20	
2-Methylnaphthalene	4.01	0.100 µg/L	4.36		92	50-140	8	21	
Naphthalene	3.94	0.200 µg/L	4.44		89	50-140	8	22	
Phenanthrene	4.76	0.100 µg/L	4.40		108	61-134	4	17	
Pyrene	5.21	0.020 µg/L	4.44		117	66-131	4	19	
Quinoline	5.62	0.050 µg/L	4.44		126	50-140	3	14	
Surrogate: Acridine-d9	3.48	µg/L	4.38		80	50-140			
Surrogate: Naphthalene-d8	4.32	µg/L	4.44		97	50-140			
Surrogate: Perylene-d12	4.84	µg/L	4.44		109	50-140			

Total Metals, Batch B9G0312

Blank (B9G0312-BLK1)					Prepared: 2019-07-04, Analyzed: 2019-07-04				
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B9G0312-BLK2)					Prepared: 2019-07-04, Analyzed: 2019-07-04				
Mercury, total	< 0.000010	0.000010 mg/L							
Reference (B9G0312-SRM1)					Prepared: 2019-07-04, Analyzed: 2019-07-04				
Mercury, total	0.00452	0.000010 mg/L	0.00489		93	80-120			
Reference (B9G0312-SRM2)					Prepared: 2019-07-04, Analyzed: 2019-07-04				
Mercury, total	0.00439	0.000010 mg/L	0.00489		90	80-120			

Total Metals, Batch B9G0480

Blank (B9G0480-BLK1)					Prepared: 2019-07-05, Analyzed: 2019-07-07				
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							

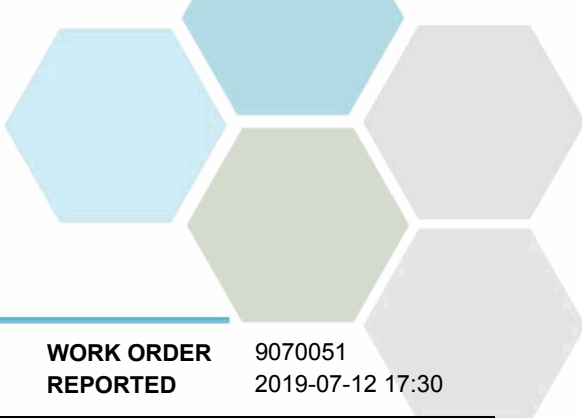


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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9G0480, Continued									
Blank (B9G0480-BLK1), Continued					Prepared: 2019-07-05, Analyzed: 2019-07-07				
Strontium, total	< 0.0010	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 (B9G0480-BLK2)					Prepared: 2019-07-05, Analyzed: 2019-07-07				
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 (B9G0480-BLK3)					Prepared: 2019-07-05, Analyzed: 2019-07-07				
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 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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Total Metals, Batch B9G0480, Continued

Blank (B9G0480-BLK3), Continued

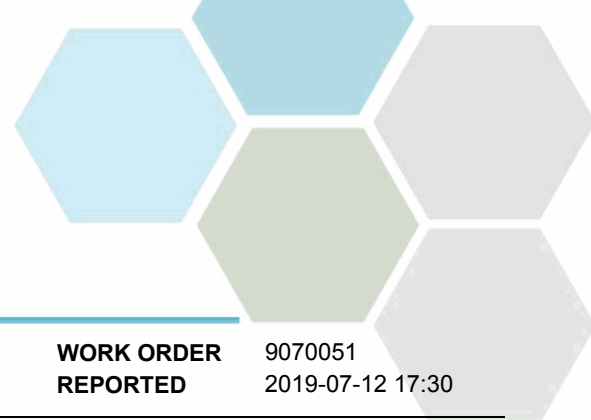
Prepared: 2019-07-05, Analyzed: 2019-07-07

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							

LCS (B9G0480-BS1)

Prepared: 2019-07-05, Analyzed: 2019-07-07

Aluminum, total	0.0220	0.0050 mg/L	0.0200		110	80-120			
Antimony, total	0.0224	0.00020 mg/L	0.0200		112	80-120			
Arsenic, total	0.0219	0.00050 mg/L	0.0200		110	80-120			
Barium, total	0.0206	0.0050 mg/L	0.0200		103	80-120			
Beryllium, total	0.0236	0.00010 mg/L	0.0200		118	80-120			
Bismuth, total	0.0240	0.00010 mg/L	0.0200		120	80-120			
Boron, total	0.0217	0.0050 mg/L	0.0200		108	80-120			
Cadmium, total	0.0224	0.000010 mg/L	0.0200		112	80-120			
Calcium, total	2.26	0.20 mg/L	2.00		113	80-120			
Chromium, total	0.0212	0.00050 mg/L	0.0200		106	80-120			
Cobalt, total	0.0212	0.00010 mg/L	0.0200		106	80-120			
Copper, total	0.0225	0.00040 mg/L	0.0200		113	80-120			
Iron, total	2.05	0.010 mg/L	2.00		103	80-120			
Lead, total	0.0238	0.00020 mg/L	0.0200		119	80-120			
Lithium, total	0.0235	0.00010 mg/L	0.0200		117	80-120			
Magnesium, total	2.13	0.010 mg/L	2.00		106	80-120			
Manganese, total	0.0216	0.00020 mg/L	0.0200		108	80-120			
Molybdenum, total	0.0207	0.00010 mg/L	0.0200		103	80-120			
Nickel, total	0.0217	0.00040 mg/L	0.0200		108	80-120			
Phosphorus, total	2.20	0.050 mg/L	2.00		110	80-120			

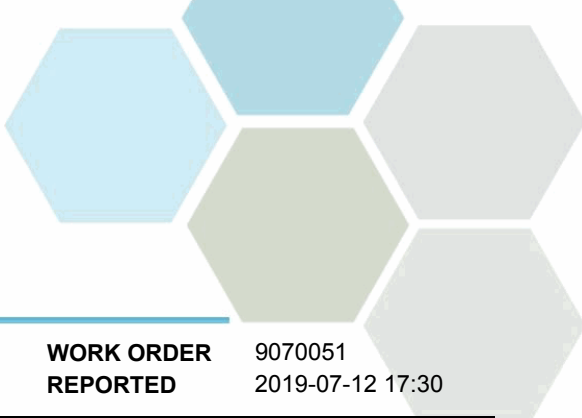


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9G0480, Continued									
LCS (B9G0480-BS1), Continued					Prepared: 2019-07-05, Analyzed: 2019-07-07				
Potassium, total	2.26	0.10 mg/L	2.00		113	80-120			
Selenium, total	0.0218	0.00050 mg/L	0.0200		109	80-120			
Silicon, total	2.0	1.0 mg/L	2.00		98	80-120			
Silver, total	0.0223	0.000050 mg/L	0.0200		111	80-120			
Sodium, total	2.04	0.10 mg/L	2.00		102	80-120			
Strontium, total	0.0208	0.0010 mg/L	0.0200		104	80-120			
Sulfur, total	5.1	3.0 mg/L	5.00		102	80-120			
Tellurium, total	0.0232	0.00050 mg/L	0.0200		116	80-120			
Thallium, total	0.0236	0.000020 mg/L	0.0200		118	80-120			
Thorium, total	0.0225	0.00010 mg/L	0.0200		113	80-120			
Tin, total	0.0214	0.00020 mg/L	0.0200		107	80-120			
Titanium, total	0.0210	0.0050 mg/L	0.0200		105	80-120			
Tungsten, total	0.0218	0.0010 mg/L	0.0200		109	80-120			
Uranium, total	0.0237	0.000020 mg/L	0.0200		119	80-120			
Vanadium, total	0.0211	0.0010 mg/L	0.0200		105	80-120			
Zinc, total	0.0235	0.0040 mg/L	0.0200		117	80-120			
Zirconium, total	0.0231	0.00010 mg/L	0.0200		116	80-120			
Duplicate (B9G0480-DUP1)									
Source: 9070051-03			Prepared: 2019-07-05, Analyzed: 2019-07-07						
Aluminum, total	0.0468	0.0050 mg/L		0.0465			< 1	20	
Antimony, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Arsenic, total	0.00172	0.00050 mg/L		0.00172				15	
Barium, total	0.0213	0.0050 mg/L		0.0215				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	0.0268	0.0050 mg/L		0.0253			6	20	
Cadmium, total	0.000093	0.000010 mg/L		0.000094			< 1	20	
Calcium, total	35.5	0.20 mg/L		35.2			< 1	12	
Chromium, total	0.00052	0.00050 mg/L		0.00054				12	
Cobalt, total	0.00044	0.00010 mg/L		0.00045				13	
Copper, total	0.00041	0.00040 mg/L		0.00061				20	
Iron, total	0.250	0.010 mg/L		0.253			1	18	
Lead, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Lithium, total	0.00013	0.00010 mg/L		0.00014				19	
Magnesium, total	5.58	0.010 mg/L		5.42			3	10	
Manganese, total	0.394	0.00020 mg/L		0.387			2	13	
Molybdenum, total	0.00668	0.00010 mg/L		0.00672			< 1	20	
Nickel, total	0.00138	0.00040 mg/L		0.00142				20	
Phosphorus, total	0.133	0.050 mg/L		0.141				20	
Potassium, total	0.70	0.10 mg/L		0.68			3	13	
Selenium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Silicon, total	6.4	1.0 mg/L		6.2			2	11	
Silver, total	0.000050	0.000050 mg/L		0.000057				18	
Sodium, total	10.3	0.10 mg/L		10.2			2	10	
Strontium, total	0.206	0.0010 mg/L		0.204			1	9	
Sulfur, total	7.3	3.0 mg/L		6.8				20	
Tellurium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Thallium, total	0.000025	0.000020 mg/L		0.000025				20	
Thorium, total	< 0.00010	0.00010 mg/L		< 0.00010				18	
Tin, total	0.00022	0.00020 mg/L		0.00023				20	
Titanium, total	< 0.0050	0.0050 mg/L		< 0.0050				20	
Tungsten, total	< 0.0010	0.0010 mg/L		< 0.0010				20	
Uranium, total	0.000647	0.000020 mg/L		0.000648			< 1	14	
Vanadium, total	0.0011	0.0010 mg/L		0.0012				17	
Zinc, total	< 0.0040	0.0040 mg/L		< 0.0040				8	
Zirconium, total	0.00014	0.00010 mg/L		0.00015				20	



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9070051
2019-07-12 17:30

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9G0480, Continued									
Reference (B9G0480-SRM1)					Prepared: 2019-07-05, Analyzed: 2019-07-07				
Aluminum, total	0.292	0.0050 mg/L	0.303		96	82-114			
Antimony, total	0.0531	0.00020 mg/L	0.0511		104	88-115			
Arsenic, total	0.127	0.00050 mg/L	0.118		108	88-111			
Barium, total	0.808	0.0050 mg/L	0.823		98	83-110			
Beryllium, total	0.0550	0.00010 mg/L	0.0496		111	80-119			
Boron, total	3.35	0.0050 mg/L	3.45		97	80-118			
Cadmium, total	0.0533	0.000010 mg/L	0.0495		108	90-110			
Calcium, total	11.8	0.20 mg/L	11.6		102	85-113			
Chromium, total	0.260	0.00050 mg/L	0.250		104	88-111			
Cobalt, total	0.0399	0.00010 mg/L	0.0377		106	90-114			
Copper, total	0.529	0.00040 mg/L	0.486		109	90-117			
Iron, total	0.496	0.010 mg/L	0.488		102	90-116			
Lead, total	0.222	0.00020 mg/L	0.204		109	90-110			
Lithium, total	0.434	0.00010 mg/L	0.403		108	79-118			
Magnesium, total	3.81	0.010 mg/L	3.79		101	88-116			
Manganese, total	0.110	0.00020 mg/L	0.109		101	88-108			
Molybdenum, total	0.205	0.00010 mg/L	0.198		104	88-110			
Nickel, total	0.259	0.00040 mg/L	0.249		104	90-112			
Phosphorus, total	0.248	0.050 mg/L	0.227		109	72-118			
Potassium, total	7.88	0.10 mg/L	7.21		109	87-116			
Selenium, total	0.128	0.00050 mg/L	0.121		106	90-122			
Sodium, total	7.41	0.10 mg/L	7.54		98	86-118			
Strontium, total	0.385	0.0010 mg/L	0.375		103	86-110			
Thallium, total	0.0883	0.000020 mg/L	0.0805		110	90-113			
Uranium, total	0.0310	0.000020 mg/L	0.0306		101	88-112			
Vanadium, total	0.391	0.0010 mg/L	0.386		101	87-110			
Zinc, total	2.70	0.0040 mg/L	2.49		108	90-113			

QC Qualifiers:

- S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
- 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: 7 TAT: 5	CARO Analytical Services #110 - 4011 Viking Way Richmond, BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: June 2019 Shipped via: Harbour Air Tracking #: SDG:

#	Client information	Analyses	Containers
# 1	MW6 06/30/2019 12:00 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 CVAFS Reg & 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 06/30/2019 13:15 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 CVAFS Reg & 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 06/30/2019 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 CVAFS Reg & 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)

#	Sample ID Date/Time Grab / Water	Analyses	Containers
# 4	MW2 06/30/2019 14:30 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 CVAFS Reg & 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)
# 5	SB2 06/30/2019 12:30 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 CVAFS Reg & 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)
# 6	LE-1 06/30/2019 15:00 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 CVAFS Reg & 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)
# 7	SW1 06/30/2019 14:00 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 CVAFS Reg & 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 G183-IAM-826Z	SUBMITTED :7/2/2019 8:14:42 AM	Page 3 of 3
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Relinquished by	Date/Time	Accepted by	Date/Time