

From: SPOMO1701@outlook.com
To: [Environmental Compliance ENV:EX](#); marty@chholdings.ca
Subject: SPO MO1701-Status Update April 15, 2019
Date: April 15, 2019 20:22:11
Attachments: [CHH Status Report Apr 15, 2019.pdf](#)
[CHH February 2019 COA.pdf](#)
[CHH February 2019 COA.xlsx](#)
[CHH March 2019 COA.pdf](#)
[CHH March 2019 COA.xlsx](#)
[Feb Mar 2019 Surface Water Quality DATA-CHH.pdf](#)
[Feb Mar 2019 Groundwater Quality DATA-CHH.pdf](#)

- ***Please find information regarding the Leachate reporting requirements for the APRIL 15, 2019 reporting period as per SPILL PREVENTION ORDER : MO1701 Section 1d***

Total Leachate Collected= 3.76 m³
Total Leachate Stored= 26.62 m³
Total Leachate Transported= 0.00 m³

- ***Sampling was conducted on March 30 , 2019 as per Section 6biii of File 311372 August 11, 2017 letter. Tabulated Laboratory results and COA's are attached for Feb 2019 and March 2019 reporting periods.***

Sampling Summary:

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*
9. *SB-2*
10. *SB-3 (Insufficient volume)*

- ***Attached is the QP Progress Report for April 15, 2019 as per File 311372 August 11, 2017 letter.***

Thank you



FIELD REVIEW REPORT		DATE: April 15, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 42	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 11°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: = 3.76 m³
 - Total leachate stored = 26.62 m³
 - Total leachate transported = 0 m³
- **Soil Management Area (SMA)**
 - All works are in good condition and no noticeable changes since the date of our last inspection
- **Contact Water Containment Pond**
 - All works are in good condition and no noticeable changes since the date of our last inspection
- **cut-off ditch upland of PEA**
 - All works are in good condition, ditch still performing well.

ISLANDER ENGINEERING LTD.

Mike Achtem, P.Eng



FIELD REVIEW REPORT		DATE: April 15, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 42	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 11°C	PAGE: 2 of 3



SMA - looking south



SMA - looking north



Contact water containment Pond



Leak and leachate detection works



FIELD REVIEW REPORT		DATE: April 15, 2019	ISLANDER PROJECT No.: 2087
REPORT No: 42	STAGE OF CONSTRUCTION: Landfill Closure	WEATHER: Sun 11°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-LE-1	SHA-SW-1	SHA-SW-1
Laboratory ID			9021867-07	9040043-07	9021867-08	9040043-08
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	LE-1	LE-1	SW1	SW1
Date Sampled/Time			2019-02-25	2019-03-30	2019-02-25	2019-03-30
Physical Tests						
Colour, True (Colour Units)	15 TCU	15 ⁽¹⁾ units absolute, or 5 units above background (30-day average)	<5.0	13	<5.0	<5.0
Total Dissolved Solids (mg/L)	-	-	-	-	-	-
Total Suspended Solids (mg/L)	-	25 mg/L above background (24-hr during clear flow)	<2.0	<2.0	<2.0	<2.0
pH	7-10.5	6.5-9	6.54	6.66	7.26	7.33
Conductivity (uS/cm)	-	-	12600	12200	447	409
Hardness (as CaCO3)	-	-	3050	3100	170	179
Turbidity (NTU)	Δ1 NTU	8 NTU above background (24-hr during clear flow)	0.11	0.1	0.13	<0.10
Anions and Nutrients mg/L						
Alkalinity Total (as CaCO3)	<10 high sensitivity to acid inputs		31	<1.0	125	<1.0
Acid Sensitivity	10-20 moderate sensitivity to acid inputs		Low	High	Low	High
	>20 low sensitivity to acid inputs					
Chloride (Cl)	250 mg/L	600 mg/L (instant max), 150 mg/L (30-day average)	3410	3240	17.6	12
Fluoride (F)	1.5 mg/L (instant max) 1.0 mg/L (30-day average)	0.4 (Hardness <10mg/L)	<1.00	<0.10	<0.10	<0.10
		Hardness-Dependent AW (Hardness is >10mg/L) ⁽¹⁾	0.24	0.24	0.28	0.28
Nitrate (as N)	45 mg/L	32.8 mg/L (instant maximum) 3.0 mg/L (30-day average)	1.9	1.42	0.329	0.375
Nitrite (as N) ⁽²⁾	3 mg/L	Cl > 10 mg/L 0.6 mg/L (MAX), 0.2 mg/L (30-day average)	<0.100	<0.010	<0.010	<0.010
Sulfate (SO4) H 0-30 mg/L	500 mg/L	128 mg/L 30-day average)				
		218 mg/L (30-day average)				
		309 mg/L (30-day average)				
		429 mg/L (30-day average)				
		TBD	1750	1660	71.3	77.2

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1		
Laboratory ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	9021867-07	9040043-07	9021867-08	9040043-08		
Sample ID			LE-1	LE-1	SW1	SW1		
Date Sampled/Time			2019-02-25	2019-03-30	2019-02-25	2019-03-30		
Physical Tests								
Hardness (as CaCO3) (mg/L)	-	-	3050	3100	170	179		
pH	7-10.5	6.5-9	6.54	6.66	7.26	7.33		
Total Metals (mg/L)								
Aluminum (Al)-Total	0.2	-	0.0597	0.0361	0.0123	0.0099		
Antimony (Sb)-Total	-	-	0.00032	<0.00020	<0.00020	<0.00020		
Arsenic (As)-Total	0.01	0.005	<0.00050	0.00061	<0.00050	<0.00050		
Barium (Ba)-Total	-	-	0.0136	0.0072	0.0107	0.0096		
Beryllium (Be)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010		
Bismuth, total	-	-	<0.00010	<0.00010	<0.00010	<0.00010		
Boron (B)-Total	5	1.2	0.27	0.23	0.0139	0.0169		
Cadmium (Cd)-Total	-	-	0.000526	0.000519	<0.00010	<0.00010		
Calcium (Ca)-Total	-	-	932	864	59.7	59.4		
Chromium (Cr)-Total	-	-	0.00057	0.00132	<0.00050	0.00093		
Chromium (Cr(III))	-	-	-	-	-	<0.00100		
Chromium (Cr(VI))	-	-	-	-	-	<0.0010		
Cobalt (Co)-Total	-	0.110 (Short Term), 0.004 (Long Term Average)	0.00135	0.00048	<0.00010	<0.00010		
Copper (Cu)-Total	0.5	Hardness-Dependent ⁽¹⁾	0.00181	0.00156	0.00095	0.00107		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	0.267	0.234	0.0160	0.0168		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	0.1220	0.1240	0.0068	0.0072		
Iron (Fe)-Total	-	1	<0.010	<0.010	0.013	<0.010		
		Hardness-Dependent ⁽¹⁾	<0.00020	<0.00020	<0.00020	<0.00020		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	6.3396	6.4630	0.1604	0.1713		
Lead (Pb)-Total	0.01	Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	0.2503	0.2554	0.0096	0.0100		
		Lithium (Li)-Total	-	-	0.00028	0.00032	0.00013	0.00023
		Magnesium (Mg)-Total	-	-	240	223	8.24	8.02
Manganese (Mn)-Total	-	Hardness-Dependent ⁽¹⁾	13.7	11.4	0.0056	0.00291		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	34.2	34.7	2.4	2.5		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	14.0	14.2	1.4	1.4		
Mercury (Hg)-Total	0.001	0.00002	<0.000010	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)-Total	0.25	51 (instant max) 2 (30-d average)	0.00015	<0.00010	0.0007	0.00068		
Nickel (Ni)-Total	-	0.025 (Hardness-Dependent ⁽¹⁾ BCAWQG to protect AW) 0.60mg/L Calculated Hardness-Dependent ⁽²⁾ BCAWQG to protect AW 500000 mg/L CaCO3	0.00569	0.00556	0.0006	0.00053		
Phosphorus (P)-Total	-	-	<0.050	<0.050	<0.050	<0.050		
Potassium (K)-Total	-	-	25.5	22.5	0.64	0.64		
Selenium (Se)-Total	0.01	0.002	0.00104	<0.00050	<0.00050	<0.00050		
Silicon (Si)-Total	-	-	6.6	6.1	4.6	4.8		
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)	0.000081	0.000061	<0.000050	<0.000050		
Sodium (Na)-Total	-	-	1750	1600	8.72	8.26		
Strontium (Sr)-Total	-	-	4.73	4.19	0.169	0.159		
Sulfur (S)-Total	-	-	785	688	27.3	29.2		
Tellurium (Te)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050		
Thallium (Tl)-Total	-	-	<0.00020	<0.00020	<0.00020	<0.00020		
Thorium (Th)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010		
Tin (Sn)-Total	-	-	<0.00020	<0.00020	<0.00020	<0.00020		
Titanium (Ti)-Total	-	-	<0.0050	<0.0050	<0.0050	<0.0050		
Uranium (U)-Total	-	-	0.000078	0.000046	0.000928	0.000901		
Vanadium (V)-Total	-	-	<0.0010	<0.0010	<0.0010	<0.0010		
Zinc (Zn)-Total	5.0	Hardness >90 mg/L	0.0184	0.0214	<0.0040	<0.0040		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (instant max)	2.253	2.291	0.093	0.100		
		Hardness-Dependent BCAWQG to protect AW ⁽²⁾ (30-d average)	2.228	2.265	0.068	0.074		
Zirconium (Zr)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010		

Table 3: Analytical Results for Dissolved Metals

Table 3: Analytical Results for Dissolved Metals			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1
Laboratory ID			9021867-07	9040043-07	9021867-08	9040043-08
Sample ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	LE-1	LE-1	SW1	SW1
Date Sampled/Time			2019-02-25	2019-03-30	2019-02-25	2019-03-30
Physical Tests						
Hardness (as CaCO3) (mg/L)	-	-	3050	3100	170	179
pH	7-10.5	6.5-9	6.54	6.66	7.26	7.33
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	0.0276	0.0129	<0.0050	<0.0050
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (instant max)	0.089	0.104	0.265	0.299
		pH/Hardness Dependent BCAWQG to protect AW ⁽⁴⁾ (30-d Mean)	0.052	0.065	0.255	0.305
Antimony (Sb)-Dissolved	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Barium (Ba)-Dissolved	-	-	0.0135	0.0074	0.0103	0.0093
Beryllium (Be)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Dissolved	-	-	0.246	0.21	0.0127	0.0151
Cadmium (Cd)-Dissolved	-	Hardness-Dependent⁽³⁾	0.000528	0.000536	<0.000010	<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	Hardness exceeds 455mg/L	0.00102	0.00107
		Calculated Hardness-Dependent BCAWQG to protect AW ⁽³⁾ (long-term max) $e[0.736 * \ln(Hss) - 4.943]$ ug/L H<285mg/L	Hardness exceeds 285mg/L	Hardness exceeds 285mg/L	0.00031	0.00032
Calcium (Ca)-Dissolved	-	up to 4, highly sensitive to acid inputs 4 to 8, moderately sensitive over 8 low sensitivity	838	862	55.3	58.9
Chromium (Cr)-Dissolved	-	-	Low	Low	Low	Low
Chromium (Cr)-Dissolved	-	-	0.00052	0.00155	<0.00050	0.00099
Cobalt (Co)-Dissolved	-	-	0.0013	0.00048	<0.00010	<0.00010
Copper (Cu)-Dissolved	-	-	0.00172	0.00164	0.00079	0.00082
Iron (Fe)-Dissolved	-	0.35	<0.010	<0.010	<0.010	<0.010
Lead (Pb)-Dissolved	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Lithium, dissolved	-	-	0.00024	0.00021	0.00011	0.00013
Magnesium (Mg)-Dissolved	-	-	232	231	7.77	7.77
Manganese (Mn)-Dissolved	-	-	14.1	12.1	0.00398	0.00105
Mercury (Hg)-Dissolved	-	-	-	<0.000010	-	<0.000010
Molybdenum (Mo)-Dissolved	-	-	0.00017	<0.00010	0.00061	0.00067
Nickel (Ni)-Dissolved	-	-	0.00552	0.00596	0.00054	<0.00040
Phosphorus (P)-Dissolved	-	-	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	-	-	24.3	23.3	0.6	0.59
Selenium (Se)-Dissolved	-	-	0.00053	<0.00050	<0.00050	<0.00050
Silicon (Si)-Dissolved	-	-	4	6.3	1.9	4.6
Silver (Ag)-Dissolved	-	-	<0.000050	0.00008	<0.000050	<0.000050
Sodium (Na)-Dissolved	-	-	1660	1650	8.25	7.91
Strontium (Sr)-dissolved	-	-	4.66	4.26	0.169	0.155
Sulfur (S)-Dissolved	-	-	673	722	25.7	28.7
Tellurium (Te)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Dissolved	-	-	<0.000020	<0.000020	<0.000020	<0.000020
Thorium (Th)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Dissolved	-	-	<0.0050	<0.0050	<0.0050	<0.0050
Uranium (U)-Dissolved	-	-	0.000076	0.000044	0.000869	0.000909
Vanadium (V)-Dissolved	-	-	<0.0010	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Dissolved	-	-	0.0179	0.0233	<0.0040	<0.0040
Zirconium (Zr)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010

Notes: Refer to Table Endnotes (attached)

Table 4: Analytical Results for Hydrocarbons and PAHs			SHA-LE-1	SHA-LE-1	SHA-SW-1	SHA-SW-1
Laboratory ID	BC DRINKING WATER QUALITY GUIDELINES	BC FRESHWATER AQUATIC LIFE WATER QUALITY GUIDELINES	9021867-07	9040043-07	9021867-08	9040043-08
Sample ID			LE-1	LE-1	SW1	SW1
Date Sampled/ Time			2019-02-25	2019-03-30	2019-02-25	2019-03-30
Hydrocarbons ug/L						
LEPH	-	-	770	<250	<250	<250
HEPH	-	-	720	<250	<250	<250
Polycyclic Aromatic						
Acenaphthene	-	6 (LONG TERM)	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200	<0.200	<0.200
Acridine	-	3 (LONG TERM), 0.05 (PHOTOTOXIC)	<0.050	<0.050	<0.050	<0.050
Anthracene	-	4 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	0.01	0.1 (LONG TERM), 0.1 (PHOTOTOXIC)	<0.010	<0.010	<0.010	0.018
Benzo(a)pyrene	-	0.01 (LONG TERM)	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	-	-	-	-	-	-
Benzo(b+j)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050
2-Chloronaphthalene	-	-	<0.100	<0.100	<0.100	<0.100
Chrysene	-	-	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	-	-	<0.010	<0.010	<0.010	<0.010
Fluoranthene	-	4 (LONG TERM), 0.2 (PHOTOTOXIC)	<0.030	<0.030	<0.030	0.042
Fluorene	-	12 (LONG TERM)	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	-	-	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	-	-	<0.100	<0.100	<0.100	<0.100
2-Methylnaphthalene	-	-	0.161	<0.100	<0.100	<0.100
Naphthalene	-	1 (LONG TERM)	<0.200	<0.200	<0.200	<0.200
Phenanthrene	-	0.3 (LONG TERM)	<0.100	<0.100	<0.100	<0.100
Pyrene	-	0.02 (PHOTOTOXIC)	<0.020	<0.020	<0.020	0.024
Quinoline	-	-	<0.050	<0.050	<0.050	<0.050

Notes: Refer to Table Endnotes (attached)

Analytical Table Footnotes: Leachate and Surface Water

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

"<" less than the laboratory detection limit indicated.

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

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

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

(2) Nitrite BCAWWQG Guideline is Chloride dependent

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

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

BOLD, UNDERLINE

Laboratory Detection Limit exceeds one or more applicable Standard

BOLD, BLUE SHADING

Concentration greater than BCAWWQG Guideline

BOLD, BEIGE SHADING

Concentration greater than BCAWWQG Chronic Guideline

BOLD, GREEN SHADING

Concentration greater than BC Ministry of Environment Drinking Water Sources

RED FONT

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

Table 1: Analytical Results for Nutrients

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB1	SB1	SB2	SB2
	As-built Well Depths		47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m
Sample ID			9021867-01	9040043-01	9021867-02	9040043-02	9021867-03	9040043-03	9021867-04	9040043-04	9021867-05	9040043-05	9021867-06	9040043-06
Date Sampled	Aquatic Life	Drinking Water	MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2
			2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30
Physical Tests														
Colour, True (TCU)	-	-	<5.0	8.5	<5.0	6.2	<5.0	7	5.4	8.5	<5.0	<5.0	<5.0	<5.0
Conductivity (uS/cm)	-	-	1310	1280	379	378	258	255	304	296	87.8	266	496	443
Hardness (as CaCO ₃) mg/L	-	-	518	549	143	151	92.9	101	115	126	28.6	119	203	183
pH (pH Units)	-	-	7.12	7.07	7.4	7.34	7.29	7.34	7.29	7.42	6.34	6.89	6.67	6.66
Total Suspended Solids mg/L	-	-	11.8	11.6	7.2	8.8	12.4	98	17	20.6	94	122	122	66
Total Dissolved Solids mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity (NTU)	-	-	33.7	37.9	4.32	6.36	7.55	38.3	15.7	23.9	57.2	67.9	121	69.2
Anions and Nutrients mg/L														
Alkalinity, Total (as CaCO ₃)	-	-	616	617	130	130	108	110	129	131	15.8	86.2	178	88.3
Chloride (Cl)	1500	250	38.7	37.2	14.2	14.2	2.51	2.39	5.66	5.55	1.93	3.14	17.2	20.2
Fluoride (F)	2 (H < 50)	1.5	0.14	0.12	<0.10	<0.10	<0.10	0.11	<0.10	0.1	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	400	10	0.144	0.111	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.24	0.19	0.19	0.191
Nitrite (as N) ⁽²⁾ Cl <2 mg/L	0.2										<0.010			
Cl 2 - <4 mg/L	0.4					<0.010	<0.010				<0.010			
Cl 4 - <6 mg/L	0.6	3.2						<0.010	<0.010					
Cl 6 - <8 mg/L	0.8													
Cl 8 - <10 mg/L	1													
Cl ≥ 10 mg/L	2		0.013	<0.010	<0.010	<0.010							<0.010	<0.010
Sulfate (SO ₄)	1000	500	75.7	69.9	41.6	40.7	19.2	19.2	17	15.3	17.5	42.3	50.9	39

Notes: Refer to Table Endnotes (attached)

Table 2: Analytical Results for Total Metals

Sample Location	CSR Standards ^{6H}		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB1	SB1	SB2	SB2
As-built Well Depths			47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m
Sample ID			9021867-01	9040043-01	9021867-02	9040043-02	9021867-03	9040043-03	9021867-04	9040043-04	9021867-05	9040043-05	9021867-06	9040043-06
			MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2
Date Sampled	Aquatic Life	Drinking Water	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30
Physical Tests mg/L														
Hardness (as CaCO3)	-	-	518	549	143	151	92.9	101	115	126	28.6	119	203	183
Total Metals mg/L														
Aluminum (Al)-Total	-	-	0.0812	0.093	0.0508	0.0575	0.0494	0.133	0.224	0.221	2.24	1.46	3.67	1.37
Antimony (Sb)-Total	-	-	0.00067	0.00053	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	-	-	0.00552	0.00578	0.00118	0.00143	0.0014	0.00167	0.00195	0.00222	<0.00050	<0.00050	0.00052	<0.00050
Barium (Ba)-Total	-	-	0.103	0.104	0.0317	0.0337	0.0223	0.0236	0.0333	0.0318	0.0176	0.0152	0.025	0.0134
Beryllium (Be)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Boron (B)-Total	-	-	0.0632	0.0666	0.0261	0.0214	0.0268	0.0236	0.0257	0.0237	0.0056	0.0061	0.0171	0.015
Cadmium (Cd)-Total	-	-	0.000042	0.000042	0.00009	0.000095	0.000078	0.000134	0.000028	0.000042	0.000014	0.000016	0.000019	0.000016
Calcium (Ca)-Total	-	-	161	169	45.4	49.1	30.7	32.4	36.4	37.9	12.1	41.2	69	61.1
Chromium (Cr)-Total	-	-	0.00056	0.00145	<0.00050	0.00103	<0.00050	0.001	<0.00050	0.00087	0.00252	0.00209	0.00445	0.00275
Cobalt (Co)-Total	-	-	0.00404	0.00405	0.00051	0.0006	0.00039	0.00047	0.00052	0.00053	0.00272	0.00231	0.00313	0.00169
Copper (Cu)-Total	-	-	0.00136	0.00134	0.00059	0.00052	<0.00040	0.00039	0.00049	0.0007	0.0069	0.00575	0.0125	0.00667
Iron (Fe)-Total	-	-	5.38	5.03	0.152	0.152	0.204	0.244	0.647	0.51	2.78	1.59	4.43	1.45
Lead (Pb)-Total	-	-	0.00043	0.00044	<0.00020	<0.00020	<0.00020	<0.00020	0.0004	0.00041	0.00272	0.00196	0.00135	0.00077
Lithium (Li)-Total	-	-	0.00933	0.0108	0.00014	0.00015	<0.00010	0.00016	<0.00010	0.00012	0.0008	0.00055	0.00152	0.0007
Magnesium (Mg)-Total	-	-	31.9	33.9	6.89	7.53	5.17	5.51	6.87	7.18	1.79	4.08	9.61	7.94
Manganese (Mn)-Total	-	-	1.91	2	0.354	0.378	0.34	0.352	0.486	0.474	0.0806	0.0642	0.149	0.0831
Mercury (Hg)-Total	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total	-	-	0.00146	0.00127	0.00067	0.000637	0.00067	0.00065	0.00422	0.00416	0.00038	0.00031	0.00072	0.00038
Nickel (Ni)-Total	-	-	0.00789	0.00824	0.00132	0.00138	0.00135	0.00224	0.00109	0.00123	0.00315	0.00339	0.00437	0.00267
Phosphorus(P)-Total	-	-	<0.050	<0.050	0.06	0.056	0.11	0.091	0.133	0.111	<0.050	<0.050	0.121	<0.050
Potassium (K)-Total	-	-	2.91	2.93	0.87	0.9	0.62	0.62	0.7	0.68	0.36	0.4	1.35	1.01
Selenium (Se)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silicon (Si)-Total	-	-	11.5	12.3	6.1	6.6	6.1	6.6	6.8	7	4.3	5.4	11.3	7.7
Silver (Ag)-Total	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Total	-	-	46.7	51.6	12.3	13.5	9.7	10.2	8.5	8.79	1.97	3.27	12.7	12.1
Strontium (Sr)-Total	-	-	0.61	0.611	0.234	0.253	0.197	0.208	0.167	0.172	0.0316	0.101	0.213	0.188
Sulfur (S)-Total	-	-	22.9	20.7	17.4	15	11.5	7.8	10.2	6.6	10.3	15.8	20.2	13.7
Tellurium (Te)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Thallium (Tl)-Total	-	-	0.000036	0.000059	0.00003	0.000042	<0.000020	<0.000020	<0.000020	0.000023	<0.000020	<0.000020	<0.000020	<0.000020
Thorium (Th)-Total	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00023	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	<0.00010
Tin (Sn)-Total	-	-	0.00103	0.00079	0.00025	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	0.00036	<0.00020	0.00023	<0.00020
Titanium (Ti)-Total	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.012	0.0079	0.13	0.0639	0.233	0.0631
Uranium (U)-Total	-	-	0.00559	0.00563	0.000951	0.00105	0.000643	0.000737	0.000845	0.000845	0.000151	0.00045	0.00135	0.000919
Vanadium (V)-Total	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	0.0014	0.0075	0.0047	0.0102	0.0042
Zinc (Zn)-Total	-	-	0.0058	0.0089	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.009	0.007	0.0127	0.0063
Zirconium (Zr)-Total	-	-	0.00014	0.00013	0.00016	0.0001	0.00018	0.00019	0.00013	0.00011	0.0001	<0.00010	0.00029	<0.00010

Notes: Refer to Table Endnotes (attached)

Table 3: Analytical Results for Dissolved Metals

Sample Location	CSR Standards ⁽¹⁾		MW-6	MW-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-3D	MW-2	MW-2	SB1	SB1	SB2	SB2
	As-built Well Depths		47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m	
Sample ID			9021867-01	9040043-01	9021867-02	9040043-02	9021867-03	9040043-03	9021867-04	9040043-04	9021867-05	9040043-05	9021867-06	9040043-06	
			MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2	
Date Sampled	Aquatic Life	Drinking Water	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	
Physical Tests mg/L															
Hardness (as CaCO3)	-	-	518	549	143	151	92.9	101	115	126	28.6	119	203	183	
Dissolved Metals mg/L															
Aluminum (Al)-Dissolved	-	9.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0065	<0.0050	0.008	0.0102	<0.0050	<0.0050	
Antimony (Sb)-Dissolved	0.2	0.006	0.00038	0.00032	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Arsenic (As)-Dissolved	0.05	0.01	0.00491	0.00533	0.00118	0.00125	0.00134	0.00143	0.00199	0.00223	<0.00050	<0.00050	<0.00050	<0.00050	
Barium (Ba)-Dissolved	10	1	0.077	0.0785	0.0311	0.033	0.0221	0.0222	0.0312	0.0315	<0.00050	0.0052	0.0063	0.0058	
Beryllium (Be)-Dissolved	0.053	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Bismuth (Bi)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Boron (B)-Dissolved	50	5	0.0612	0.0582	0.0256	0.0191	0.0257	0.0213	0.0251	0.0222	<0.00050	0.0055	0.0167	0.0138	
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	<0.000010	<0.000010	<0.000010	<0.000010		0.000012		<0.000010	<0.000010
Calcium (Ca)-Dissolved	-	-	155	165	45.9	48.2	28.9	31.8	34.8	38.6	10	41.9	67.8	60.9	
Chromium (Cr)-Dissolved	0.01	0.05	<0.00050	0.00096	<0.00050	0.00085	<0.00050	0.00095	<0.00050	0.00096	<0.00050	0.00097	<0.00050	0.00088	
Colbalt (Co)-Dissolved	0.04	-	0.00167	0.00205	0.00046	0.00053	0.00034	0.00037	0.00032	0.00034	<0.00010	0.00011	<0.00010	<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	<0.00040	<0.00040		0.00063			0.00069
Iron (Fe)-Dissolved	-	6.5	<0.00040	<0.00040	0.105	0.147	0.141	0.184	0.294	0.354	<0.010	0.016	<0.010	<0.010	
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			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	
Lithium (Li)-Dissolved	-	-	<0.00020	<0.00020											
Magnesium (Mg)-Dissolved	-	100	0.00928	0.00869	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00011	
Manganese (Mn)-Dissolved	-	0.55	31.8	32.8	6.85	7.28	4.98	5.22	6.74	7.19	0.854	3.54	8.21	7.44	
Mercury (Hg)-Dissolved	0.001	0.001	1.73	2.06	0.315	0.39	0.299	0.352	0.435	0.518	0.00027	0.00077	0.00042	0.00067	
Molybdenum (Mo)-Dissolved	10	0.25	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Nickel (Ni)-Dissolved	0.25 (H=60) 0.65 (H=60-<120) 1.1 (H=120-<180) 1.5 (H=180)	-	0.00043	0.00055	0.00616	0.00664	0.0063	0.00662	0.00461	0.00423	0.00034	0.00048	0.00066	0.00065	
Phosphorus (P)-Dissolved	-	-	0.00108	0.00155	0.001	0.00111	0.00088	0.00103	0.00059	0.00059		0.00212		0.00069	0.00054
Potassium (K)-Dissolved	-	-	<0.050	<0.050	<0.050	0.057	0.065	0.09	0.067	0.156	<0.050	<0.050	<0.050	<0.050	
Selenium (Se)-Dissolved	0.01	0.01	2.85	2.88	0.83	0.86	0.58	0.55	0.65	0.66	0.17	0.27	0.85	0.83	
Silicon (Si)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Silver (Ag)-Dissolved	0.0005 (H=100) 0.015 (H=100)	-	9.1	11.9	3.6	6.3	3.5	6	3.9	6.8	<1.0	3.6	2.6	5.6	
Sodium (Na)-Dissolved	-	200	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Strontium (Sr)-Dissolved	-	-	45.6	49.4	12	13.1	9.29	9.6	8.39	8.91	1.67	3.14	12.1	12	
Sulfur (S)-Dissolved	-	-	0.625	0.621	0.245	0.248	0.195	0.197	0.17	0.176	0.026	0.0881	0.204	0.184	
Tellurium (Te)-Dissolved	-	-	21.7	20.3	17.8	15.6	12	8.9	10.7	7.4	10.9	15.8	20.1	14.7	
Thallium (Tl)-Dissolved	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Thorium (Th)-Dissolved	0.003	-	<0.000020	<0.000020	<0.000020	<0.000021	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Tin (Sn)-Dissolved	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium (Ti)-Dissolved	1	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<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	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Vanadium (V)-Dissolved	-	-	0.00556	0.00593	0.000952	0.00102	0.000571	0.000639	0.000786	0.000832	0.000021	0.000367	0.00119	0.000849	
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	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Zirconium (Zr)-Dissolved	-	-	<0.0002	<0.00018	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<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-6	MW-3S	MW-3S	MW-3D	MW-3D	MW-2	MW-2	SB1	SB1	SB2	SB2
	As-built Well Depths		47m	47m	23m	23m	46m	46m	43m	43m	4.01m	4.01m	3.28m	3.28m
Sample ID			9021867-01	9040043-01	9021867-02	9040043-02	9021867-03	9040043-03	9021867-04	9040043-04	9021867-05	9040043-05	9021867-06	9040043-06
Date Sampled	Aquatic Life	Drinking Water	MW6	MW6	MW3S	MW3S	MW3D	MW3D	MW2	MW2	SB1	SB1	SB2	SB2
			2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30	2019-02-25	2019-03-30
Turbidity (NTU)	-	-	33.7	37.9	4.32	6.36	7.55	38.3	15.7	23.9	57.2	67.9	121	69.2
Hydrocarbons ug/L														
EPH10-19	5000	5000	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
EPH10-19 (SG)	5000	5000												
EPH19-32	-	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
EPH19-32 (SG)	-	-												
LEPH	500	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
HEPH	-	-	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
Polycyclic Aromatic Hydrocarbons ug/L														
Acenaphthene	60	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	-	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	0.5	-	<0.050	<0.050	<0.050	<0.050	0.521	<0.050	<0.215	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	1	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)anthracene	1	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	<0.010
Benzo(a)pyrene	0.1	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.019	<0.010
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-Chloronaphthalene			<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	1	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.018	<0.010
Fluoranthene	2	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	120	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene			<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
2-Methylnaphthalene			<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Naphthalene	10	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	3	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	0.2	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	34	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

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.

RED TEXT

The formula $0.5 * MDL$ is utilized for statistical purposes

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

Note: This is not the original data. Please refer to PDF / Hardcopy report.

LAB ID	CLIENT ID	DATE SAMPLED	DATE RECEIVED	MATRIX	General Method	Analyte	Units	MRL	9021867-01	9021867-02	9021867-03	9021867-04	9021867-05	9021867-06	9021867-07	9021867-08
									MW6	MW3S	MW3D	MW2	SB1	SB2	LE-1	SW1
									2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25
									2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27
									Water	Water	Water	Water	Water	Water	Water	Water
						Chloride	mg/L	0.1	38.7	14.2	2.51	5.66	1.93	17.2	34.10	17.6
						Fluoride	mg/L	0.1	0.14	<0.10	<0.10	<0.10	<0.10	<0.10	<1.00	<0.10
						Nitrate (as N)	mg/L	0.01	0.144	<0.010	<0.010	<0.010	0.24	0.19	1.9	0.329
						Nitrite (as N)	mg/L	0.01	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<0.010
						Sulfate	mg/L	1	75.7	41.6	19.2	17	17.5	50.9	1750	71.3
						Hardness, Total (as CaCO3)	mg/L	0.5	518	143	92.9	115	28.6	203	3050	170
						Colour, True	CU	5	<5.0	<5.0	<5.0	5.4	<5.0	<5.0	<5.0	<5.0
						Alkalinity, Total (as CaCO3)	mg/L	1	616	130	108	129	15.8	178	31	125
						Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
						Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	616	130	108	129	15.8	178	31	125
						Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
						Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
						Solids, Total Suspended	mg/L	2	11.8	7.2	12.4	17	94	122	<2.0	<2.0
						Turbidity	NTU	0.1	33.7	4.32	7.55	15.7	57.2	121	0.11	0.13
						pH	pH units	0.1	7.12	7.4	7.29	7.29	6.34	6.67	6.54	7.26
						Conductivity (EC)	uS/cm	2	1310	379	258	304	87.8	496	12600	447
						Aluminum, dissolved	mg/L	0.005	<0.0050	<0.0050	<0.0050	0.0065	0.008	<0.0050	0.0276	<0.0050
						Antimony, dissolved	mg/L	0.0002	0.00038	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
						Arsenic, dissolved	mg/L	0.0005	0.00491	0.00118	0.00134	0.00199	<0.00050	<0.00050	<0.00050	<0.00050
						Barium, dissolved	mg/L	0.005	0.077	0.0311	0.0221	0.0312	<0.0050	0.0063	0.0135	0.0103
						Beryllium, dissolved	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
						Bismuth, dissolved	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
						Boron, dissolved	mg/L	0.005	0.0612	0.0256	0.0257	0.0251	<0.0050	0.0167	0.246	0.0127
						Cadmium, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000528	<0.000010
						Calcium, dissolved	mg/L	0.2	155	45.9	28.9	34.8	10	67.8	838	55.3
						Chromium, dissolved	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00052	<0.00050
						Cobalt, dissolved	mg/L	0.0001	0.00167	0.00046	0.00034	0.00032	<0.00010	<0.00010	0.0013	<0.00010
						Copper, dissolved	mg/L	0.0004	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00521	0.00172	0.00079
						Iron, dissolved	mg/L	0.01	4.03	0.105	0.141	0.294	<0.010	<0.010	<0.010	<0.010
						Lead, dissolved	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
						Lithium, dissolved	mg/L	0.0001	0.00928	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00024	0.00011
						Magnesium, dissolved	mg/L	0.01	31.8	6.85	4.98	6.74	0.854	8.21	232	7.77
						Manganese, dissolved	mg/L	0.0002	1.73	0.315	0.299	0.435	0.00027	0.00042	14.1	0.00398
						Molybdenum, dissolved	mg/L	0.0001	0.00043	0.00016	0.00063	0.00461	0.00034	0.00066	0.00017	0.00061
						Nickel, dissolved	mg/L	0.0004	0.00108	0.001	0.00088	0.00059	0.00055	0.00069	0.00552	0.00054
						Phosphorus, dissolved	mg/L	0.05	<0.050	0.065	0.065	0.067	<0.050	<0.050	<0.050	<0.050
						Potassium, dissolved	mg/L	0.1	2.85	0.83	0.58	0.65	0.17	0.85	24.3	0.6
						Selenium, dissolved	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00053	<0.00050
						Silicon, dissolved	mg/L	1	9.1	3.6	3.5	3.9	<1.0	2.6	4	1.9
						Silver, dissolved	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
						Sodium, dissolved	mg/L	0.1	45.6	12	9.29	8.39	1.67	12.1	1660	8.25
						Strontium, dissolved	mg/L	0.001	0.625	0.245	0.195	0.17	0.026	0.204	4.66	0.169
						Sulfur, dissolved	mg/L	3	21.7	17.8	12	10.7	10.9	20.1	673	25.7
						Tellurium, dissolved	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
						Thallium, dissolved	mg/L	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
						Thorium, dissolved	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
						Tin, dissolved	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
						Titanium, dissolved	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
						Tungsten, dissolved	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
						Uranium, dissolved	mg/L	0.00002	0.00556	0.000952	0.000571	0.000786	0.000021	0.00019	0.000076	0.000869
						Vanadium, dissolved	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
						Zinc, dissolved	mg/L	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0179	<0.0040
						Zirconium, dissolved	mg/L	0.0001	0.0002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
						EPHW10-19	ug/L	250	<250	<250	<250	<250	<250	<250	720	<250
						EPHW19-32	ug/L	250	<250	<250	<250	<250	<250	<250	720	<250
						LEPHw	ug/L	250	<250	<250	<250	<250	<250	<250	770	<250
						HEPHw	ug/L	250	<250	<250	<250	<250	<250	<250	720	<250
						Acenaphthene	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
						Acenaphthylene	ug/L	0.2	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
						Acridine	ug/L	0.05	<0.050	<0.050	0.521	<0.215	<0.050	<0.050	<0.050	<0.050
						Anthracene	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
						Benzo(a)anthracene	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	<0.010	<0.010
						Benzo(a)pyrene	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.019	<0.010	<0.010
						Benzo(b)fluoranthene	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
						Benzo(g,h,i)perylene	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
						Benzo(k)fluoranthene	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
						2-Chloronaphthalene	ug/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
						Chrysene	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
						Dibenz(a,h)anthracene	ug/L	0.01	<0.010	<0.010	<0.010	<0.010				

CARO Analytical Services
 FINAL Analytical Testing Report
 Work Order: 9021867
 Report Date: 2019-03-07 12:09:32

Client: Alterra Construction
 Attention: Rahim Gaidhar
 Project: P17-932
 Project Info: [none]

Note: This is not the original data. Please refer to PDF / Hardcopy report.

LAB ID		9021867-01	9021867-02	9021867-03	9021867-04	9021867-05	9021867-06	9021867-07	9021867-08		
CLIENT ID		MW6	MW3S	MW3D	MW2	SB1	SB2	LE-1	SW1		
DATE SAMPLED		2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25	2019-02-25		
DATE RECEIVED		2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27	2019-02-27		
MATRIX		Water	Water	Water	Water	Water	Water	Water	Water		
General Method	Analyte	Units	MRL								
Total Metals	Silicon, total	mg/L	1	11.5	6.1	6.1	6.8	4.3	11.3	6.6	4.6
Total Metals	Silver, total	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000081	<0.000050
Total Metals	Sodium, total	mg/L	0.1	46.7	12.3	9.7	8.5	1.97	12.7	1750	8.72
Total Metals	Strontium, total	mg/L	0.001	0.61	0.234	0.197	0.167	0.0316	0.213	4.73	0.169
Total Metals	Sulfur, total	mg/L	3	22.9	17.4	11.5	10.2	10.3	20.2	785	27.3
Total Metals	Tellurium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Thallium, total	mg/L	0.00002	0.000036	0.00003	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Total Metals	Thorium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	<0.00010	<0.00010
Total Metals	Tin, total	mg/L	0.0002	0.00103	0.00025	0.00023	<0.00020	0.00036	0.00023	<0.00020	<0.00020
Total Metals	Titanium, total	mg/L	0.005	<0.0050	<0.0050	<0.0050	0.012	0.13	0.233	<0.0050	<0.0050
Total Metals	Tungsten, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Uranium, total	mg/L	0.00002	0.00559	0.000951	0.000643	0.000845	0.000151	0.00135	0.000078	0.000928
Total Metals	Vanadium, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	0.0015	0.0075	0.0102	<0.0010	<0.0010
Total Metals	Zinc, total	mg/L	0.004	0.0058	<0.0040	<0.0040	<0.0040	0.009	0.0127	0.0184	<0.0040
Total Metals	Zirconium, total	mg/L	0.0001	0.00014	0.00016	0.00018	0.00013	0.0001	0.00029	<0.00010	<0.00010

Note: This is not the original data. Please refer to PDF / Hardcopy report.

LAB ID		9040043-01	9040043-02	9040043-03	9040043-04	9040043-05	9040043-06	9040043-07	9040043-08
CLIENT ID		MW6	MW35	MW3D	MW2	SB1	SB2	LE-1	SW1
DATE SAMPLED		2019-03-30	2019-03-30	2019-03-30	2019-03-30	2019-03-30	2019-03-30	2019-03-30	2019-03-30
DATE RECEIVED		2019-04-01	2019-04-01	2019-04-01	2019-04-01	2019-04-01	2019-04-01	2019-04-01	2019-04-01
MATRIX		Water	Water	Water	Water	Water	Water	Water	Water
General Method	Analyte	Units	MRL						
Polycyclic Aromatic Hydrocarbons (PAH)	Indeno(1,2,3-cd)pyrene	ug/L	0.05	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	1-Methylnaphthalene	ug/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	2-Methylnaphthalene	ug/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Naphthalene	ug/L	0.2	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Polycyclic Aromatic Hydrocarbons (PAH)	Phenanthrene	ug/L	0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Polycyclic Aromatic Hydrocarbons (PAH)	Pyrene	ug/L	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	0.024
Polycyclic Aromatic Hydrocarbons (PAH)	Quinoline	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Aluminum, total	mg/L	0.005	0.093	0.0575	0.133	0.221	1.46	1.37
Total Metals	Antimony, total	mg/L	0.0002	0.00053	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Total Metals	Arsenic, total	mg/L	0.0005	0.00578	0.00143	0.00167	0.00222	<0.00050	<0.00050
Total Metals	Barium, total	mg/L	0.005	0.104	0.0337	0.0236	0.0318	0.0152	0.0134
Total Metals	Beryllium, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Bismuth, total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Boron, total	mg/L	0.005	0.0666	0.0214	0.0236	0.0237	0.0061	0.015
Total Metals	Cadmium, total	mg/L	1E-05	0.000042	0.000095	0.000134	0.000042	0.000016	0.000016
Total Metals	Calcium, total	mg/L	0.2	169	49.1	32.4	37.9	41.2	61.1
Total Metals	Chromium, total	mg/L	0.0005	0.00145	0.00103	0.001	0.00087	0.00209	0.00275
Total Metals	Cobalt, total	mg/L	0.0001	0.00405	0.0006	0.00047	0.00053	0.00231	0.00169
Total Metals	Copper, total	mg/L	0.0004	0.00134	0.00052	0.00329	0.0007	0.00575	0.00667
Total Metals	Iron, total	mg/L	0.01	5.03	0.152	0.244	0.51	1.59	1.45
Total Metals	Lead, total	mg/L	0.0002	0.00044	<0.00020	<0.00020	0.00041	0.00196	0.00077
Total Metals	Lithium, total	mg/L	0.0001	0.0108	0.00015	0.00016	0.00012	0.00055	0.0007
Total Metals	Magnesium, total	mg/L	0.01	33.9	7.53	5.51	7.18	4.08	7.94
Total Metals	Manganese, total	mg/L	0.0002	2	0.378	0.352	0.474	0.0642	0.0831
Total Metals	Mercury, total	mg/L	1E-05	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Metals	Molybdenum, total	mg/L	0.0001	0.00127	0.00637	0.0065	0.00416	0.00031	0.00038
Total Metals	Nickel, total	mg/L	0.0004	0.00824	0.00138	0.00224	0.00123	0.00339	0.00267
Total Metals	Phosphorus, total	mg/L	0.05	<0.050	0.056	0.091	0.111	<0.050	<0.050
Total Metals	Potassium, total	mg/L	0.1	2.93	0.9	0.62	0.68	0.4	1.01
Total Metals	Selenium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Silicon, total	mg/L	1	12.3	6.6	6.6	7	5.4	7.7
Total Metals	Silver, total	mg/L	5E-05	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000061
Total Metals	Sodium, total	mg/L	0.1	51.6	13.5	10.2	8.79	3.27	12.1
Total Metals	Strontium, total	mg/L	0.001	0.611	0.253	0.208	0.172	0.101	0.188
Total Metals	Sulfur, total	mg/L	3	20.7	15	7.8	6.6	15.8	13.7
Total Metals	Tellurium, total	mg/L	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Thallium, total	mg/L	2E-05	0.000059	0.000042	<0.000020	0.000023	<0.000020	<0.000020
Total Metals	Thorium, total	mg/L	0.0001	<0.00010	<0.00010	0.00023	<0.00010	<0.00010	<0.00010
Total Metals	Tin, total	mg/L	0.0002	0.00079	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Total Metals	Titanium, total	mg/L	0.005	<0.0050	<0.0050	<0.0050	0.0079	0.0639	0.0631
Total Metals	Tungsten, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Uranium, total	mg/L	2E-05	0.00563	0.00105	0.000737	0.000845	0.00045	0.000919
Total Metals	Vanadium, total	mg/L	0.001	<0.0010	<0.0010	<0.0010	0.0014	0.0047	0.0042
Total Metals	Zinc, total	mg/L	0.004	0.0089	<0.0040	<0.0040	<0.0040	0.007	0.0063
Total Metals	Zirconium, total	mg/L	0.0001	0.00013	0.0001	0.00019	0.00011	<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 9021867

RECEIVED / TEMP 2019-02-27 11:45 / 5°C

REPORTED 2019-04-02 09:11

COC NUMBER Feb 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.

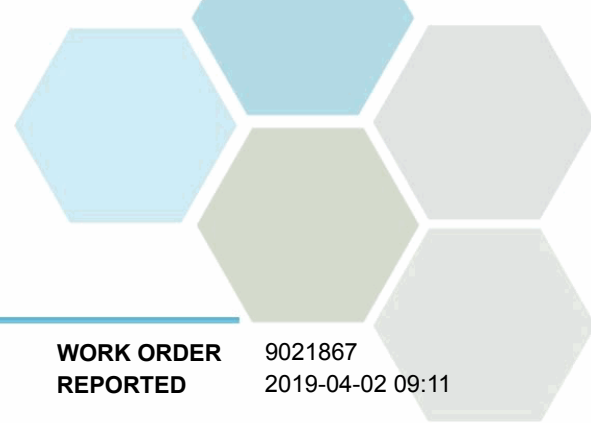
If you have any questions or concerns, please contact me at bshaw@caro.ca

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

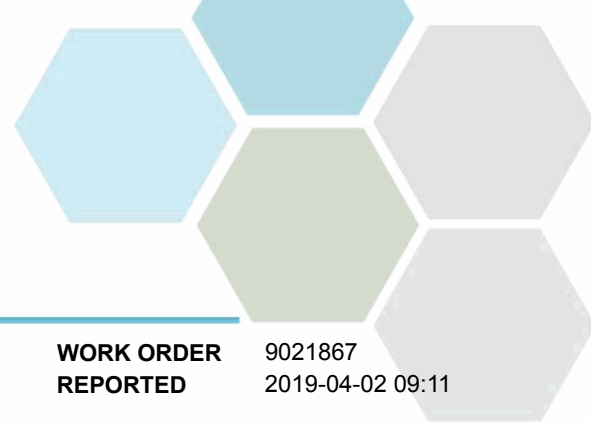


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9021867-01) Matrix: Water Sampled: 2019-02-25 10:15					
Anions					
Chloride	38.7	0.10	mg/L	2019-02-28	
Fluoride	0.14	0.10	mg/L	2019-02-28	
Nitrate (as N)	0.144	0.010	mg/L	2019-02-28	
Nitrite (as N)	0.013	0.010	mg/L	2019-02-28	
Sulfate	75.7	1.0	mg/L	2019-02-28	
BCMOE Aggregate Hydrocarbons					
EPHw10-19	< 250	250	µg/L	2019-03-04	
EPHw19-32	< 250	250	µg/L	2019-03-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	92	60-140	%	2019-03-04	
Calculated Parameters					
Hardness, Total (as CaCO3)	518	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Antimony, dissolved	0.00038	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	0.00491	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0770	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0612	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	155	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	0.00167	0.00010	mg/L	2019-03-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-03-05	
Iron, dissolved	4.03	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	0.00928	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	31.8	0.010	mg/L	2019-03-05	
Manganese, dissolved	1.73	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00043	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00108	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	
Potassium, dissolved	2.85	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	9.1	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	45.6	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.625	0.0010	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (9021867-01) | Matrix: Water | Sampled: 2019-02-25 10:15, Continued

Dissolved Metals, Continued

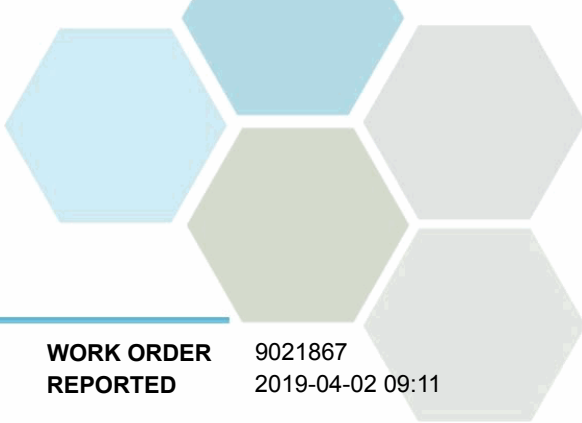
Sulfur, dissolved	21.7	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.00556	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	0.00020	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	616	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	616	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	1310	2.0	µS/cm	2019-02-28	
pH	7.12	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	11.8	2.0	mg/L	2019-03-02	
Turbidity	33.7	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-05	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-05	
Acridine	< 0.050	0.050	µg/L	2019-03-05	
Anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Chrysene	< 0.050	0.050	µg/L	2019-03-05	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-05	
Fluorene	< 0.050	0.050	µg/L	2019-03-05	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-05	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Naphthalene	< 0.200	0.200	µg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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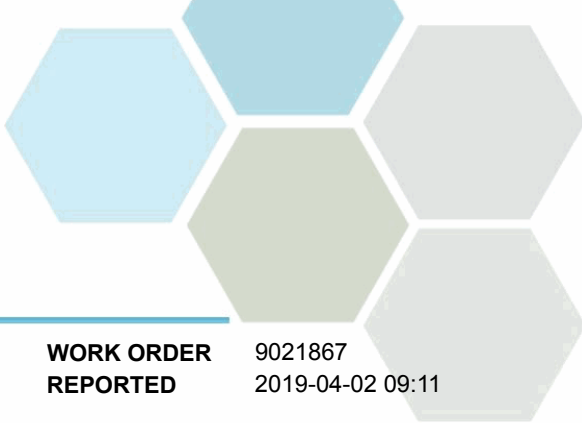
MW6 (9021867-01) | Matrix: Water | Sampled: 2019-02-25 10:15, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Phenanthrene	< 0.100	0.100	µg/L	2019-03-05	
Pyrene	< 0.020	0.020	µg/L	2019-03-05	
Quinoline	< 0.050	0.050	µg/L	2019-03-05	
Surrogate: Acridine-d9	76	50-140	%	2019-03-05	
Surrogate: Naphthalene-d8	105	50-140	%	2019-03-05	
Surrogate: Perylene-d12	41	50-140	%	2019-03-05	S09

Total Metals

Aluminum, total	0.0812	0.0050	mg/L	2019-03-05	
Antimony, total	0.00067	0.00020	mg/L	2019-03-05	
Arsenic, total	0.00552	0.00050	mg/L	2019-03-05	
Barium, total	0.103	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0632	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000042	0.000010	mg/L	2019-03-05	
Calcium, total	161	0.20	mg/L	2019-03-05	
Chromium, total	0.00056	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00404	0.00010	mg/L	2019-03-05	
Copper, total	0.00136	0.00040	mg/L	2019-03-05	
Iron, total	5.38	0.010	mg/L	2019-03-05	
Lead, total	0.00043	0.00020	mg/L	2019-03-05	
Lithium, total	0.00933	0.00010	mg/L	2019-03-05	
Magnesium, total	31.9	0.010	mg/L	2019-03-05	
Manganese, total	1.91	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00146	0.00010	mg/L	2019-03-05	
Nickel, total	0.00789	0.00040	mg/L	2019-03-05	
Phosphorus, total	< 0.050	0.050	mg/L	2019-03-05	
Potassium, total	2.91	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	11.5	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	46.7	0.10	mg/L	2019-03-05	
Strontium, total	0.610	0.0010	mg/L	2019-03-05	
Sulfur, total	22.9	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	0.000036	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	0.00103	0.00020	mg/L	2019-03-05	
Titanium, total	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.00559	0.000020	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9021867-01) Matrix: Water Sampled: 2019-02-25 10:15, Continued					
<i>Total Metals, Continued</i>					
Vanadium, total	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, total	0.0058	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00014	0.00010	mg/L	2019-03-05	

MW3S (9021867-02) | Matrix: Water | Sampled: 2019-02-25 12:00

<i>Anions</i>					
Chloride	14.2	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	41.6	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

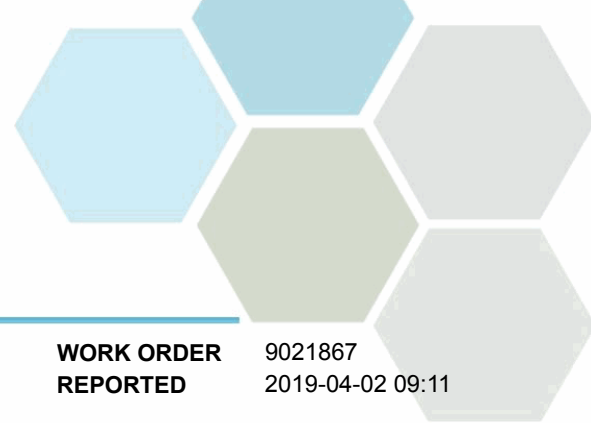
EPHw10-19	< 250	250	µg/L	2019-03-04	
EPHw19-32	< 250	250	µg/L	2019-03-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
<i>Surrogate: 2-Methylnonane (EPH/F2-4)</i>	75	60-140	%	2019-03-04	

Calculated Parameters

Hardness, Total (as CaCO3)	143	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	0.00118	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0311	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0256	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	45.9	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	0.00046	0.00010	mg/L	2019-03-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-03-05	
Iron, dissolved	0.105	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	6.85	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.315	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00616	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00100	0.00040	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (9021867-02) | Matrix: Water | Sampled: 2019-02-25 12:00, Continued

Dissolved Metals, Continued

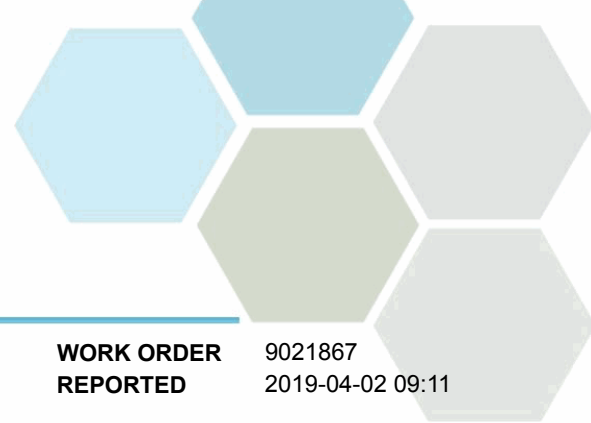
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	
Potassium, dissolved	0.83	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	3.6	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	12.0	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.245	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	17.8	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000952	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	130	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	130	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	379	2.0	µS/cm	2019-02-28	
pH	7.40	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	7.2	2.0	mg/L	2019-02-28	
Turbidity	4.32	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-05	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-05	
Acridine	< 0.050	0.050	µg/L	2019-03-05	
Anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Chrysene	< 0.050	0.050	µg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
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Analyte	Result	RL	Units	Analyzed	Qualifier
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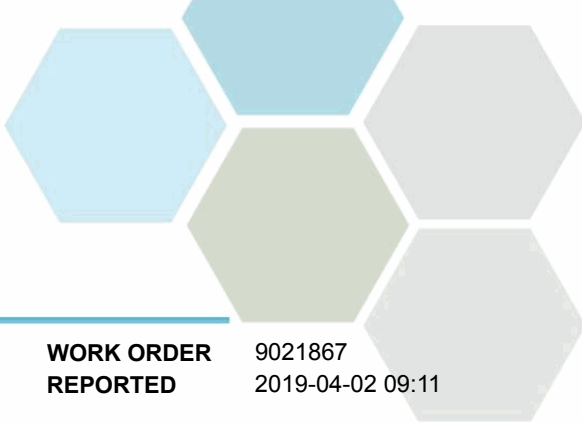
MW3S (9021867-02) | Matrix: Water | Sampled: 2019-02-25 12:00, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-05	
Fluorene	< 0.050	0.050	µg/L	2019-03-05	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-05	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Naphthalene	< 0.200	0.200	µg/L	2019-03-05	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-05	
Pyrene	< 0.020	0.020	µg/L	2019-03-05	
Quinoline	< 0.050	0.050	µg/L	2019-03-05	
Surrogate: Acridine-d9	67	50-140	%	2019-03-05	
Surrogate: Naphthalene-d8	66	50-140	%	2019-03-05	
Surrogate: Perylene-d12	67	50-140	%	2019-03-05	

Total Metals

Aluminum, total	0.0508	0.0050	mg/L	2019-03-05	
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	0.00118	0.00050	mg/L	2019-03-05	
Barium, total	0.0317	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0261	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000090	0.000010	mg/L	2019-03-05	
Calcium, total	45.4	0.20	mg/L	2019-03-05	
Chromium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00051	0.00010	mg/L	2019-03-05	
Copper, total	0.00059	0.00040	mg/L	2019-03-05	
Iron, total	0.152	0.010	mg/L	2019-03-05	
Lead, total	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, total	0.00014	0.00010	mg/L	2019-03-05	
Magnesium, total	6.89	0.010	mg/L	2019-03-05	
Manganese, total	0.354	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00607	0.00010	mg/L	2019-03-05	
Nickel, total	0.00132	0.00040	mg/L	2019-03-05	
Phosphorus, total	0.060	0.050	mg/L	2019-03-05	
Potassium, total	0.87	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	6.1	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	12.3	0.10	mg/L	2019-03-05	
Strontium, total	0.234	0.0010	mg/L	2019-03-05	
Sulfur, total	17.4	3.0	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
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Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (9021867-02) | Matrix: Water | Sampled: 2019-02-25 12:00, Continued

Total Metals, Continued

Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	0.000030	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	0.00025	0.00020	mg/L	2019-03-05	
Titanium, total	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000951	0.000020	mg/L	2019-03-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, total	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00016	0.00010	mg/L	2019-03-05	

MW3D (9021867-03) | Matrix: Water | Sampled: 2019-02-25 12:15

Anions

Chloride	2.51	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	19.2	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

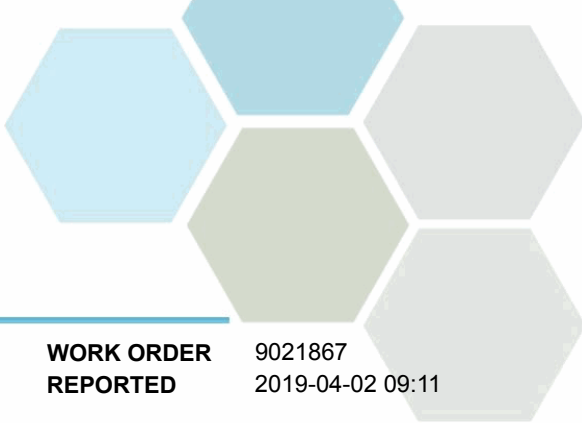
EPHw10-19	< 250	250	µg/L	2019-03-04	
EPHw19-32	< 250	250	µg/L	2019-03-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	98	60-140	%	2019-03-04	

Calculated Parameters

Hardness, Total (as CaCO3)	92.9	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	0.00134	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0221	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0257	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	28.9	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	0.00034	0.00010	mg/L	2019-03-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-03-05	



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MW3D (9021867-03) | Matrix: Water | Sampled: 2019-02-25 12:15, Continued

Dissolved Metals, Continued

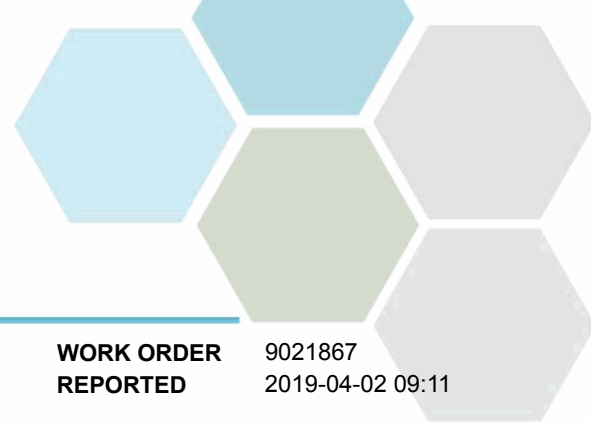
Iron, dissolved	0.141	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	4.98	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.299	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00630	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00088	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	0.065	0.050	mg/L	2019-03-05	
Potassium, dissolved	0.58	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	3.5	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	9.29	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.195	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	12.0	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000571	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	108	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	108	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	258	2.0	µS/cm	2019-02-28	
pH	7.29	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	12.4	2.0	mg/L	2019-02-28	
Turbidity	7.55	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-05	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-05	
Acridine	0.521	0.050	µg/L	2019-03-05	
Anthracene	< 0.010	0.010	µg/L	2019-03-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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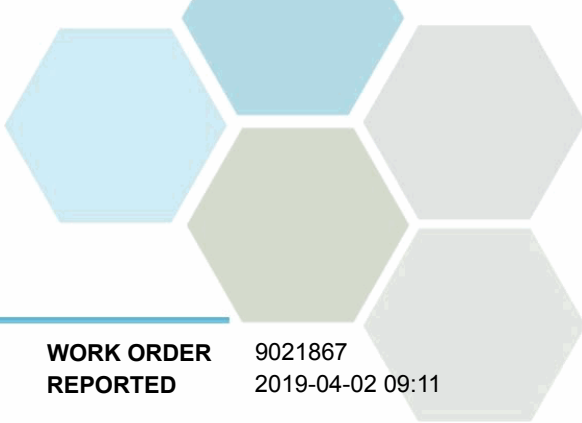
MW3D (9021867-03) | Matrix: Water | Sampled: 2019-02-25 12:15, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Chrysene	< 0.050	0.050	µg/L	2019-03-05	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-05	
Fluorene	< 0.050	0.050	µg/L	2019-03-05	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-05	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Naphthalene	< 0.200	0.200	µg/L	2019-03-05	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-05	
Pyrene	< 0.020	0.020	µg/L	2019-03-05	
Quinoline	< 0.050	0.050	µg/L	2019-03-05	
Surrogate: Acridine-d9	82	50-140	%	2019-03-05	
Surrogate: Naphthalene-d8	104	50-140	%	2019-03-05	
Surrogate: Perylene-d12	110	50-140	%	2019-03-05	

Total Metals

Aluminum, total	0.0494	0.0050	mg/L	2019-03-05	
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	0.00140	0.00050	mg/L	2019-03-05	
Barium, total	0.0223	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0268	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000078	0.000010	mg/L	2019-03-05	
Calcium, total	30.7	0.20	mg/L	2019-03-05	
Chromium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00039	0.00010	mg/L	2019-03-05	
Copper, total	< 0.00040	0.00040	mg/L	2019-03-05	
Iron, total	0.204	0.010	mg/L	2019-03-05	
Lead, total	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, total	5.17	0.010	mg/L	2019-03-05	
Manganese, total	0.340	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00670	0.00010	mg/L	2019-03-05	
Nickel, total	0.00135	0.00040	mg/L	2019-03-05	
Phosphorus, total	0.110	0.050	mg/L	2019-03-05	



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Analyte	Result	RL	Units	Analyzed	Qualifier
MW3D (9021867-03) Matrix: Water Sampled: 2019-02-25 12:15, Continued					
<i>Total Metals, Continued</i>					
Potassium, total	0.62	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	6.1	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	9.70	0.10	mg/L	2019-03-05	
Strontium, total	0.197	0.0010	mg/L	2019-03-05	
Sulfur, total	11.5	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	0.00023	0.00020	mg/L	2019-03-05	
Titanium, total	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000643	0.000020	mg/L	2019-03-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, total	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00018	0.00010	mg/L	2019-03-05	

MW2 (9021867-04) | Matrix: Water | Sampled: 2019-02-25 13:00

Anions

Chloride	5.66	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	17.0	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

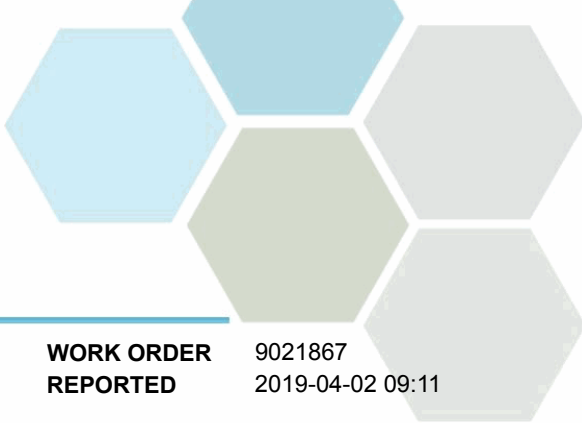
EPHw10-19	< 250	250	µg/L	2019-03-04	
EPHw19-32	< 250	250	µg/L	2019-03-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	86	60-140	%	2019-03-04	

Calculated Parameters

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

Aluminum, dissolved	0.0065	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	0.00199	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0312	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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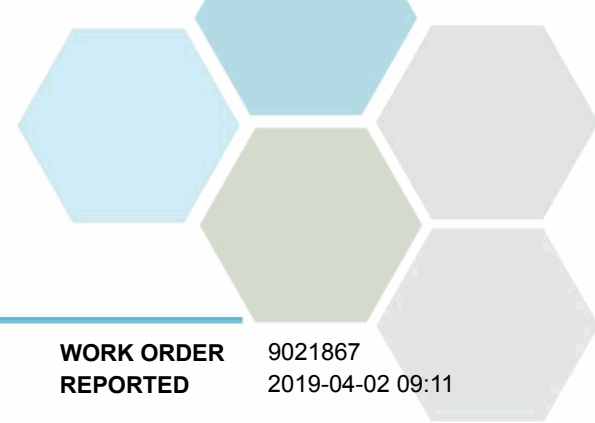
MW2 (9021867-04) | Matrix: Water | Sampled: 2019-02-25 13:00, Continued

Dissolved Metals, Continued

Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0251	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	34.8	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	0.00032	0.00010	mg/L	2019-03-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-03-05	
Iron, dissolved	0.294	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	6.74	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.435	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00461	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00059	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	0.067	0.050	mg/L	2019-03-05	
Potassium, dissolved	0.65	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	3.9	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	8.39	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.170	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	10.7	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000786	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	129	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	129	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	5.4	5.0	CU	2019-02-28	
Conductivity (EC)	304	2.0	µS/cm	2019-02-28	
pH	7.29	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	17.0	2.0	mg/L	2019-02-28	



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MW2 (9021867-04) | Matrix: Water | Sampled: 2019-02-25 13:00, Continued

General Parameters, Continued

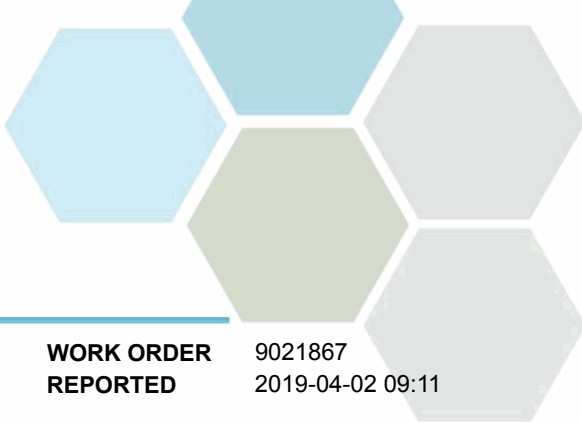
Turbidity	15.7	0.10	NTU	2019-02-28	
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Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-05	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-05	
Acridine	< 0.215	0.050	µg/L	2019-03-05	RA1
Anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-05	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Chrysene	< 0.050	0.050	µg/L	2019-03-05	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-05	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-05	
Fluorene	< 0.050	0.050	µg/L	2019-03-05	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-05	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Naphthalene	< 0.200	0.200	µg/L	2019-03-05	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-05	
Pyrene	< 0.020	0.020	µg/L	2019-03-05	
Quinoline	< 0.050	0.050	µg/L	2019-03-05	
Surrogate: Acridine-d9	62	50-140	%	2019-03-05	
Surrogate: Naphthalene-d8	109	50-140	%	2019-03-05	
Surrogate: Perylene-d12	84	50-140	%	2019-03-05	

Total Metals

Aluminum, total	0.224	0.0050	mg/L	2019-03-05	
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	0.00195	0.00050	mg/L	2019-03-05	
Barium, total	0.0333	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0257	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000028	0.000010	mg/L	2019-03-05	
Calcium, total	36.4	0.20	mg/L	2019-03-05	
Chromium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00052	0.00010	mg/L	2019-03-05	
Copper, total	0.00049	0.00040	mg/L	2019-03-05	
Iron, total	0.647	0.010	mg/L	2019-03-05	
Lead, total	0.00040	0.00020	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (9021867-04) Matrix: Water Sampled: 2019-02-25 13:00, Continued					
<i>Total Metals, Continued</i>					
Lithium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, total	6.87	0.010	mg/L	2019-03-05	
Manganese, total	0.486	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00422	0.00010	mg/L	2019-03-05	
Nickel, total	0.00109	0.00040	mg/L	2019-03-05	
Phosphorus, total	0.133	0.050	mg/L	2019-03-05	
Potassium, total	0.70	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	6.8	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	8.50	0.10	mg/L	2019-03-05	
Strontium, total	0.167	0.0010	mg/L	2019-03-05	
Sulfur, total	10.2	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, total	0.0120	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000845	0.000020	mg/L	2019-03-05	
Vanadium, total	0.0015	0.0010	mg/L	2019-03-05	
Zinc, total	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00013	0.00010	mg/L	2019-03-05	

SB1 (9021867-05) | Matrix: Water | Sampled: 2019-02-25 11:30

CT1

Anions

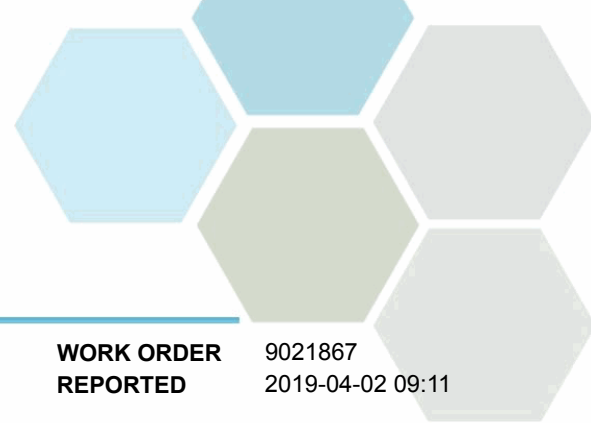
Chloride	1.93	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	0.240	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	17.5	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2019-03-06	
EPHw19-32	< 250	250	µg/L	2019-03-06	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	64	60-140	%	2019-03-06	

Calculated Parameters

Hardness, Total (as CaCO3)	28.6	0.500	mg/L	N/A	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (9021867-05) | Matrix: Water | Sampled: 2019-02-25 11:30, Continued

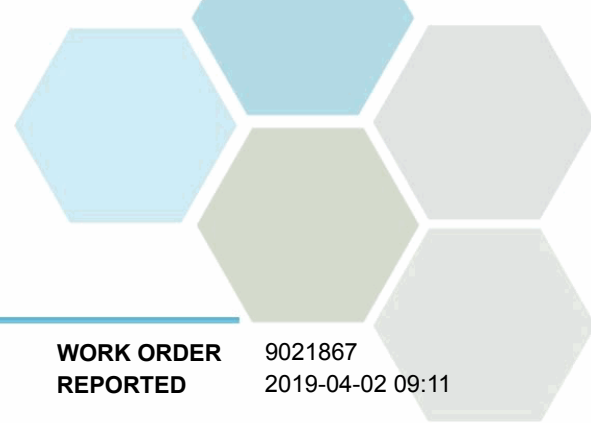
CT1

Dissolved Metals

Aluminum, dissolved	0.0080	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	10.0	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-03-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	0.854	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.00027	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00034	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00055	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	
Potassium, dissolved	0.17	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	< 1.0	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	1.67	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.0260	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	10.9	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000021	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	15.8	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	15.8	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (9021867-05) | Matrix: Water | Sampled: 2019-02-25 11:30, Continued

CT1

General Parameters, Continued

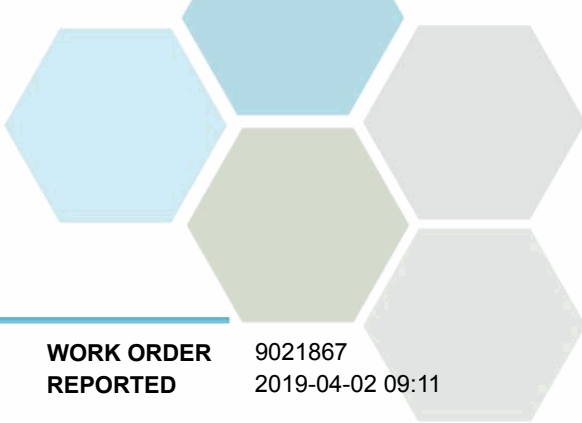
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	87.8	2.0	µS/cm	2019-02-28	
pH	6.34	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	94.0	2.0	mg/L	2019-02-28	
Turbidity	57.2	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-06	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-06	
Acridine	< 0.050	0.050	µg/L	2019-03-06	
Anthracene	< 0.010	0.010	µg/L	2019-03-06	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-06	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-06	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-06	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-06	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-06	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-06	
Chrysene	< 0.050	0.050	µg/L	2019-03-06	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-06	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-06	
Fluorene	< 0.050	0.050	µg/L	2019-03-06	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-06	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-06	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-06	
Naphthalene	< 0.200	0.200	µg/L	2019-03-06	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-06	
Pyrene	< 0.020	0.020	µg/L	2019-03-06	
Quinoline	< 0.050	0.050	µg/L	2019-03-06	
Surrogate: Acridine-d9	57	50-140	%	2019-03-06	
Surrogate: Naphthalene-d8	118	50-140	%	2019-03-06	
Surrogate: Perylene-d12	102	50-140	%	2019-03-06	

Total Metals

Aluminum, total	2.24	0.0050	mg/L	2019-03-05	
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, total	0.0176	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0056	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000014	0.000010	mg/L	2019-03-05	
Calcium, total	12.1	0.20	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB1 (9021867-05) | Matrix: Water | Sampled: 2019-02-25 11:30, Continued

CT1

Total Metals, Continued

Chromium, total	0.00252	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00272	0.00010	mg/L	2019-03-05	
Copper, total	0.00690	0.00040	mg/L	2019-03-05	
Iron, total	2.78	0.010	mg/L	2019-03-05	
Lead, total	0.00272	0.00020	mg/L	2019-03-05	
Lithium, total	0.00080	0.00010	mg/L	2019-03-05	
Magnesium, total	1.79	0.010	mg/L	2019-03-05	
Manganese, total	0.0806	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00038	0.00010	mg/L	2019-03-05	
Nickel, total	0.00315	0.00040	mg/L	2019-03-05	
Phosphorus, total	< 0.050	0.050	mg/L	2019-03-05	
Potassium, total	0.36	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	4.3	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	1.97	0.10	mg/L	2019-03-05	
Strontium, total	0.0316	0.0010	mg/L	2019-03-05	
Sulfur, total	10.3	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	0.00036	0.00020	mg/L	2019-03-05	
Titanium, total	0.130	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000151	0.000020	mg/L	2019-03-05	
Vanadium, total	0.0075	0.0010	mg/L	2019-03-05	
Zinc, total	0.0090	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00010	0.00010	mg/L	2019-03-05	

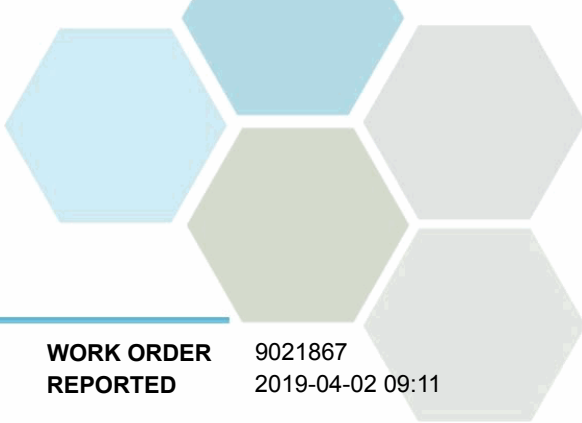
SB2 (9021867-06) | Matrix: Water | Sampled: 2019-02-25 11:00

Anions

Chloride	17.2	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	0.190	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	50.9	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2019-03-04	
EPHw19-32	< 250	250	µg/L	2019-03-04	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (9021867-06) | Matrix: Water | Sampled: 2019-02-25 11:00, Continued

BCMOE Aggregate Hydrocarbons, Continued

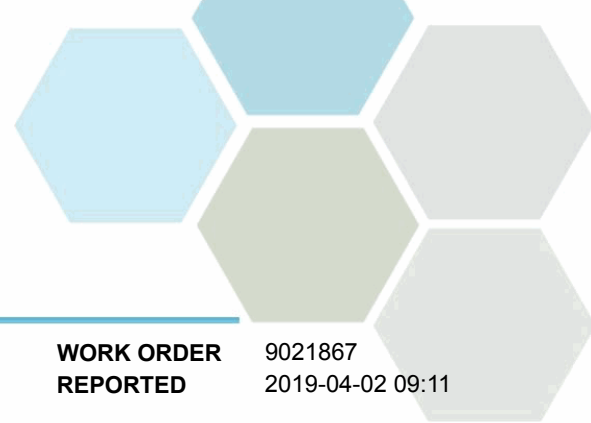
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	87	60-140	%	2019-03-04	

Calculated Parameters

Hardness, Total (as CaCO3)	203	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0063	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0167	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	67.8	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Copper, dissolved	0.00521	0.00040	mg/L	2019-03-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	0.00011	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	8.21	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.00042	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00066	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00069	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	
Potassium, dissolved	0.85	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	2.6	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	12.1	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.204	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	20.1	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.00119	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (9021867-06) | Matrix: Water | Sampled: 2019-02-25 11:00, Continued

Dissolved Metals, Continued

Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

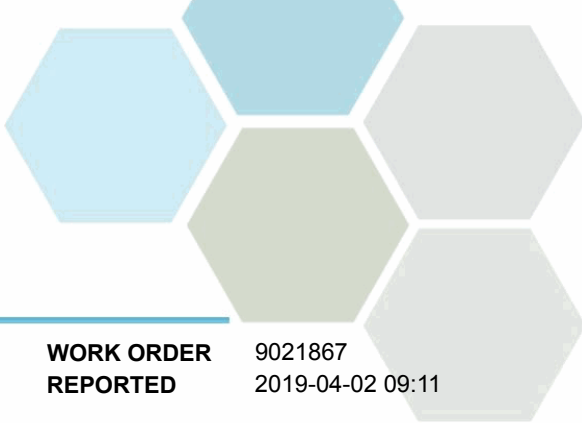
Alkalinity, Total (as CaCO3)	178	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	178	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	496	2.0	µS/cm	2019-02-28	
pH	6.67	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	122	2.0	mg/L	2019-02-28	
Turbidity	121	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-05	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-05	
Acridine	< 0.050	0.050	µg/L	2019-03-05	
Anthracene	< 0.010	0.010	µg/L	2019-03-05	
Benz(a)anthracene	0.024	0.010	µg/L	2019-03-05	
Benzo(a)pyrene	0.019	0.010	µg/L	2019-03-05	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-05	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-05	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Chrysene	< 0.050	0.050	µg/L	2019-03-05	
Dibenz(a,h)anthracene	0.018	0.010	µg/L	2019-03-05	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-05	
Fluorene	< 0.050	0.050	µg/L	2019-03-05	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-05	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-05	
Naphthalene	< 0.200	0.200	µg/L	2019-03-05	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-05	
Pyrene	< 0.020	0.020	µg/L	2019-03-05	
Quinoline	< 0.050	0.050	µg/L	2019-03-05	
Surrogate: Acridine-d9	57	50-140	%	2019-03-05	
Surrogate: Naphthalene-d8	76	50-140	%	2019-03-05	
Surrogate: Perylene-d12	88	50-140	%	2019-03-05	

Total Metals

Aluminum, total	3.67	0.0050	mg/L	2019-03-05	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

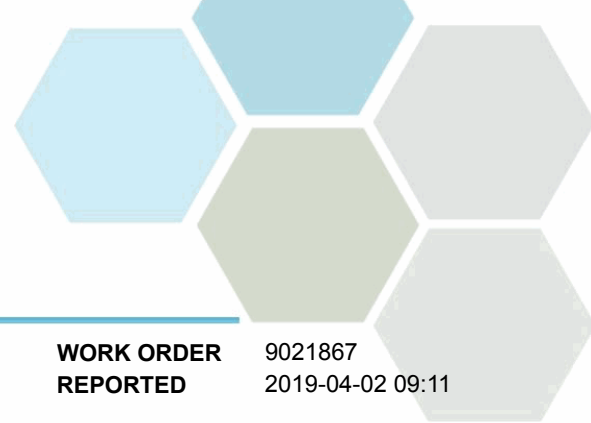
WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL	Units	Analyzed	Qualifier
SB2 (9021867-06) Matrix: Water Sampled: 2019-02-25 11:00, Continued					
<i>Total Metals, Continued</i>					
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	0.00052	0.00050	mg/L	2019-03-05	
Barium, total	0.0250	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0171	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000019	0.000010	mg/L	2019-03-05	
Calcium, total	69.0	0.20	mg/L	2019-03-05	
Chromium, total	0.00445	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00313	0.00010	mg/L	2019-03-05	
Copper, total	0.0125	0.00040	mg/L	2019-03-05	
Iron, total	4.43	0.010	mg/L	2019-03-05	
Lead, total	0.00135	0.00020	mg/L	2019-03-05	
Lithium, total	0.00152	0.00010	mg/L	2019-03-05	
Magnesium, total	9.61	0.010	mg/L	2019-03-05	
Manganese, total	0.149	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00072	0.00010	mg/L	2019-03-05	
Nickel, total	0.00437	0.00040	mg/L	2019-03-05	
Phosphorus, total	0.121	0.050	mg/L	2019-03-05	
Potassium, total	1.35	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	11.3	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	12.7	0.10	mg/L	2019-03-05	
Strontium, total	0.213	0.0010	mg/L	2019-03-05	
Sulfur, total	20.2	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	0.00013	0.00010	mg/L	2019-03-05	
Tin, total	0.00023	0.00020	mg/L	2019-03-05	
Titanium, total	0.233	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.00135	0.000020	mg/L	2019-03-05	
Vanadium, total	0.0102	0.0010	mg/L	2019-03-05	
Zinc, total	0.0127	0.0040	mg/L	2019-03-05	
Zirconium, total	0.00029	0.00010	mg/L	2019-03-05	

LE-1 (9021867-07) | Matrix: Water | Sampled: 2019-02-25 13:30

Anions

Chloride	3410	0.10	mg/L	2019-02-28	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9021867-07) | Matrix: Water | Sampled: 2019-02-25 13:30, Continued

Anions, Continued

Fluoride	< 1.00	0.10	mg/L	2019-02-28	RA1
Nitrate (as N)	1.90	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.100	0.010	mg/L	2019-02-28	RA1
Sulfate	1750	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

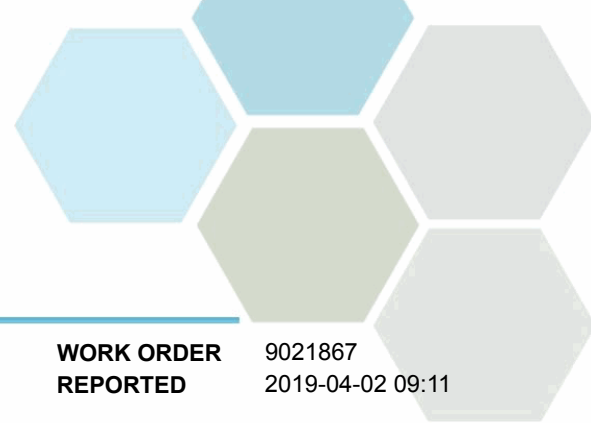
EPHw10-19	770	250	µg/L	2019-03-03	
EPHw19-32	720	250	µg/L	2019-03-03	
LEPHw	770	250	µg/L	N/A	
HEPHw	720	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	89	60-140	%	2019-03-03	

Calculated Parameters

Hardness, Total (as CaCO3)	3050	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0276	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0135	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.246	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	0.000528	0.000010	mg/L	2019-03-05	
Calcium, dissolved	838	0.20	mg/L	2019-03-05	
Chromium, dissolved	0.00052	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	0.00130	0.00010	mg/L	2019-03-05	
Copper, dissolved	0.00172	0.00040	mg/L	2019-03-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	0.00024	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	232	0.010	mg/L	2019-03-05	
Manganese, dissolved	14.1	0.00020	mg/L	2019-02-28	
Molybdenum, dissolved	0.00017	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00552	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	
Potassium, dissolved	24.3	0.10	mg/L	2019-03-05	
Selenium, dissolved	0.00053	0.00050	mg/L	2019-03-05	
Silicon, dissolved	4.0	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	1660	0.10	mg/L	2019-03-05	
Strontium, dissolved	4.66	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	673	3.0	mg/L	2019-03-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9021867-07) | Matrix: Water | Sampled: 2019-02-25 13:30, Continued

Dissolved Metals, Continued

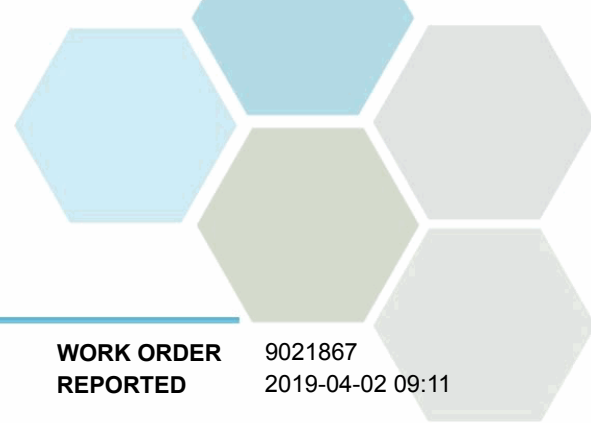
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000076	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	0.0179	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	31.0	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	31.0	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	12600	2.0	µS/cm	2019-02-28	
pH	6.54	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-02-28	
Turbidity	0.11	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-03	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-03	
Acridine	< 0.050	0.050	µg/L	2019-03-03	
Anthracene	< 0.010	0.010	µg/L	2019-03-03	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-03	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-03	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-03	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-03	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-03	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-03	
Chrysene	< 0.050	0.050	µg/L	2019-03-03	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-03	
Fluoranthene	< 0.030	0.030	µg/L	2019-03-03	
Fluorene	< 0.050	0.050	µg/L	2019-03-03	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-03	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-03	
2-Methylnaphthalene	0.161	0.100	µg/L	2019-03-03	
Naphthalene	< 0.200	0.200	µg/L	2019-03-03	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-03	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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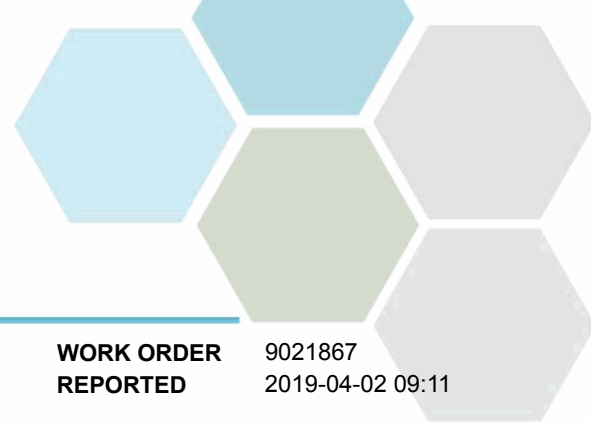
LE-1 (9021867-07) | Matrix: Water | Sampled: 2019-02-25 13:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Pyrene	< 0.020	0.020	µg/L	2019-03-03	
Quinoline	< 0.050	0.050	µg/L	2019-03-03	
Surrogate: Acridine-d9	66	50-140	%	2019-03-03	
Surrogate: Naphthalene-d8	83	50-140	%	2019-03-03	
Surrogate: Perylene-d12	96	50-140	%	2019-03-03	

Total Metals

Aluminum, total	0.0597	0.0050	mg/L	2019-03-05	
Antimony, total	0.00032	0.00020	mg/L	2019-03-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, total	0.0136	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.270	0.0050	mg/L	2019-03-05	
Cadmium, total	0.000526	0.000010	mg/L	2019-03-05	
Calcium, total	932	0.20	mg/L	2019-03-05	
Chromium, total	0.00057	0.00050	mg/L	2019-03-05	
Cobalt, total	0.00135	0.00010	mg/L	2019-03-05	
Copper, total	0.00181	0.00040	mg/L	2019-03-05	
Iron, total	< 0.010	0.010	mg/L	2019-03-05	
Lead, total	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, total	0.00028	0.00010	mg/L	2019-03-05	
Magnesium, total	240	0.010	mg/L	2019-03-05	
Manganese, total	13.7	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00015	0.00010	mg/L	2019-03-05	
Nickel, total	0.00569	0.00040	mg/L	2019-03-05	
Phosphorus, total	< 0.050	0.050	mg/L	2019-03-05	
Potassium, total	25.5	0.10	mg/L	2019-03-05	
Selenium, total	0.00104	0.00050	mg/L	2019-03-05	
Silicon, total	6.6	1.0	mg/L	2019-03-05	
Silver, total	0.000081	0.000050	mg/L	2019-03-05	
Sodium, total	1750	0.10	mg/L	2019-03-05	
Strontium, total	4.73	0.0010	mg/L	2019-03-05	
Sulfur, total	785	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, total	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000078	0.000020	mg/L	2019-03-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-03-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9021867-07) | Matrix: Water | Sampled: 2019-02-25 13:30, Continued

Total Metals, Continued

Zinc, total	0.0184	0.0040	mg/L	2019-03-05	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-03-05	

SW1 (9021867-08) | Matrix: Water | Sampled: 2019-02-25 12:45

Anions

Chloride	17.6	0.10	mg/L	2019-02-28	
Fluoride	< 0.10	0.10	mg/L	2019-02-28	
Nitrate (as N)	0.329	0.010	mg/L	2019-02-28	
Nitrite (as N)	< 0.010	0.010	mg/L	2019-02-28	
Sulfate	71.3	1.0	mg/L	2019-02-28	

BCMOE Aggregate Hydrocarbons

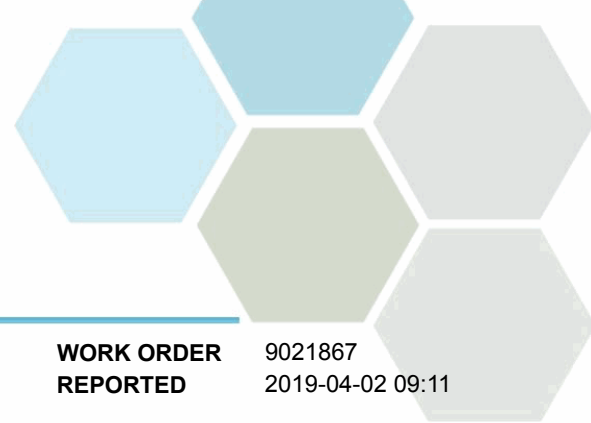
EPHw10-19	< 250	250	µg/L	2019-03-03	
EPHw19-32	< 250	250	µg/L	2019-03-03	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	97	60-140	%	2019-03-03	

Calculated Parameters

Hardness, Total (as CaCO3)	170	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, dissolved	0.0103	0.0050	mg/L	2019-03-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, dissolved	0.0127	0.0050	mg/L	2019-03-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, dissolved	55.3	0.20	mg/L	2019-03-05	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Copper, dissolved	0.00079	0.00040	mg/L	2019-03-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-03-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, dissolved	0.00011	0.00010	mg/L	2019-03-05	
Magnesium, dissolved	7.77	0.010	mg/L	2019-03-05	
Manganese, dissolved	0.00398	0.00020	mg/L	2019-03-05	
Molybdenum, dissolved	0.00061	0.00010	mg/L	2019-03-05	
Nickel, dissolved	0.00054	0.00040	mg/L	2019-03-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-03-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9021867
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Analyte	Result	RL	Units	Analyzed	Qualifier
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SW1 (9021867-08) | Matrix: Water | Sampled: 2019-02-25 12:45, Continued

Dissolved Metals, Continued

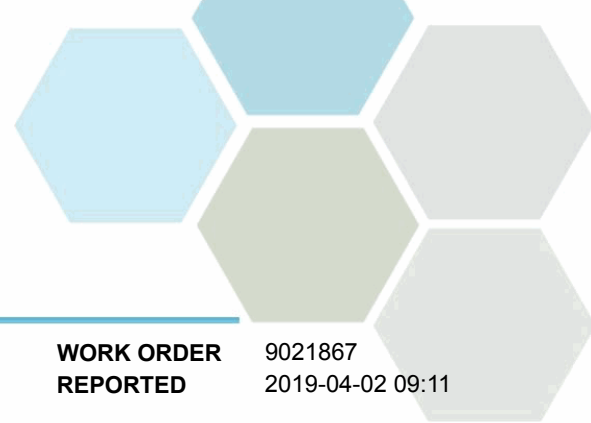
Potassium, dissolved	0.60	0.10	mg/L	2019-03-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, dissolved	1.9	1.0	mg/L	2019-03-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, dissolved	8.25	0.10	mg/L	2019-03-05	
Strontium, dissolved	0.169	0.0010	mg/L	2019-03-05	
Sulfur, dissolved	25.7	3.0	mg/L	2019-03-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-03-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, dissolved	0.000869	0.000020	mg/L	2019-03-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-03-05	

General Parameters

Alkalinity, Total (as CaCO3)	125	1.0	mg/L	2019-02-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Bicarbonate (as CaCO3)	125	1.0	mg/L	2019-02-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-02-28	
Colour, True	< 5.0	5.0	CU	2019-02-28	
Conductivity (EC)	447	2.0	µS/cm	2019-02-28	
pH	7.26	0.10	pH units	2019-03-05	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-02-28	
Turbidity	0.13	0.10	NTU	2019-02-28	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-03-03	
Acenaphthylene	< 0.200	0.200	µg/L	2019-03-03	
Acridine	< 0.050	0.050	µg/L	2019-03-03	
Anthracene	< 0.010	0.010	µg/L	2019-03-03	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-03-03	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-03-03	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-03-03	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-03-03	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-03-03	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-03-03	
Chrysene	< 0.050	0.050	µg/L	2019-03-03	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-03-03	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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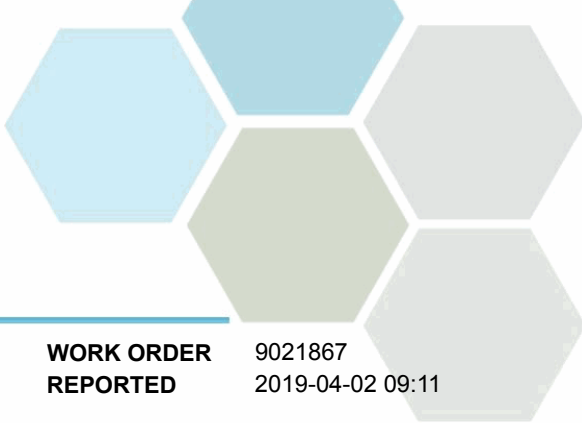
SW1 (9021867-08) | Matrix: Water | Sampled: 2019-02-25 12:45, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Fluoranthene	< 0.030	0.030	µg/L	2019-03-03	
Fluorene	< 0.050	0.050	µg/L	2019-03-03	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-03-03	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-03	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-03-03	
Naphthalene	< 0.200	0.200	µg/L	2019-03-03	
Phenanthrene	< 0.100	0.100	µg/L	2019-03-03	
Pyrene	< 0.020	0.020	µg/L	2019-03-03	
Quinoline	< 0.050	0.050	µg/L	2019-03-03	
Surrogate: Acridine-d9	76	50-140	%	2019-03-03	
Surrogate: Naphthalene-d8	75	50-140	%	2019-03-03	
Surrogate: Perylene-d12	101	50-140	%	2019-03-03	

Total Metals

Aluminum, total	0.0123	0.0050	mg/L	2019-03-05	
Antimony, total	< 0.00020	0.00020	mg/L	2019-03-05	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-03-05	
Barium, total	0.0107	0.0050	mg/L	2019-03-05	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-03-05	
Boron, total	0.0139	0.0050	mg/L	2019-03-05	
Cadmium, total	< 0.000010	0.000010	mg/L	2019-03-05	
Calcium, total	59.7	0.20	mg/L	2019-03-05	
Chromium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Cobalt, total	< 0.00010	0.00010	mg/L	2019-03-05	
Copper, total	0.00095	0.00040	mg/L	2019-03-05	
Iron, total	0.013	0.010	mg/L	2019-03-05	
Lead, total	< 0.00020	0.00020	mg/L	2019-03-05	
Lithium, total	0.00013	0.00010	mg/L	2019-03-05	
Magnesium, total	8.24	0.010	mg/L	2019-03-05	
Manganese, total	0.00560	0.00020	mg/L	2019-03-05	
Mercury, total	< 0.000010	0.000010	mg/L	2019-03-05	
Molybdenum, total	0.00070	0.00010	mg/L	2019-03-05	
Nickel, total	0.00060	0.00040	mg/L	2019-03-05	
Phosphorus, total	< 0.050	0.050	mg/L	2019-03-05	
Potassium, total	0.64	0.10	mg/L	2019-03-05	
Selenium, total	< 0.00050	0.00050	mg/L	2019-03-05	
Silicon, total	4.6	1.0	mg/L	2019-03-05	
Silver, total	< 0.000050	0.000050	mg/L	2019-03-05	
Sodium, total	8.72	0.10	mg/L	2019-03-05	
Strontium, total	0.169	0.0010	mg/L	2019-03-05	
Sulfur, total	27.3	3.0	mg/L	2019-03-05	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-03-05	



TEST RESULTS

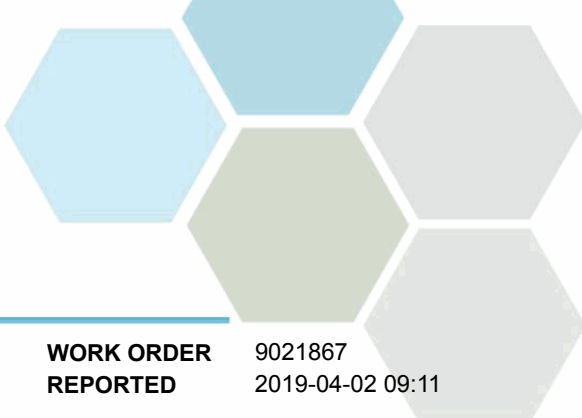
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Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (9021867-08) Matrix: Water Sampled: 2019-02-25 12:45, Continued					
<i>Total Metals, Continued</i>					
Thallium, total	< 0.000020	0.000020	mg/L	2019-03-05	
Thorium, total	< 0.00010	0.00010	mg/L	2019-03-05	
Tin, total	< 0.00020	0.00020	mg/L	2019-03-05	
Titanium, total	< 0.0050	0.0050	mg/L	2019-03-05	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-03-05	
Uranium, total	0.000928	0.000020	mg/L	2019-03-05	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-03-05	
Zinc, total	< 0.0040	0.0040	mg/L	2019-03-05	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-03-05	

Sample Qualifiers:

- CT1 Incorrect Container(s) supplied for L/HEPH analysis
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
- RA1 The Reporting Limit has been raised due to matrix interference.
- S09 The surrogate recovery for this sample is outside of established control limits due to sample matrix effects



APPENDIX 1: SUPPORTING INFORMATION

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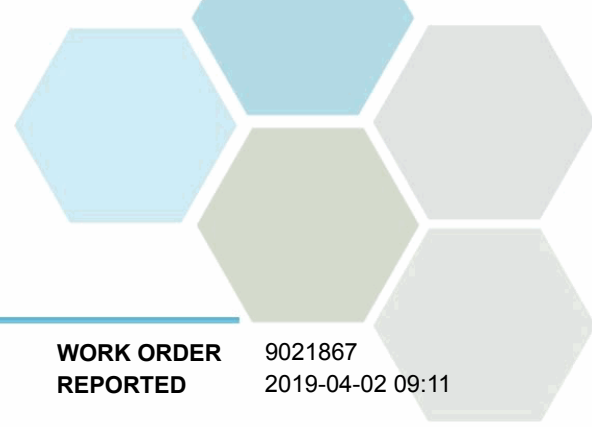
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Analysis Description	Method Ref.	Technique	Location
Alkalinity in Water	SM 2320 B* (2011)	Titration with H2SO4	Kelowna
Anions in Water	SM 4110 B (2011)	Ion Chromatography	Kelowna
Colour, True in Water	SM 2120 C (2011)	Spectrophotometry (456 nm)	Kelowna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

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

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
CU	Colour Units (referenced against a platinum cobalt standard)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
pH units	pH < 7 = acidic, pH > 7 = basic
µg/L	Micrograms per litre
µS/cm	Microsiemens per centimetre
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association



APPENDIX 1: SUPPORTING INFORMATION

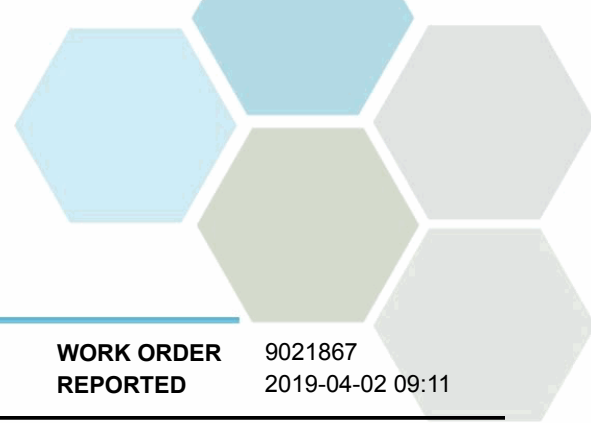
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REPORTED 2019-04-02 09:11

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

- **Method Blank (Blk):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Anions, Batch B9B1851

Blank (B9B1851-BLK1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
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 (B9B1851-BS1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Chloride	16.2	0.10 mg/L	16.0		101	90-110			
Fluoride	4.01	0.10 mg/L	4.00		100	88-108			
Nitrate (as N)	4.06	0.010 mg/L	4.00		102	93-108			
Nitrite (as N)	2.00	0.010 mg/L	2.00		100	85-114			
Sulfate	16.0	1.0 mg/L	16.0		100	91-109			

BCMOE Aggregate Hydrocarbons, Batch B9C0129

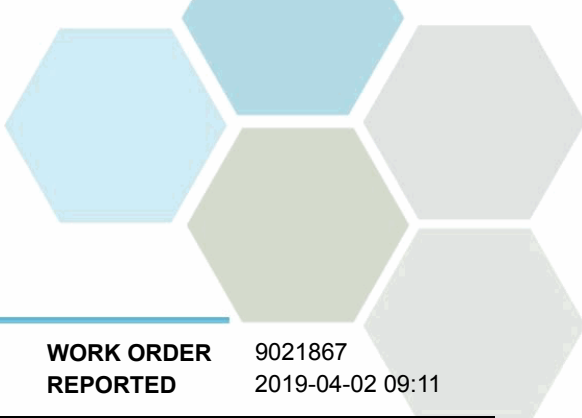
Blank (B9C0129-BLK1)			Prepared: 2019-03-03, Analyzed: 2019-03-03						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	311	µg/L	444		70	60-140			

LCS (B9C0129-BS2)			Prepared: 2019-03-03, Analyzed: 2019-03-03						
EPHw10-19	16300	250 µg/L	15400		106	70-130			
EPHw19-32	19900	250 µg/L	22100		90	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	508	µg/L	444		114	60-140			

BCMOE Aggregate Hydrocarbons, Batch B9C0166

Blank (B9C0166-BLK1)			Prepared: 2019-03-04, Analyzed: 2019-03-04						
EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	410	µg/L	444		92	60-140			

LCS (B9C0166-BS2)			Prepared: 2019-03-04, Analyzed: 2019-03-04						
EPHw10-19	17400	250 µg/L	15400		113	70-130			
EPHw19-32	22400	250 µg/L	22100		102	70-130			



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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BCMOE Aggregate Hydrocarbons, Batch B9C0166, Continued

LCS (B9C0166-BS2), Continued

Prepared: 2019-03-04, Analyzed: 2019-03-04

Surrogate: 2-Methylnonane (EPH/F2-4)	386	µg/L	444		87	60-140			
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BCMOE Aggregate Hydrocarbons, Batch B9C0307

Blank (B9C0307-BLK1)

Prepared: 2019-03-05, Analyzed: 2019-03-06

EPHw10-19	< 250	250 µg/L							
EPHw19-32	< 250	250 µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	355	µg/L	444		80	60-140			

LCS (B9C0307-BS2)

Prepared: 2019-03-05, Analyzed: 2019-03-06

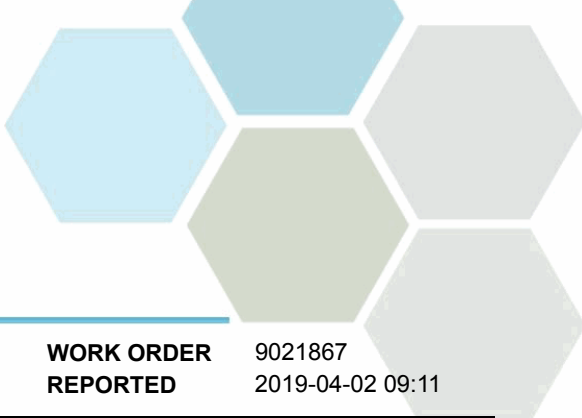
EPHw10-19	16400	250 µg/L	15400		106	70-130			
EPHw19-32	20100	250 µg/L	22100		91	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	349	µg/L	444		79	60-140			

Dissolved Metals, Batch B9B1828

Blank (B9B1828-BLK1)

Prepared: 2019-02-28, Analyzed: 2019-02-28

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							



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B9B1828, Continued

Blank (B9B1828-BLK2)

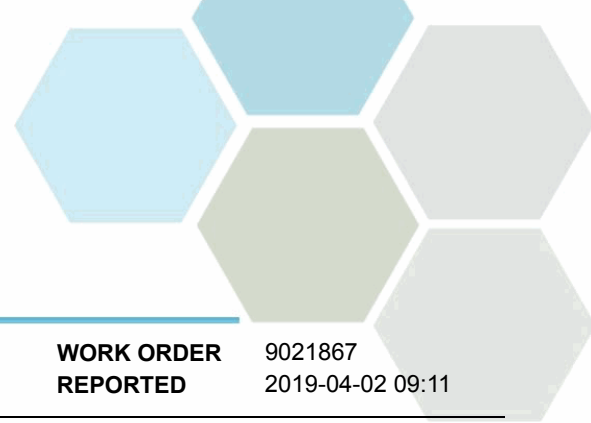
Prepared: 2019-02-28, Analyzed: 2019-02-28

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 (B9B1828-BS1)

Prepared: 2019-02-28, Analyzed: 2019-02-28

Aluminum, dissolved	0.0211	0.0050 mg/L	0.0200		106	80-120			
Antimony, dissolved	0.0172	0.00020 mg/L	0.0200		86	80-120			
Arsenic, dissolved	0.0194	0.00050 mg/L	0.0200		97	80-120			
Barium, dissolved	0.0207	0.0050 mg/L	0.0200		104	80-120			
Beryllium, dissolved	0.0176	0.00010 mg/L	0.0200		88	80-120			
Bismuth, dissolved	0.0179	0.00010 mg/L	0.0200		90	80-120			
Boron, dissolved	0.0167	0.0050 mg/L	0.0200		84	80-120			
Cadmium, dissolved	0.0202	0.000010 mg/L	0.0200		101	80-120			
Calcium, dissolved	1.65	0.20 mg/L	2.00		83	80-120			
Chromium, dissolved	0.0217	0.00050 mg/L	0.0200		109	80-120			
Cobalt, dissolved	0.0195	0.00010 mg/L	0.0200		97	80-120			
Copper, dissolved	0.0189	0.00040 mg/L	0.0200		95	80-120			
Iron, dissolved	1.96	0.010 mg/L	2.00		98	80-120			
Lead, dissolved	0.0200	0.00020 mg/L	0.0200		100	80-120			
Lithium, dissolved	0.0168	0.00010 mg/L	0.0200		84	80-120			
Magnesium, dissolved	1.89	0.010 mg/L	2.00		94	80-120			
Manganese, dissolved	0.0186	0.00020 mg/L	0.0200		93	80-120			



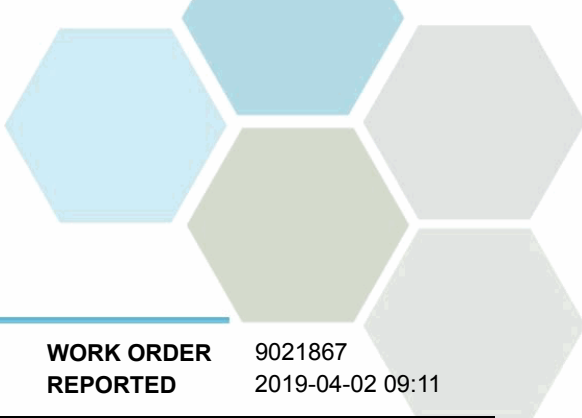
APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9021867
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B9B1828, Continued									
LCS (B9B1828-BS1), Continued					Prepared: 2019-02-28, Analyzed: 2019-02-28				
Molybdenum, dissolved	0.0189	0.00010 mg/L	0.0200		94	80-120			
Nickel, dissolved	0.0199	0.00040 mg/L	0.0200		100	80-120			
Phosphorus, dissolved	1.92	0.050 mg/L	2.00		96	80-120			
Potassium, dissolved	1.82	0.10 mg/L	2.00		91	80-120			
Selenium, dissolved	0.0202	0.00050 mg/L	0.0200		101	80-120			
Silicon, dissolved	1.7	1.0 mg/L	2.00		85	80-120			
Silver, dissolved	0.0176	0.000050 mg/L	0.0200		88	80-120			
Sodium, dissolved	1.97	0.10 mg/L	2.00		98	80-120			
Strontium, dissolved	0.0174	0.0010 mg/L	0.0200		87	80-120			
Sulfur, dissolved	4.2	3.0 mg/L	5.00		83	80-120			
Tellurium, dissolved	0.0220	0.00050 mg/L	0.0200		110	80-120			
Thallium, dissolved	0.0202	0.000020 mg/L	0.0200		101	80-120			
Thorium, dissolved	0.0204	0.00010 mg/L	0.0200		102	80-120			
Tin, dissolved	0.0189	0.00020 mg/L	0.0200		94	80-120			
Titanium, dissolved	0.0202	0.0050 mg/L	0.0200		101	80-120			
Tungsten, dissolved	0.0192	0.0010 mg/L	0.0200		96	80-120			
Uranium, dissolved	0.0182	0.000020 mg/L	0.0200		91	80-120			
Vanadium, dissolved	0.0218	0.0010 mg/L	0.0200		109	80-120			
Zinc, dissolved	0.0215	0.0040 mg/L	0.0200		108	80-120			
Zirconium, dissolved	0.0188	0.00010 mg/L	0.0200		94	80-120			

Duplicate (B9B1828-DUP1)		Source: 9021867-02		Prepared: 2019-03-05, Analyzed: 2019-03-05					
Aluminum, dissolved	< 0.0050	0.0050 mg/L	< 0.0050						11
Antimony, dissolved	< 0.00020	0.00020 mg/L	< 0.00020						20
Arsenic, dissolved	0.00121	0.00050 mg/L	0.00118						8
Barium, dissolved	0.0321	0.0050 mg/L	0.0311				3		7
Beryllium, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						14
Bismuth, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Boron, dissolved	0.0262	0.0050 mg/L	0.0256				2		13
Cadmium, dissolved	< 0.000010	0.000010 mg/L	< 0.000010						20
Calcium, dissolved	45.2	0.20 mg/L	45.9				2		8
Chromium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						14
Cobalt, dissolved	0.00046	0.00010 mg/L	0.00046						10
Copper, dissolved	< 0.00040	0.00040 mg/L	< 0.00040						20
Iron, dissolved	0.108	0.010 mg/L	0.105				3		14
Lead, dissolved	< 0.00020	0.00020 mg/L	< 0.00020						20
Lithium, dissolved	0.00010	0.00010 mg/L	0.00010						14
Magnesium, dissolved	6.94	0.010 mg/L	6.85				1		6
Manganese, dissolved	0.321	0.00020 mg/L	0.315				2		9
Molybdenum, dissolved	0.00630	0.00010 mg/L	0.00616				2		19
Nickel, dissolved	0.00106	0.00040 mg/L	0.00100						20
Phosphorus, dissolved	< 0.050	0.050 mg/L	< 0.050						14
Potassium, dissolved	0.86	0.10 mg/L	0.83				3		8
Selenium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						20
Silicon, dissolved	3.7	1.0 mg/L	3.6						12
Silver, dissolved	< 0.000050	0.000050 mg/L	< 0.000050						20
Sodium, dissolved	12.1	0.10 mg/L	12.0				1		6
Strontium, dissolved	0.253	0.0010 mg/L	0.245				3		6
Sulfur, dissolved	18.1	3.0 mg/L	17.8				2		20
Tellurium, dissolved	< 0.00050	0.00050 mg/L	< 0.00050						20
Thallium, dissolved	< 0.000020	0.000020 mg/L	< 0.000020						13
Thorium, dissolved	< 0.00010	0.00010 mg/L	< 0.00010						20
Tin, dissolved	0.00021	0.00020 mg/L	< 0.00020						20
Titanium, dissolved	< 0.0050	0.0050 mg/L	< 0.0050						20
Tungsten, dissolved	< 0.0010	0.0010 mg/L	< 0.0010						20
Uranium, dissolved	0.000936	0.000020 mg/L	0.000952				2		14



APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B9B1828, Continued

Duplicate (B9B1828-DUP1), Continued		Source: 9021867-02		Prepared: 2019-03-05, Analyzed: 2019-03-05					
Vanadium, dissolved	< 0.0010	0.0010	mg/L	< 0.0010					20
Zinc, dissolved	< 0.0040	0.0040	mg/L	< 0.0040					11
Zirconium, dissolved	< 0.00010	0.00010	mg/L	< 0.00010					20

Reference (B9B1828-SRM1)		Prepared: 2019-02-28, Analyzed: 2019-02-28							
Aluminum, dissolved	0.204	0.0050	mg/L	0.233	87	79-114			
Antimony, dissolved	0.0457	0.00020	mg/L	0.0430	106	89-123			
Arsenic, dissolved	0.436	0.00050	mg/L	0.438	99	87-113			
Barium, dissolved	3.37	0.0050	mg/L	3.35	100	85-114			
Beryllium, dissolved	0.183	0.00010	mg/L	0.213	86	79-122			
Boron, dissolved	1.38	0.0050	mg/L	1.74	79	79-117			
Cadmium, dissolved	0.221	0.000010	mg/L	0.224	99	89-112			
Calcium, dissolved	7.66	0.20	mg/L	7.69	100	85-120			
Chromium, dissolved	0.417	0.00050	mg/L	0.437	95	87-113			
Cobalt, dissolved	0.120	0.00010	mg/L	0.128	94	90-117			
Copper, dissolved	0.876	0.00040	mg/L	0.844	104	90-115			
Iron, dissolved	1.26	0.010	mg/L	1.29	97	86-112			
Lead, dissolved	0.114	0.00020	mg/L	0.112	102	90-113			
Lithium, dissolved	0.0861	0.00010	mg/L	0.104	83	77-127			
Magnesium, dissolved	6.55	0.010	mg/L	6.92	95	84-116			
Manganese, dissolved	0.301	0.00020	mg/L	0.345	87	85-113			
Molybdenum, dissolved	0.393	0.00010	mg/L	0.426	92	87-112			
Nickel, dissolved	0.826	0.00040	mg/L	0.840	98	90-114			
Phosphorus, dissolved	0.464	0.050	mg/L	0.495	94	74-119			
Potassium, dissolved	2.66	0.10	mg/L	3.19	83	78-119			
Selenium, dissolved	0.0343	0.00050	mg/L	0.0331	104	89-123			
Sodium, dissolved	18.1	0.10	mg/L	19.1	95	81-117			
Strontium, dissolved	0.907	0.0010	mg/L	0.916	99	82-111			
Thallium, dissolved	0.0377	0.000020	mg/L	0.0393	96	90-113			
Uranium, dissolved	0.247	0.000020	mg/L	0.266	93	87-113			
Vanadium, dissolved	0.924	0.0010	mg/L	0.869	106	85-110			
Zinc, dissolved	0.875	0.0040	mg/L	0.881	99	88-114			

General Parameters, Batch B9B1837

Blank (B9B1837-BLK1)		Prepared: 2019-02-28, Analyzed: 2019-02-28							
Colour, True	< 5.0	5.0	CU						

LCS (B9B1837-BS1)		Prepared: 2019-02-28, Analyzed: 2019-02-28							
Colour, True	19	5.0	CU	20.0	96	85-115			

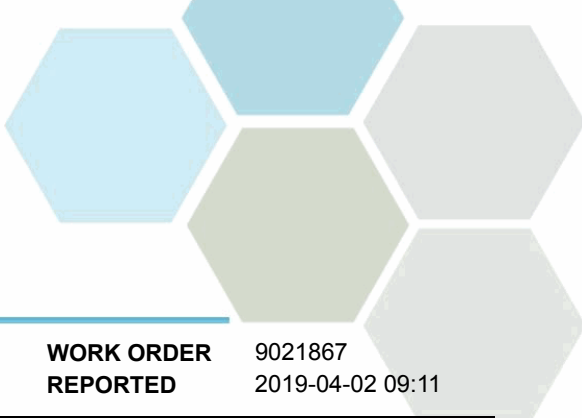
General Parameters, Batch B9B1861

Blank (B9B1861-BLK1)		Prepared: 2019-02-28, Analyzed: 2019-02-28							
Turbidity	< 0.10	0.10	NTU						

Duplicate (B9B1861-DUP1)		Source: 9021867-03		Prepared: 2019-02-28, Analyzed: 2019-02-28					
Turbidity	7.61	0.10	NTU	7.55			< 1	18	

General Parameters, Batch B9B1862

Blank (B9B1862-BLK1)		Prepared: 2019-02-28, Analyzed: 2019-02-28							
Conductivity (EC)	< 2.0	2.0	µS/cm						

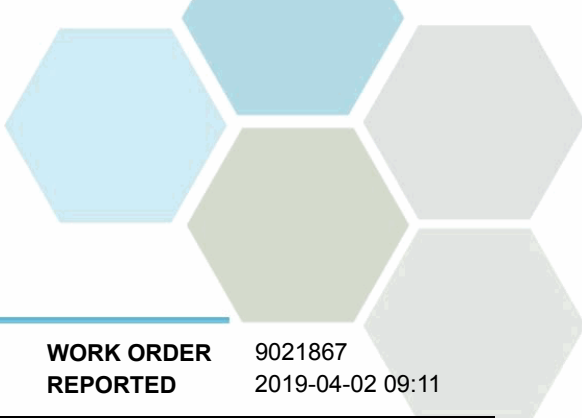


APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B9B1862, Continued									
LCS (B9B1862-BS1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Conductivity (EC)	151	2.0 µS/cm	147		103	90-110			
Duplicate (B9B1862-DUP1)			Source: 9021867-08 Prepared: 2019-02-28, Analyzed: 2019-02-28						
Conductivity (EC)	446	2.0 µS/cm		447			< 1	4	
Reference (B9B1862-SRM1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Conductivity (EC)	1040	2.0 µS/cm	1000		104	95-105			
General Parameters, Batch B9B1864									
Blank (B9B1864-BLK1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B9B1864-BLK2)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B9B1864-BS1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Alkalinity, Total (as CaCO3)	104	1.0 mg/L	100		104	92-106			
LCS (B9B1864-BS2)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Alkalinity, Total (as CaCO3)	104	1.0 mg/L	100		104	92-106			
General Parameters, Batch B9B1908									
Blank (B9B1908-BLK1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B9B1908-BS1)			Prepared: 2019-02-28, Analyzed: 2019-02-28						
Solids, Total Suspended	95.0	10.0 mg/L	100		95	83-107			
Duplicate (B9B1908-DUP1)			Source: 9021867-05 Prepared: 2019-02-28, Analyzed: 2019-02-28						
Solids, Total Suspended	85.0	2.0 mg/L		94.0			10	20	
General Parameters, Batch B9C0075									
Blank (B9C0075-BLK1)			Prepared: 2019-03-02, Analyzed: 2019-03-02						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B9C0075-BS1)			Prepared: 2019-03-02, Analyzed: 2019-03-02						
Solids, Total Suspended	97.0	10.0 mg/L	100		97	83-107			
General Parameters, Batch B9C0311									
Reference (B9C0311-SRM1)			Prepared: 2019-03-05, Analyzed: 2019-03-05						
pH	6.14	0.10 pH units	6.20		99	97.5-102.5			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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General Parameters, Batch B9C0311, Continued

Reference (B9C0311-SRM2)

Prepared: 2019-03-05, Analyzed: 2019-03-05

pH	6.15	0.10 pH units	6.20		99	97.5-102.5			
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Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0129

Blank (B9C0129-BLK1)

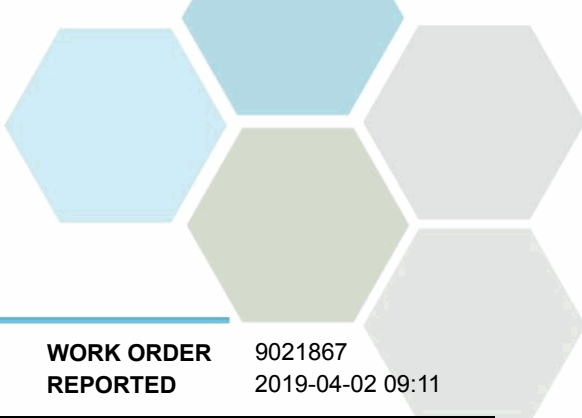
Prepared: 2019-03-03, Analyzed: 2019-03-03

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	2.42	µg/L	4.38		55	50-140			
Surrogate: Naphthalene-d8	4.74	µg/L	4.47		106	50-140			
Surrogate: Perylene-d12	4.83	µg/L	4.47		108	50-140			

LCS (B9C0129-BS1)

Prepared: 2019-03-03, Analyzed: 2019-03-03

Acenaphthene	4.66	0.050 µg/L	4.40		106	58-125			
Acenaphthylene	4.45	0.200 µg/L	4.40		101	54-128			
Acridine	2.95	0.050 µg/L	4.44		66	50-112			
Anthracene	4.33	0.010 µg/L	4.44		97	66-125			
Benz(a)anthracene	4.14	0.010 µg/L	4.44		93	59-123			
Benzo(a)pyrene	3.68	0.010 µg/L	4.40		84	62-116			
Benzo(b+j)fluoranthene	7.29	0.050 µg/L	8.89		82	69-121			
Benzo(g,h,i)perylene	3.67	0.050 µg/L	4.40		83	58-129			
Benzo(k)fluoranthene	4.12	0.050 µg/L	4.44		93	67-128			
2-Chloronaphthalene	3.86	0.100 µg/L	4.44		87	50-140			
Chrysene	4.30	0.050 µg/L	4.42		97	58-125			
Dibenz(a,h)anthracene	3.35	0.010 µg/L	4.42		76	58-126			
Fluoranthene	4.31	0.030 µg/L	4.36		99	67-133			
Fluorene	4.09	0.050 µg/L	4.40		93	55-122			
Indeno(1,2,3-cd)pyrene	3.54	0.050 µg/L	4.44		80	62-126			
1-Methylnaphthalene	3.84	0.100 µg/L	4.38		88	53-125			
2-Methylnaphthalene	3.89	0.100 µg/L	4.36		89	52-122			
Naphthalene	4.09	0.200 µg/L	4.44		92	50-130			
Phenanthrene	3.99	0.100 µg/L	4.40		91	67-127			
Pyrene	4.32	0.020 µg/L	4.44		97	68-133			
Quinoline	4.14	0.050 µg/L	4.44		93	51-140			
Surrogate: Acridine-d9	3.49	µg/L	4.38		80	50-140			
Surrogate: Naphthalene-d8	4.38	µg/L	4.47		98	50-140			
Surrogate: Perylene-d12	4.40	µg/L	4.47		98	50-140			



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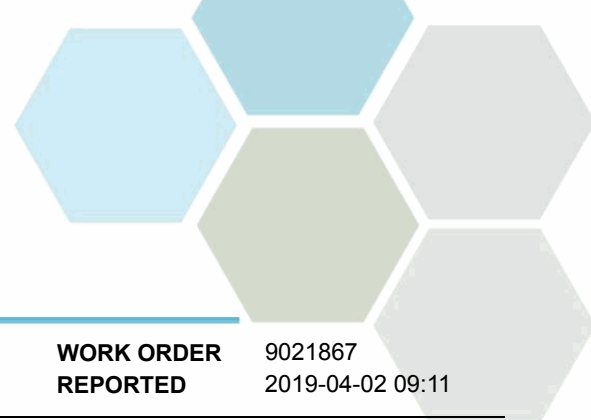
WORK ORDER REPORTED 9021867
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0129, Continued									
LCS Dup (B9C0129-BSD1)					Prepared: 2019-03-03, Analyzed: 2019-03-03				
Acenaphthene	4.01	0.050 µg/L	4.40		91	58-125	15	16	
Acenaphthylene	3.80	0.200 µg/L	4.40		86	54-128	16	16	
Acridine	2.26	0.050 µg/L	4.44		51	50-112	27	26	RPD
Anthracene	3.79	0.010 µg/L	4.44		85	66-125	13	14	
Benz(a)anthracene	3.60	0.010 µg/L	4.44		81	59-123	14	23	
Benzo(a)pyrene	3.22	0.010 µg/L	4.40		73	62-116	13	16	
Benzo(b+j)fluoranthene	7.08	0.050 µg/L	8.89		80	69-121	3	14	
Benzo(g,h,i)perylene	3.11	0.050 µg/L	4.40		71	58-129	16	25	
Benzo(k)fluoranthene	3.97	0.050 µg/L	4.44		89	67-128	4	18	
2-Chloronaphthalene	3.32	0.100 µg/L	4.44		75	50-140	15	30	
Chrysene	3.77	0.050 µg/L	4.42		85	58-125	13	24	
Dibenz(a,h)anthracene	2.85	0.010 µg/L	4.42		64	58-126	16	23	
Fluoranthene	3.71	0.030 µg/L	4.36		85	67-133	15	18	
Fluorene	3.67	0.050 µg/L	4.40		83	55-122	11	16	
Indeno(1,2,3-cd)pyrene	2.97	0.050 µg/L	4.44		67	62-126	17	22	
1-Methylnaphthalene	3.38	0.100 µg/L	4.38		77	53-125	13	16	
2-Methylnaphthalene	3.41	0.100 µg/L	4.36		78	52-122	13	17	
Naphthalene	3.63	0.200 µg/L	4.44		82	50-130	12	18	
Phenanthrene	3.64	0.100 µg/L	4.40		83	67-127	9	14	
Pyrene	3.74	0.020 µg/L	4.44		84	68-133	14	18	
Quinoline	3.98	0.050 µg/L	4.44		90	51-140	4	12	
Surrogate: Acridine-d9	2.27	µg/L	4.38		52	50-140			
Surrogate: Naphthalene-d8	3.85	µg/L	4.47		86	50-140			
Surrogate: Perylene-d12	3.86	µg/L	4.47		86	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0166

Blank (B9C0166-BLK1)			Prepared: 2019-03-04, Analyzed: 2019-03-05						
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	2.60	µg/L	4.38		59	50-140			
Surrogate: Naphthalene-d8	4.16	µg/L	4.47		93	50-140			
Surrogate: Perylene-d12	4.48	µg/L	4.47		100	50-140			

LCS (B9C0166-BS1)			Prepared: 2019-03-04, Analyzed: 2019-03-04						
Acenaphthene	3.83	0.050 µg/L	4.40		87	58-125			



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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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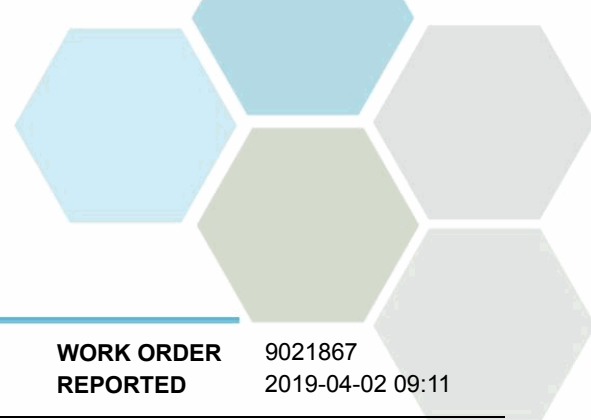
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0166, Continued

LCS (B9C0166-BS1), Continued			Prepared: 2019-03-04, Analyzed: 2019-03-04						
Acenaphthylene	4.86	0.200 µg/L	4.40		110	54-128			
Acridine	3.77	0.050 µg/L	4.44		85	50-112			
Anthracene	4.50	0.010 µg/L	4.44		101	66-125			
Benzo(a)anthracene	4.37	0.010 µg/L	4.44		98	59-123			
Benzo(a)pyrene	4.35	0.010 µg/L	4.40		99	62-116			
Benzo(b+j)fluoranthene	8.84	0.050 µg/L	8.89		99	69-121			
Benzo(g,h,i)perylene	4.33	0.050 µg/L	4.40		98	58-129			
Benzo(k)fluoranthene	4.30	0.050 µg/L	4.44		97	67-128			
2-Chloronaphthalene	4.55	0.100 µg/L	4.44		102	50-140			
Chrysene	4.37	0.050 µg/L	4.42		99	58-125			
Dibenz(a,h)anthracene	4.11	0.010 µg/L	4.42		93	58-126			
Fluoranthene	4.77	0.030 µg/L	4.36		109	67-133			
Fluorene	3.66	0.050 µg/L	4.40		83	55-122			
Indeno(1,2,3-cd)pyrene	4.07	0.050 µg/L	4.44		92	62-126			
1-Methylnaphthalene	4.56	0.100 µg/L	4.38		104	53-125			
2-Methylnaphthalene	4.57	0.100 µg/L	4.36		105	52-122			
Naphthalene	4.18	0.200 µg/L	4.44		94	50-130			
Phenanthrene	4.85	0.100 µg/L	4.40		110	67-127			
Pyrene	4.77	0.020 µg/L	4.44		107	68-133			
Quinoline	4.42	0.050 µg/L	4.44		99	51-140			
Surrogate: Acridine-d9	3.50	µg/L	4.38		80	50-140			
Surrogate: Naphthalene-d8	4.18	µg/L	4.47		94	50-140			
Surrogate: Perylene-d12	4.70	µg/L	4.47		105	50-140			

LCS Dup (B9C0166-BSD1)			Prepared: 2019-03-04, Analyzed: 2019-03-05						
Acenaphthene	4.43	0.050 µg/L	4.40		101	58-125	15	16	
Acenaphthylene	4.59	0.200 µg/L	4.40		104	54-128	6	16	
Acridine	3.59	0.050 µg/L	4.44		81	50-112	5	26	
Anthracene	4.34	0.010 µg/L	4.44		98	66-125	4	14	
Benzo(a)anthracene	4.86	0.010 µg/L	4.44		109	59-123	11	23	
Benzo(a)pyrene	4.42	0.010 µg/L	4.40		100	62-116	2	16	
Benzo(b+j)fluoranthene	9.70	0.050 µg/L	8.89		109	69-121	9	14	
Benzo(g,h,i)perylene	5.56	0.050 µg/L	4.40		126	58-129	25	25	
Benzo(k)fluoranthene	4.94	0.050 µg/L	4.44		111	67-128	14	18	
2-Chloronaphthalene	4.31	0.100 µg/L	4.44		97	50-140	5	30	
Chrysene	4.93	0.050 µg/L	4.42		111	58-125	12	24	
Dibenz(a,h)anthracene	4.14	0.010 µg/L	4.42		94	58-126	< 1	23	
Fluoranthene	3.57	0.030 µg/L	4.36		82	67-133	29	18	RPD
Fluorene	4.02	0.050 µg/L	4.40		91	55-122	10	16	
Indeno(1,2,3-cd)pyrene	4.07	0.050 µg/L	4.44		92	62-126	< 1	22	
1-Methylnaphthalene	4.05	0.100 µg/L	4.38		93	53-125	12	16	
2-Methylnaphthalene	4.03	0.100 µg/L	4.36		93	52-122	13	17	
Naphthalene	3.53	0.200 µg/L	4.44		79	50-130	17	18	
Phenanthrene	4.63	0.100 µg/L	4.40		105	67-127	5	14	
Pyrene	3.59	0.020 µg/L	4.44		81	68-133	28	18	RPD
Quinoline	2.51	0.050 µg/L	4.44		56	51-140	55	12	RPD
Surrogate: Acridine-d9	7.55	µg/L	8.76		86	50-140			
Surrogate: Naphthalene-d8	8.14	µg/L	8.93		91	50-140			
Surrogate: Perylene-d12	11.1	µg/L	8.93		124	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0307

Blank (B9C0307-BLK1)			Prepared: 2019-03-05, Analyzed: 2019-03-06						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							

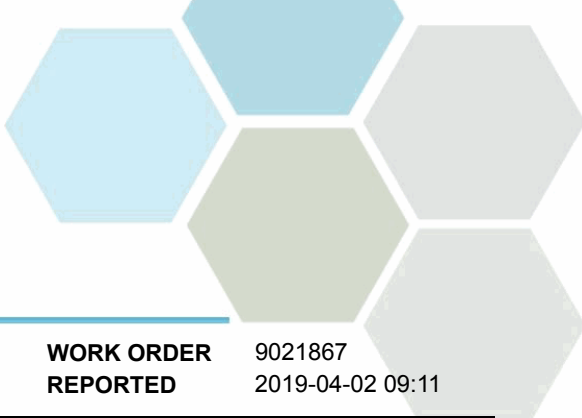


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0307, Continued									
Blank (B9C0307-BLK1), Continued					Prepared: 2019-03-05, Analyzed: 2019-03-06				
Acridine	< 0.050	0.050 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
2-Chloronaphthalene	< 0.100	0.100 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
1-Methylnaphthalene	< 0.100	0.100 µg/L							
2-Methylnaphthalene	< 0.100	0.100 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Acridine-d9	3.95	µg/L	4.38		90	50-140			
Surrogate: Naphthalene-d8	4.23	µg/L	4.47		95	50-140			
Surrogate: Perylene-d12	4.73	µg/L	4.47		106	50-140			
LCS (B9C0307-BS1)					Prepared: 2019-03-05, Analyzed: 2019-03-06				
Acenaphthene	4.99	0.050 µg/L	4.40		113	58-125			
Acenaphthylene	5.32	0.200 µg/L	4.40		121	54-128			
Acridine	3.77	0.050 µg/L	4.44		85	50-112			
Anthracene	5.19	0.010 µg/L	4.44		117	66-125			
Benz(a)anthracene	4.49	0.010 µg/L	4.44		101	59-123			
Benzo(a)pyrene	5.08	0.010 µg/L	4.40		115	62-116			
Benzo(b+j)fluoranthene	9.87	0.050 µg/L	8.89		111	69-121			
Benzo(g,h,i)perylene	5.12	0.050 µg/L	4.40		116	58-129			
Benzo(k)fluoranthene	5.24	0.050 µg/L	4.44		118	67-128			
2-Chloronaphthalene	5.46	0.100 µg/L	4.44		123	50-140			
Chrysene	4.50	0.050 µg/L	4.42		102	58-125			
Dibenz(a,h)anthracene	5.14	0.010 µg/L	4.42		116	58-126			
Fluoranthene	5.73	0.030 µg/L	4.36		132	67-133			
Fluorene	5.30	0.050 µg/L	4.40		120	55-122			
Indeno(1,2,3-cd)pyrene	4.81	0.050 µg/L	4.44		108	62-126			
1-Methylnaphthalene	5.28	0.100 µg/L	4.38		121	53-125			
2-Methylnaphthalene	5.10	0.100 µg/L	4.36		117	52-122			
Naphthalene	5.67	0.200 µg/L	4.44		128	50-130			
Phenanthrene	5.48	0.100 µg/L	4.40		124	67-127			
Pyrene	5.48	0.020 µg/L	4.44		123	68-133			
Quinoline	4.16	0.050 µg/L	4.44		94	51-140			
Surrogate: Acridine-d9	3.27	µg/L	4.38		75	50-140			
Surrogate: Naphthalene-d8	5.72	µg/L	4.47		128	50-140			
Surrogate: Perylene-d12	5.30	µg/L	4.47		119	50-140			
LCS Dup (B9C0307-BSD1)					Prepared: 2019-03-05, Analyzed: 2019-03-06				
Acenaphthene	4.53	0.050 µg/L	4.40		103	58-125	10	16	
Acenaphthylene	4.76	0.200 µg/L	4.40		108	54-128	11	16	
Acridine	3.19	0.050 µg/L	4.44		72	50-112	17	26	
Anthracene	4.60	0.010 µg/L	4.44		103	66-125	12	14	
Benz(a)anthracene	4.79	0.010 µg/L	4.44		108	59-123	7	23	
Benzo(a)pyrene	4.79	0.010 µg/L	4.40		109	62-116	6	16	



APPENDIX 2: QUALITY CONTROL RESULTS

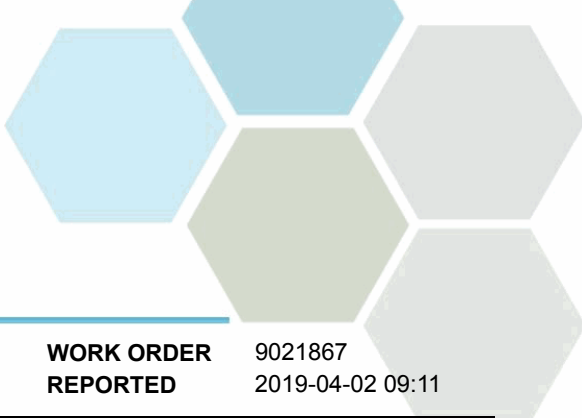
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9C0307, Continued									
LCS Dup (B9C0307-BSD1), Continued					Prepared: 2019-03-05, Analyzed: 2019-03-06				
Benzo(b+j)fluoranthene	9.15	0.050 µg/L	8.89		103	69-121	8	14	
Benzo(g,h,i)perylene	4.25	0.050 µg/L	4.40		96	58-129	19	25	
Benzo(k)fluoranthene	4.75	0.050 µg/L	4.44		107	67-128	10	18	
2-Chloronaphthalene	4.49	0.100 µg/L	4.44		101	50-140	19	30	
Chrysene	4.72	0.050 µg/L	4.42		107	58-125	5	24	
Dibenz(a,h)anthracene	4.38	0.010 µg/L	4.42		99	58-126	16	23	
Fluoranthene	4.82	0.030 µg/L	4.36		111	67-133	17	18	
Fluorene	4.57	0.050 µg/L	4.40		104	55-122	15	16	
Indeno(1,2,3-cd)pyrene	4.25	0.050 µg/L	4.44		96	62-126	12	22	
1-Methylnaphthalene	4.51	0.100 µg/L	4.38		103	53-125	16	16	
2-Methylnaphthalene	4.55	0.100 µg/L	4.36		105	52-122	11	17	
Naphthalene	4.82	0.200 µg/L	4.44		108	50-130	16	18	
Phenanthrene	4.86	0.100 µg/L	4.40		110	67-127	12	14	
Pyrene	4.79	0.020 µg/L	4.44		108	68-133	13	18	
Quinoline	3.74	0.050 µg/L	4.44		84	51-140	11	12	
Surrogate: Acridine-d9	3.63	µg/L	4.38		83	50-140			
Surrogate: Naphthalene-d8	5.41	µg/L	4.47		121	50-140			
Surrogate: Perylene-d12	6.14	µg/L	4.47		137	50-140			

Total Metals, Batch B9C0013

Blank (B9C0013-BLK1)			Prepared: 2019-03-01, Analyzed: 2019-03-05						
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							

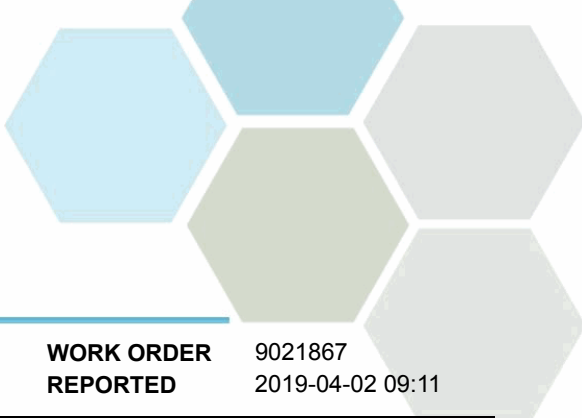


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9C0013, Continued									
Blank (B9C0013-BLK1), Continued					Prepared: 2019-03-01, Analyzed: 2019-03-05				
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 (B9C0013-BLK2)					Prepared: 2019-03-01, Analyzed: 2019-03-05				
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Lithium, total	< 0.00010	0.00010 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Molybdenum, total	< 0.00010	0.00010 mg/L							
Nickel, total	< 0.00040	0.00040 mg/L							
Phosphorus, total	< 0.050	0.050 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silicon, total	< 1.0	1.0 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Sulfur, total	< 3.0	3.0 mg/L							
Tellurium, total	< 0.00050	0.00050 mg/L							
Thallium, total	< 0.000020	0.000020 mg/L							
Thorium, total	< 0.00010	0.00010 mg/L							
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0010	0.0010 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							
Blank (B9C0013-BLK3)					Prepared: 2019-03-01, Analyzed: 2019-03-05				
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Beryllium, total	< 0.00010	0.00010 mg/L							
Bismuth, total	< 0.00010	0.00010 mg/L							
Boron, total	< 0.0050	0.0050 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							
Chromium, total	< 0.00050	0.00050 mg/L							
Cobalt, total	< 0.00010	0.00010 mg/L							



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Total Metals, Batch B9C0013, Continued

Blank (B9C0013-BLK3), Continued

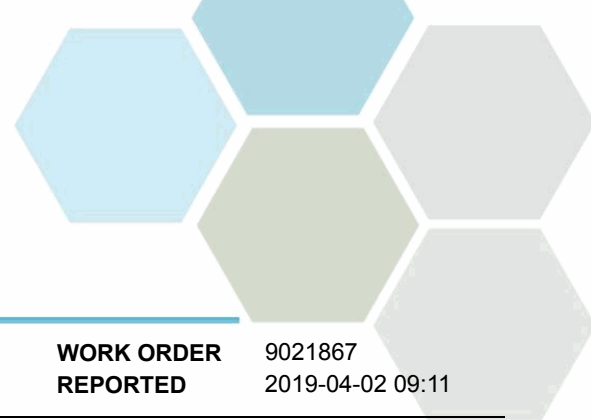
Prepared: 2019-03-01, Analyzed: 2019-03-05

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 (B9C0013-BS1)

Prepared: 2019-03-01, Analyzed: 2019-03-05

Aluminum, total	0.0220	0.0050 mg/L	0.0200		110	80-120			
Antimony, total	0.0214	0.00020 mg/L	0.0200		107	80-120			
Arsenic, total	0.0206	0.00050 mg/L	0.0200		103	80-120			
Barium, total	0.0206	0.0050 mg/L	0.0200		103	80-120			
Beryllium, total	0.0192	0.00010 mg/L	0.0200		96	80-120			
Bismuth, total	0.0207	0.00010 mg/L	0.0200		103	80-120			
Boron, total	0.0234	0.0050 mg/L	0.0200		117	80-120			
Cadmium, total	0.0202	0.000010 mg/L	0.0200		101	80-120			
Calcium, total	2.03	0.20 mg/L	2.00		102	80-120			
Chromium, total	0.0205	0.00050 mg/L	0.0200		103	80-120			
Cobalt, total	0.0206	0.00010 mg/L	0.0200		103	80-120			
Copper, total	0.0209	0.00040 mg/L	0.0200		105	80-120			
Iron, total	2.03	0.010 mg/L	2.00		101	80-120			
Lead, total	0.0204	0.00020 mg/L	0.0200		102	80-120			
Lithium, total	0.0212	0.00010 mg/L	0.0200		106	80-120			
Magnesium, total	1.97	0.010 mg/L	2.00		99	80-120			
Manganese, total	0.0197	0.00020 mg/L	0.0200		99	80-120			
Molybdenum, total	0.0206	0.00010 mg/L	0.0200		103	80-120			
Nickel, total	0.0204	0.00040 mg/L	0.0200		102	80-120			
Phosphorus, total	2.00	0.050 mg/L	2.00		100	80-120			
Potassium, total	2.08	0.10 mg/L	2.00		104	80-120			
Selenium, total	0.0203	0.00050 mg/L	0.0200		101	80-120			
Silicon, total	2.0	1.0 mg/L	2.00		100	80-120			
Silver, total	0.0177	0.000050 mg/L	0.0200		89	80-120			
Sodium, total	1.92	0.10 mg/L	2.00		96	80-120			
Strontium, total	0.0202	0.0010 mg/L	0.0200		101	80-120			
Sulfur, total	5.0	3.0 mg/L	5.00		100	80-120			
Tellurium, total	0.0215	0.00050 mg/L	0.0200		107	80-120			

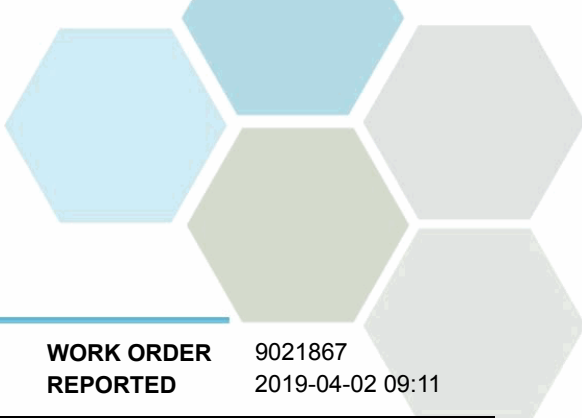


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9C0013, Continued									
LCS (B9C0013-BS1), Continued					Prepared: 2019-03-01, Analyzed: 2019-03-05				
Thallium, total	0.0207	0.000020 mg/L	0.0200		103	80-120			
Thorium, total	0.0191	0.00010 mg/L	0.0200		96	80-120			
Tin, total	0.0214	0.00020 mg/L	0.0200		107	80-120			
Titanium, total	0.0216	0.0050 mg/L	0.0200		108	80-120			
Tungsten, total	0.0205	0.0010 mg/L	0.0200		103	80-120			
Uranium, total	0.0210	0.000020 mg/L	0.0200		105	80-120			
Vanadium, total	0.0207	0.0010 mg/L	0.0200		104	80-120			
Zinc, total	0.0215	0.0040 mg/L	0.0200		107	80-120			
Zirconium, total	0.0214	0.00010 mg/L	0.0200		107	80-120			
Duplicate (B9C0013-DUP1)			Source: 9021867-02		Prepared: 2019-03-01, Analyzed: 2019-03-05				
Aluminum, total	0.0497	0.0050 mg/L		0.0508			2	20	
Antimony, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Arsenic, total	0.00121	0.00050 mg/L		0.00118				15	
Barium, total	0.0313	0.0050 mg/L		0.0317			1	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	0.0302	0.0050 mg/L		0.0261			15	20	
Cadmium, total	0.000087	0.000010 mg/L		0.000090			3	20	
Calcium, total	45.6	0.20 mg/L		45.4			< 1	12	
Chromium, total	< 0.00050	0.00050 mg/L		< 0.00050				12	
Cobalt, total	0.00051	0.00010 mg/L		0.00051			< 1	13	
Copper, total	0.00051	0.00040 mg/L		0.00059				20	
Iron, total	0.161	0.010 mg/L		0.152			6	18	
Lead, total	< 0.00020	0.00020 mg/L		< 0.00020				20	
Lithium, total	0.00014	0.00010 mg/L		0.00014				19	
Magnesium, total	6.84	0.010 mg/L		6.89			< 1	10	
Manganese, total	0.352	0.00020 mg/L		0.354			< 1	13	
Molybdenum, total	0.00599	0.00010 mg/L		0.00607			1	20	
Nickel, total	0.00129	0.00040 mg/L		0.00132				20	
Phosphorus, total	0.091	0.050 mg/L		0.060				20	
Potassium, total	0.88	0.10 mg/L		0.87			< 1	13	
Selenium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Silicon, total	6.0	1.0 mg/L		6.1			< 1	11	
Silver, total	< 0.000050	0.000050 mg/L		< 0.000050				18	
Sodium, total	12.1	0.10 mg/L		12.3			1	10	
Strontium, total	0.235	0.0010 mg/L		0.234			< 1	9	
Sulfur, total	16.9	3.0 mg/L		17.4			3	20	
Tellurium, total	< 0.00050	0.00050 mg/L		< 0.00050				20	
Thallium, total	0.000030	0.000020 mg/L		0.000030				20	
Thorium, total	< 0.00010	0.00010 mg/L		< 0.00010				18	
Tin, total	0.00020	0.00020 mg/L		0.00025				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	0.000950	0.000020 mg/L		0.000951			< 1	14	
Vanadium, total	< 0.0010	0.0010 mg/L		< 0.0010				17	
Zinc, total	< 0.0040	0.0040 mg/L		< 0.0040				8	
Zirconium, total	0.00018	0.00010 mg/L		0.00016				20	
Reference (B9C0013-SRM1)			Prepared: 2019-03-01, Analyzed: 2019-03-05						
Aluminum, total	0.279	0.0050 mg/L		0.303	92	82-114			
Antimony, total	0.0516	0.00020 mg/L		0.0511	101	88-115			
Arsenic, total	0.120	0.00050 mg/L		0.118	102	88-111			
Barium, total	0.803	0.0050 mg/L		0.823	98	83-110			
Beryllium, total	0.0469	0.00010 mg/L		0.0496	95	80-119			
Boron, total	3.57	0.0050 mg/L		3.45	104	80-118			



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9021867
2019-04-02 09:11

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9C0013, Continued									
Reference (B9C0013-SRM1), Continued					Prepared: 2019-03-01, Analyzed: 2019-03-05				
Cadmium, total	0.0481	0.000010 mg/L	0.0495		97	90-110			
Calcium, total	10.9	0.20 mg/L	11.6		94	85-113			
Chromium, total	0.259	0.00050 mg/L	0.250		104	88-111			
Cobalt, total	0.0386	0.00010 mg/L	0.0377		102	90-114			
Copper, total	0.512	0.00040 mg/L	0.486		105	90-117			
Iron, total	0.489	0.010 mg/L	0.488		100	90-116			
Lead, total	0.202	0.00020 mg/L	0.204		99	90-110			
Lithium, total	0.407	0.00010 mg/L	0.403		101	79-118			
Magnesium, total	3.66	0.010 mg/L	3.79		97	88-116			
Manganese, total	0.103	0.00020 mg/L	0.109		94	88-108			
Molybdenum, total	0.201	0.00010 mg/L	0.198		102	88-110			
Nickel, total	0.246	0.00040 mg/L	0.249		99	90-112			
Phosphorus, total	0.208	0.050 mg/L	0.227		92	72-118			
Potassium, total	6.95	0.10 mg/L	7.21		96	87-116			
Selenium, total	0.121	0.00050 mg/L	0.121		100	90-122			
Sodium, total	7.08	0.10 mg/L	7.54		94	86-118			
Strontium, total	0.387	0.0010 mg/L	0.375		103	86-110			
Thallium, total	0.0808	0.000020 mg/L	0.0805		100	90-113			
Uranium, total	0.0302	0.000020 mg/L	0.0306		99	88-112			
Vanadium, total	0.396	0.0010 mg/L	0.386		103	87-110			
Zinc, total	2.58	0.0040 mg/L	2.49		104	90-113			

Total Metals, Batch B9C0271

Blank (B9C0271-BLK1)					Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B9C0271-BLK2)					Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	< 0.000010	0.000010 mg/L							
Duplicate (B9C0271-DUP2)					Source: 9021867-01 Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	< 0.000010	0.000010 mg/L		< 0.000010				20	
Matrix Spike (B9C0271-MS2)					Source: 9021867-02 Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	0.000213	0.000010 mg/L	0.000250	< 0.000010	85	70-130			
Reference (B9C0271-SRM1)					Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	0.00465	0.000010 mg/L	0.00489		95	80-120			
Reference (B9C0271-SRM2)					Prepared: 2019-03-05, Analyzed: 2019-03-05				
Mercury, total	0.00478	0.000010 mg/L	0.00489		98	80-120			

QC Qualifiers:

RPD Relative percent difference (RPD) of duplicate analysis are outside of control limits for unknown reason(s).
S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.

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: 8 TAT: 5	CARO Analytical Services #110 - 4011 Viking Way Richmond, BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: Feb 2019 Shipped via: Maximum Express Tracking #: SDG:

#	Client information	Analyses	Containers
# 1	MW6 02/25/2019 10:15 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, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)

#	Client information	Analyses	Containers
# 2	MW3S 02/25/2019 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, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)

#	Client information	Analyses	Containers
# 3	MW3D 02/25/2019 12:15 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, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)

#	Client information	Analyses	Containers
# 4	MW2 02/25/2019 13:00 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)

#	Sample ID Date/Time Grab / Water	Analyses	Containers
# 5	SB1 02/25/2019 11:30 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)
# 6	SB2 02/25/2019 11:00 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, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)
# 7	LE-1 02/25/2019 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, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)
# 8	SW1 02/25/2019 12:45 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, 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) C13_500 mL Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1)

Relinquished by	Date/Time	Accepted by	Date/Time

CERTIFICATE OF ANALYSIS

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

ATTENTION Rahim Gaidhar

PO NUMBER P15-06 SIRM

PROJECT P17-932

PROJECT INFO

WORK ORDER 9040043

RECEIVED / TEMP 2019-04-01 14:30 / 9°C

REPORTED 2019-04-08 16:22

COC NUMBER March 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.

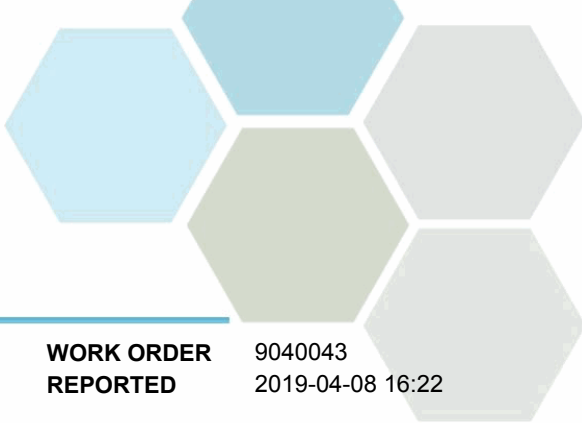
If you have any questions or concerns, please contact me at bshaw@caro.ca

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

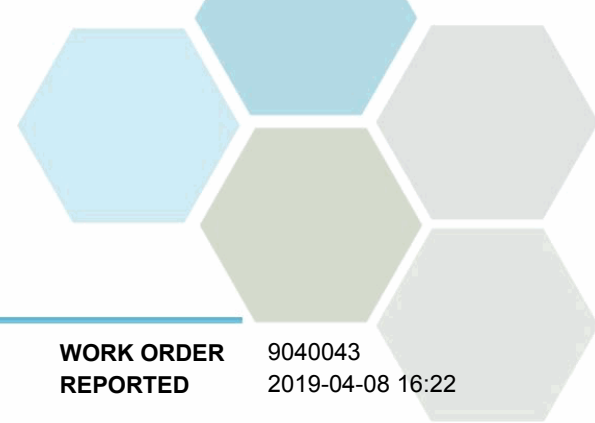


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9040043-01) Matrix: Water Sampled: 2019-03-30 11:30					
Anions					
Chloride	37.2	0.10	mg/L	2019-04-03	
Fluoride	0.12	0.10	mg/L	2019-04-03	
Nitrate (as N)	0.111	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	69.9	1.0	mg/L	2019-04-03	
BCMOE Aggregate Hydrocarbons					
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	78	60-140	%	2019-04-04	
Calculated Parameters					
Hardness, Total (as CaCO3)	549	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	0.00032	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	0.00533	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0785	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0582	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	165	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00096	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	0.00205	0.00010	mg/L	2019-04-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-04-05	
Iron, dissolved	4.46	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	0.00869	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	32.8	0.010	mg/L	2019-04-05	
Manganese, dissolved	2.06	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	0.00055	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00155	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-04-05	
Potassium, dissolved	2.88	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	11.9	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	49.4	0.10	mg/L	2019-04-05	

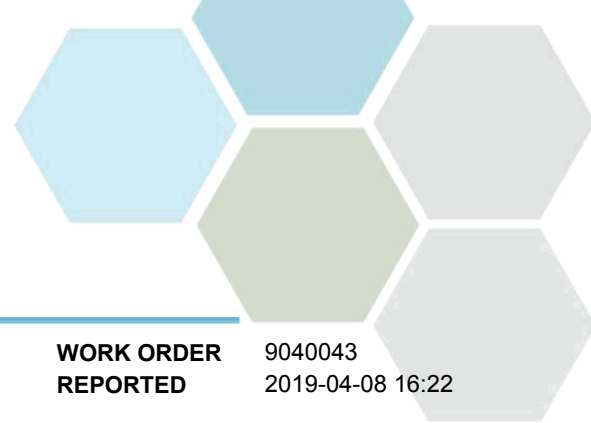


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9040043-01) Matrix: Water Sampled: 2019-03-30 11:30, Continued					
<i>Dissolved Metals, Continued</i>					
Strontium, dissolved	0.621	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	20.3	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.00593	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	0.00018	0.00010	mg/L	2019-04-05	
<i>General Parameters</i>					
Alkalinity, Total (as CaCO3)	617	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	617	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	8.5	5.0	CU	2019-04-02	
Conductivity (EC)	1280	2.0	µS/cm	2019-04-05	
pH	7.07	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	11.6	2.0	mg/L	2019-04-05	
Turbidity	37.9	0.10	NTU	2019-04-02	
<i>Polycyclic Aromatic Hydrocarbons (PAH)</i>					
Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	

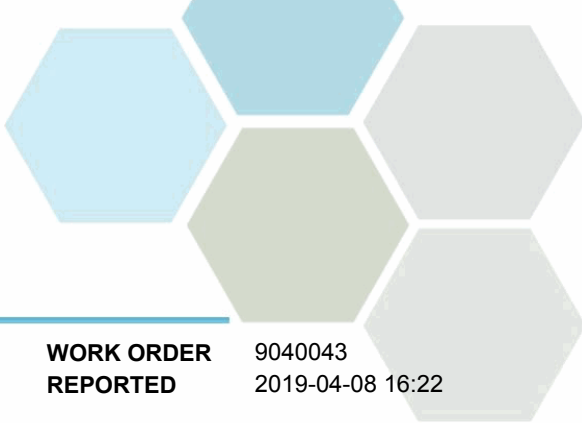


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW6 (9040043-01) Matrix: Water Sampled: 2019-03-30 11:30, Continued					
<i>Polycyclic Aromatic Hydrocarbons (PAH), Continued</i>					
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	66	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	101	50-140	%	2019-04-04	
Surrogate: Perylene-d12	92	50-140	%	2019-04-04	
Total Metals					
Aluminum, total	0.0930	0.0050	mg/L	2019-04-07	
Antimony, total	0.00053	0.00020	mg/L	2019-04-07	
Arsenic, total	0.00578	0.00050	mg/L	2019-04-07	
Barium, total	0.104	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0666	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000042	0.000010	mg/L	2019-04-07	
Calcium, total	169	0.20	mg/L	2019-04-07	
Chromium, total	0.00145	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00405	0.00010	mg/L	2019-04-07	
Copper, total	0.00134	0.00040	mg/L	2019-04-07	
Iron, total	5.03	0.010	mg/L	2019-04-07	
Lead, total	0.00044	0.00020	mg/L	2019-04-07	
Lithium, total	0.0108	0.00010	mg/L	2019-04-07	
Magnesium, total	33.9	0.010	mg/L	2019-04-07	
Manganese, total	2.00	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00127	0.00010	mg/L	2019-04-07	
Nickel, total	0.00824	0.00040	mg/L	2019-04-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-04-07	
Potassium, total	2.93	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	12.3	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	51.6	0.10	mg/L	2019-04-07	
Strontium, total	0.611	0.0010	mg/L	2019-04-07	
Sulfur, total	20.7	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	0.000059	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	0.00079	0.00020	mg/L	2019-04-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW6 (9040043-01) | Matrix: Water | Sampled: 2019-03-30 11:30, Continued

Total Metals, Continued

Uranium, total	0.00563	0.000020	mg/L	2019-04-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-04-07	
Zinc, total	0.0089	0.0040	mg/L	2019-04-07	
Zirconium, total	0.00013	0.00010	mg/L	2019-04-07	

MW3S (9040043-02) | Matrix: Water | Sampled: 2019-03-30 12:50

Anions

Chloride	14.2	0.10	mg/L	2019-04-03	
Fluoride	< 0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	40.7	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

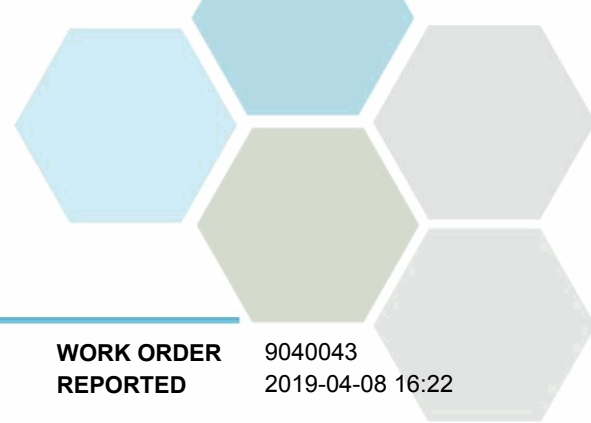
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	60	60-140	%	2019-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	151	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	0.00125	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0330	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0191	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	48.2	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00085	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	0.00053	0.00010	mg/L	2019-04-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-04-05	
Iron, dissolved	0.147	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	7.28	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.390	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3S (9040043-02) | Matrix: Water | Sampled: 2019-03-30 12:50, Continued

Dissolved Metals, Continued

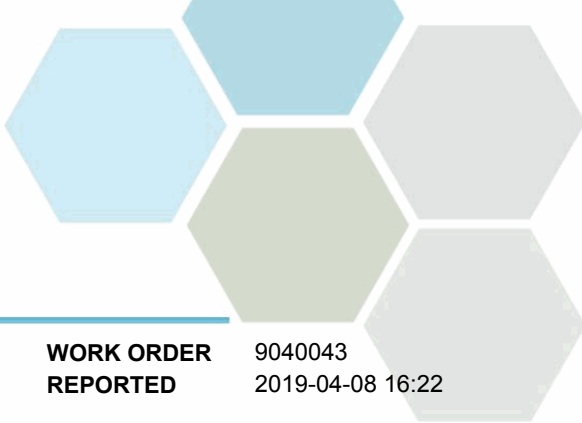
Molybdenum, dissolved	0.00664	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00111	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	0.057	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.86	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	6.3	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	13.1	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.248	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	15.6	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	0.000021	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.00102	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	130	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	130	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	6.2	5.0	CU	2019-04-02	
Conductivity (EC)	378	2.0	µS/cm	2019-04-05	
pH	7.34	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	8.8	2.0	mg/L	2019-04-05	
Turbidity	6.36	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	



TEST RESULTS

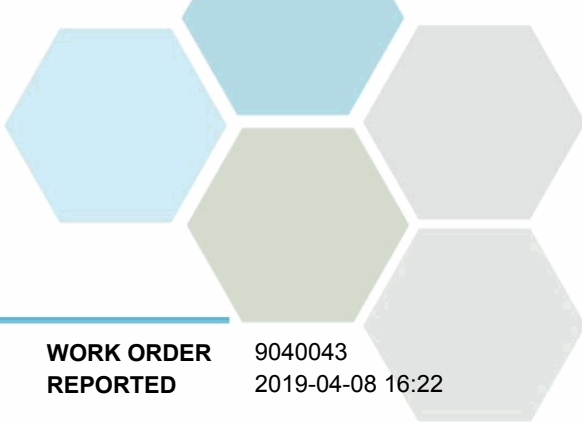
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3S (9040043-02) Matrix: Water Sampled: 2019-03-30 12:50, Continued					
<i>Polycyclic Aromatic Hydrocarbons (PAH), Continued</i>					
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	73	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	113	50-140	%	2019-04-04	
Surrogate: Perylene-d12	98	50-140	%	2019-04-04	

Total Metals

Aluminum, total	0.0575	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	0.00143	0.00050	mg/L	2019-04-07	
Barium, total	0.0337	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0214	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000095	0.000010	mg/L	2019-04-07	
Calcium, total	49.1	0.20	mg/L	2019-04-07	
Chromium, total	0.00103	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00060	0.00010	mg/L	2019-04-07	
Copper, total	0.00052	0.00040	mg/L	2019-04-07	
Iron, total	0.152	0.010	mg/L	2019-04-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-04-07	
Lithium, total	0.00015	0.00010	mg/L	2019-04-07	
Magnesium, total	7.53	0.010	mg/L	2019-04-07	
Manganese, total	0.378	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00637	0.00010	mg/L	2019-04-07	
Nickel, total	0.00138	0.00040	mg/L	2019-04-07	
Phosphorus, total	0.056	0.050	mg/L	2019-04-07	
Potassium, total	0.90	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	6.6	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	13.5	0.10	mg/L	2019-04-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3S (9040043-02) Matrix: Water Sampled: 2019-03-30 12:50, Continued					
<i>Total Metals, Continued</i>					
Strontium, total	0.253	0.0010	mg/L	2019-04-07	
Sulfur, total	15.0	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	0.000042	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.00105	0.000020	mg/L	2019-04-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-04-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-04-07	
Zirconium, total	0.00010	0.00010	mg/L	2019-04-07	

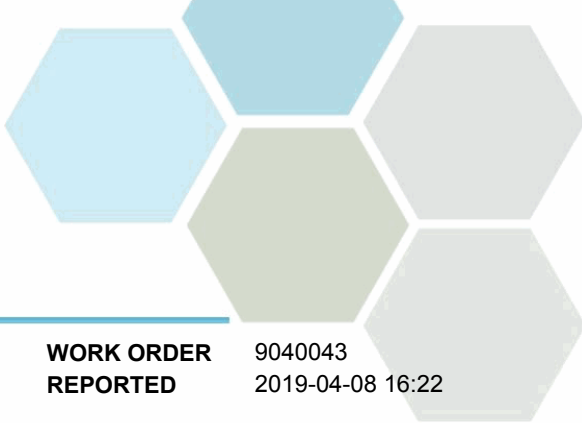
MW3D (9040043-03) | Matrix: Water | Sampled: 2019-03-30 13:15

<i>Anions</i>					
Chloride	2.39	0.10	mg/L	2019-04-03	
Fluoride	0.11	0.10	mg/L	2019-04-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	19.2	1.0	mg/L	2019-04-03	

<i>BCMOE Aggregate Hydrocarbons</i>					
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	68	60-140	%	2019-04-04	

<i>Calculated Parameters</i>					
Hardness, Total (as CaCO3)	101	0.500	mg/L	N/A	

<i>Dissolved Metals</i>					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	0.00143	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0222	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0213	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	31.8	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00095	0.00050	mg/L	2019-04-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW3D (9040043-03) | Matrix: Water | Sampled: 2019-03-30 13:15, Continued

Dissolved Metals, Continued

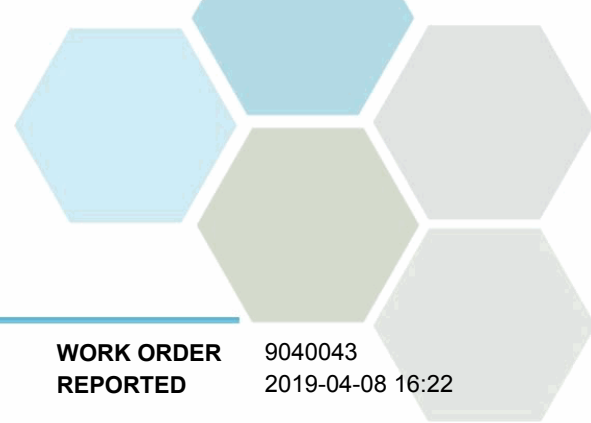
Cobalt, dissolved	0.00037	0.00010	mg/L	2019-04-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-04-05	
Iron, dissolved	0.184	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	5.22	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.352	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	0.00662	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00103	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	0.090	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.55	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	6.0	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	9.60	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.197	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	8.9	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000639	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	110	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	110	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	7.0	5.0	CU	2019-04-02	
Conductivity (EC)	255	2.0	µS/cm	2019-04-05	
pH	7.34	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	98.0	2.0	mg/L	2019-04-05	
Turbidity	38.3	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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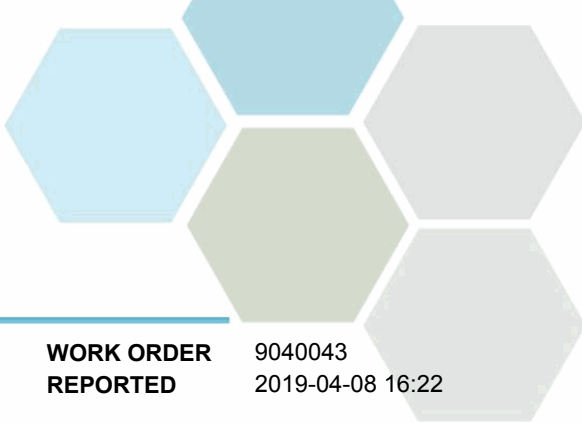
MW3D (9040043-03) | Matrix: Water | Sampled: 2019-03-30 13:15, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	63	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	95	50-140	%	2019-04-04	
Surrogate: Perylene-d12	82	50-140	%	2019-04-04	

Total Metals

Aluminum, total	0.133	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	0.00167	0.00050	mg/L	2019-04-07	
Barium, total	0.0236	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0236	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000134	0.000010	mg/L	2019-04-07	
Calcium, total	32.4	0.20	mg/L	2019-04-07	
Chromium, total	0.00100	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00047	0.00010	mg/L	2019-04-07	
Copper, total	0.00329	0.00040	mg/L	2019-04-07	
Iron, total	0.244	0.010	mg/L	2019-04-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-04-07	
Lithium, total	0.00016	0.00010	mg/L	2019-04-07	
Magnesium, total	5.51	0.010	mg/L	2019-04-07	
Manganese, total	0.352	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW3D (9040043-03) Matrix: Water Sampled: 2019-03-30 13:15, Continued					
<i>Total Metals, Continued</i>					
Molybdenum, total	0.00650	0.00010	mg/L	2019-04-07	
Nickel, total	0.00224	0.00040	mg/L	2019-04-07	
Phosphorus, total	0.091	0.050	mg/L	2019-04-07	
Potassium, total	0.62	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	6.6	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	10.2	0.10	mg/L	2019-04-07	
Strontium, total	0.208	0.0010	mg/L	2019-04-07	
Sulfur, total	7.8	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-04-07	
Thorium, total	0.00023	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000737	0.000020	mg/L	2019-04-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-04-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-04-07	
Zirconium, total	0.00019	0.00010	mg/L	2019-04-07	

MW2 (9040043-04) | Matrix: Water | Sampled: 2019-03-30 14:00

Anions

Chloride	5.55	0.10	mg/L	2019-04-03	
Fluoride	0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	15.3	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

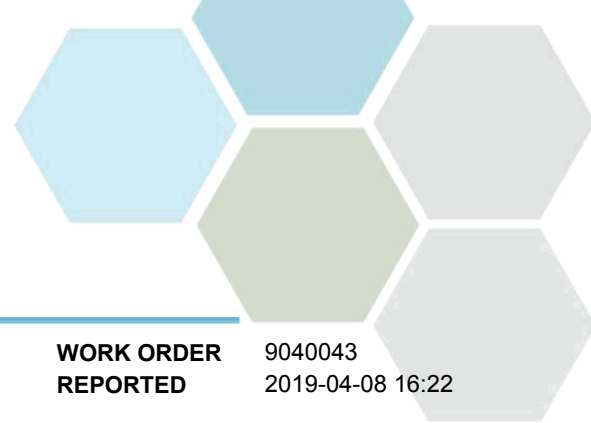
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	86	60-140	%	2019-04-04	

Calculated Parameters

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

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	



TEST RESULTS

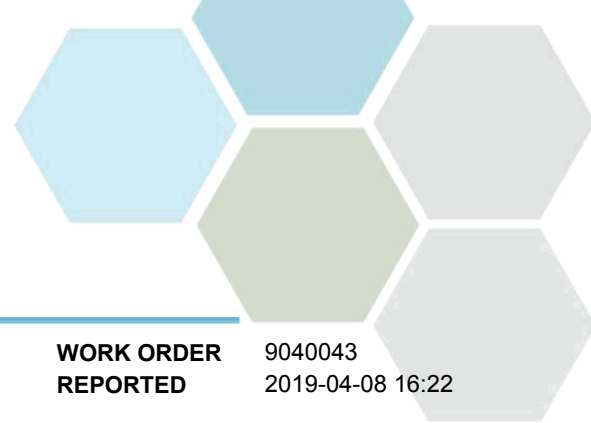
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (9040043-04) Matrix: Water Sampled: 2019-03-30 14:00, Continued					
<i>Dissolved Metals, Continued</i>					
Arsenic, dissolved	0.00223	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0315	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0222	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	38.6	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00096	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	0.00034	0.00010	mg/L	2019-04-05	
Copper, dissolved	< 0.00040	0.00040	mg/L	2019-04-05	
Iron, dissolved	0.354	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	7.19	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.518	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	0.00423	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00059	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	0.156	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.66	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	6.8	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	8.91	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.176	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	7.4	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000832	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	131	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	131	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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MW2 (9040043-04) | Matrix: Water | Sampled: 2019-03-30 14:00, Continued

General Parameters, Continued

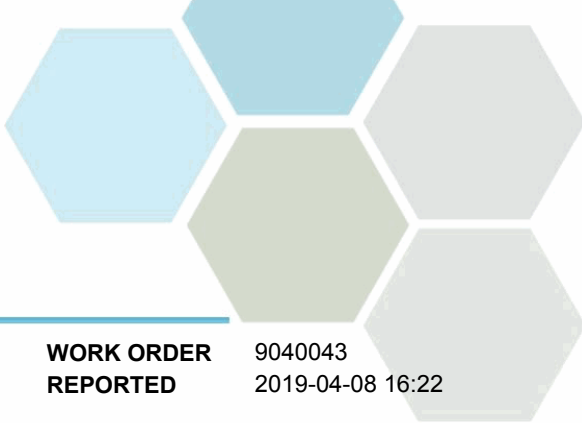
Colour, True	8.5	5.0	CU	2019-04-02	
Conductivity (EC)	296	2.0	µS/cm	2019-04-05	
pH	7.42	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	20.6	2.0	mg/L	2019-04-05	
Turbidity	23.9	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	69	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	105	50-140	%	2019-04-04	
Surrogate: Perylene-d12	96	50-140	%	2019-04-04	

Total Metals

Aluminum, total	0.221	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	0.00222	0.00050	mg/L	2019-04-07	
Barium, total	0.0318	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0237	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000042	0.000010	mg/L	2019-04-07	
Calcium, total	37.9	0.20	mg/L	2019-04-07	
Chromium, total	0.00087	0.00050	mg/L	2019-04-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
MW2 (9040043-04) Matrix: Water Sampled: 2019-03-30 14:00, Continued					
<i>Total Metals, Continued</i>					
Cobalt, total	0.00053	0.00010	mg/L	2019-04-07	
Copper, total	0.00070	0.00040	mg/L	2019-04-07	
Iron, total	0.510	0.010	mg/L	2019-04-07	
Lead, total	0.00041	0.00020	mg/L	2019-04-07	
Lithium, total	0.00012	0.00010	mg/L	2019-04-07	
Magnesium, total	7.18	0.010	mg/L	2019-04-07	
Manganese, total	0.474	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00416	0.00010	mg/L	2019-04-07	
Nickel, total	0.00123	0.00040	mg/L	2019-04-07	
Phosphorus, total	0.111	0.050	mg/L	2019-04-07	
Potassium, total	0.68	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	7.0	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	8.79	0.10	mg/L	2019-04-07	
Strontium, total	0.172	0.0010	mg/L	2019-04-07	
Sulfur, total	6.6	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	0.000023	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	0.0079	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000845	0.000020	mg/L	2019-04-07	
Vanadium, total	0.0014	0.0010	mg/L	2019-04-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-04-07	
Zirconium, total	0.00011	0.00010	mg/L	2019-04-07	

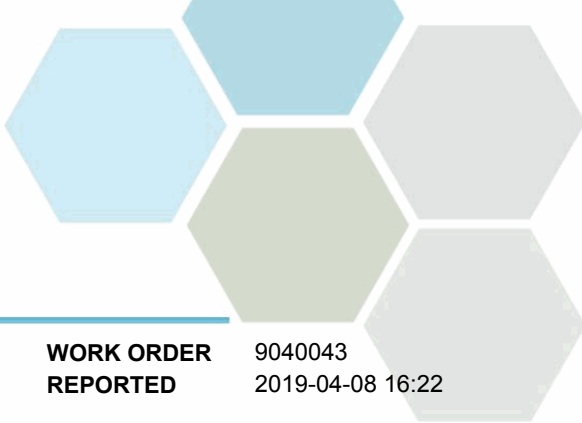
SB1 (9040043-05) | Matrix: Water | Sampled: 2019-03-30 12:00

Anions

Chloride	3.14	0.10	mg/L	2019-04-03	
Fluoride	< 0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	0.190	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	42.3	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

EPHw10-19	< 250	250	µg/L	2019-04-04	S09
EPHw19-32	< 250	250	µg/L	2019-04-04	S09
LEPHw	< 250	250	µg/L	N/A	

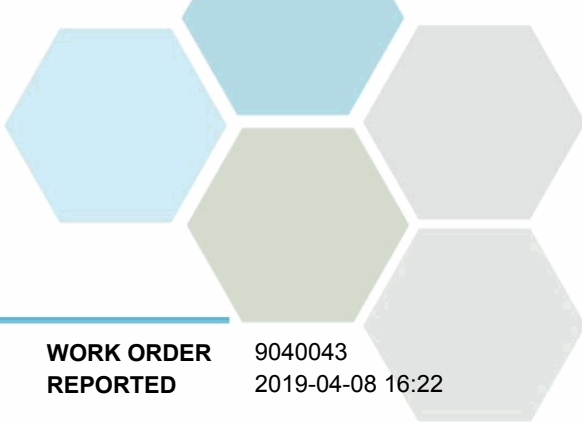


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
SB1 (9040043-05) Matrix: Water Sampled: 2019-03-30 12:00, Continued					
BCMOE Aggregate Hydrocarbons, Continued					
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	58	60-140	%	2019-04-04	S09
Calculated Parameters					
Hardness, Total (as CaCO3)	119	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	0.0102	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0052	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0055	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	0.000012	0.000010	mg/L	2019-04-05	
Calcium, dissolved	41.9	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00097	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	0.00011	0.00010	mg/L	2019-04-05	
Copper, dissolved	0.00063	0.00040	mg/L	2019-04-05	
Iron, dissolved	0.016	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	3.54	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.00077	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	0.00048	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00212	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.27	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	3.6	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	3.14	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.0981	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	15.8	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000367	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	

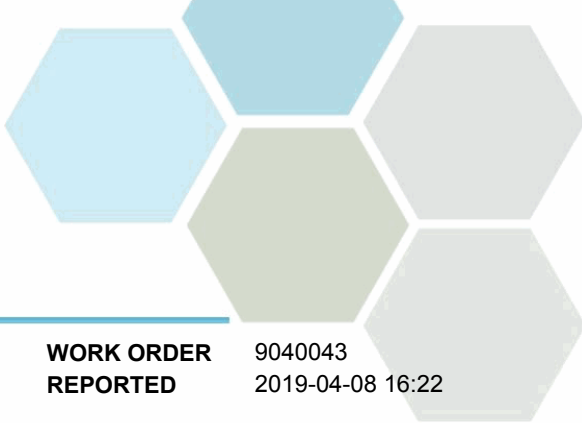


TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
SB1 (9040043-05) Matrix: Water Sampled: 2019-03-30 12:00, Continued					
<i>Dissolved Metals, Continued</i>					
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
<i>General Parameters</i>					
Alkalinity, Total (as CaCO3)	86.2	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	86.2	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	< 5.0	5.0	CU	2019-04-02	
Conductivity (EC)	266	2.0	µS/cm	2019-04-05	
pH	6.89	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	122	2.0	mg/L	2019-04-05	
Turbidity	67.9	0.10	NTU	2019-04-02	
<i>Polycyclic Aromatic Hydrocarbons (PAH)</i>					
Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	67	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	101	50-140	%	2019-04-04	
Surrogate: Perylene-d12	97	50-140	%	2019-04-04	
<i>Total Metals</i>					
Aluminum, total	1.46	0.0050	mg/L	2019-04-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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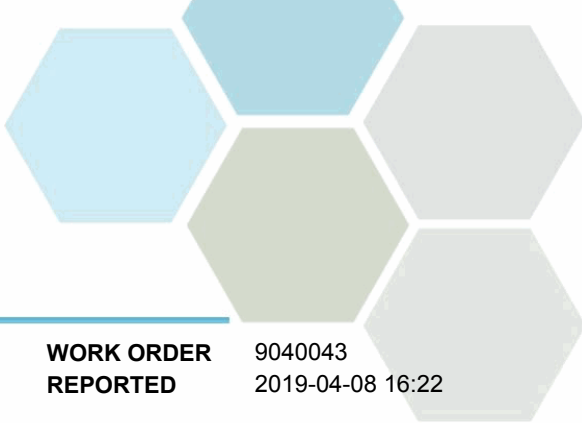
WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
SB1 (9040043-05) Matrix: Water Sampled: 2019-03-30 12:00, Continued					
<i>Total Metals, Continued</i>					
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-04-07	
Barium, total	0.0152	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0061	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000016	0.000010	mg/L	2019-04-07	
Calcium, total	41.2	0.20	mg/L	2019-04-07	
Chromium, total	0.00209	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00231	0.00010	mg/L	2019-04-07	
Copper, total	0.00575	0.00040	mg/L	2019-04-07	
Iron, total	1.59	0.010	mg/L	2019-04-07	
Lead, total	0.00196	0.00020	mg/L	2019-04-07	
Lithium, total	0.00055	0.00010	mg/L	2019-04-07	
Magnesium, total	4.08	0.010	mg/L	2019-04-07	
Manganese, total	0.0642	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00031	0.00010	mg/L	2019-04-07	
Nickel, total	0.00339	0.00040	mg/L	2019-04-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-04-07	
Potassium, total	0.40	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	5.4	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	3.27	0.10	mg/L	2019-04-07	
Strontium, total	0.101	0.0010	mg/L	2019-04-07	
Sulfur, total	15.8	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	0.0639	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000450	0.000020	mg/L	2019-04-07	
Vanadium, total	0.0047	0.0010	mg/L	2019-04-07	
Zinc, total	0.0070	0.0040	mg/L	2019-04-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-04-07	

SB2 (9040043-06) | Matrix: Water | Sampled: 2019-03-30 12:15

Anions

Chloride	20.2	0.10	mg/L	2019-04-03	
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TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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SB2 (9040043-06) | Matrix: Water | Sampled: 2019-03-30 12:15, Continued

Anions, Continued

Fluoride	< 0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	0.191	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	39.0	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

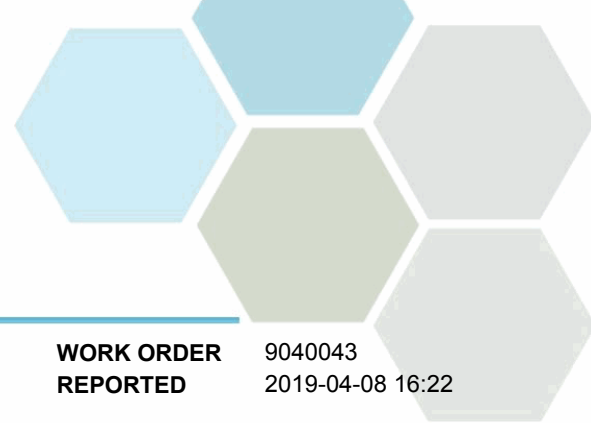
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	62	60-140	%	2019-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	183	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0058	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0138	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	60.9	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00088	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Copper, dissolved	0.00069	0.00040	mg/L	2019-04-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	0.00011	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	7.44	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.00067	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	0.00050	0.00010	mg/L	2019-04-05	
Nickel, dissolved	0.00054	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.83	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	5.6	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	12.0	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.184	0.0010	mg/L	2019-04-05	



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SB2 (9040043-06) | Matrix: Water | Sampled: 2019-03-30 12:15, Continued

Dissolved Metals, Continued

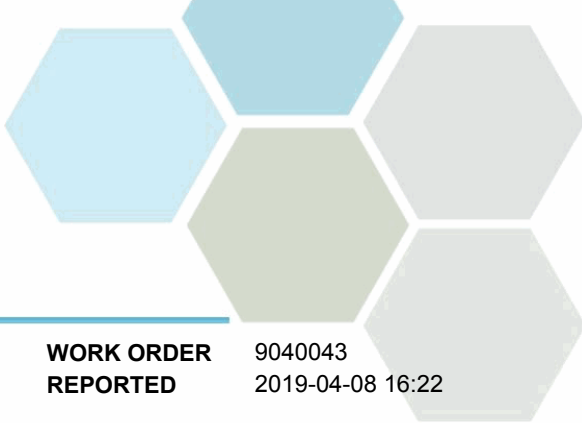
Sulfur, dissolved	14.7	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000849	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	88.3	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	88.3	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	< 5.0	5.0	CU	2019-04-02	
Conductivity (EC)	443	2.0	µS/cm	2019-04-05	
pH	6.66	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	66.0	2.0	mg/L	2019-04-05	
Turbidity	69.2	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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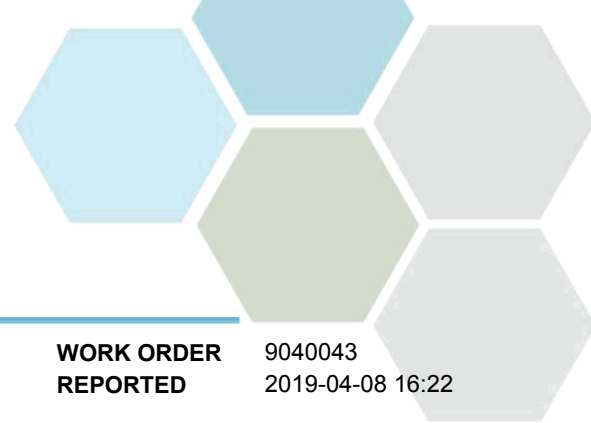
SB2 (9040043-06) | Matrix: Water | Sampled: 2019-03-30 12:15, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	74	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	121	50-140	%	2019-04-04	
Surrogate: Perylene-d12	111	50-140	%	2019-04-04	

Total Metals

Aluminum, total	1.37	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-04-07	
Barium, total	0.0134	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0150	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000016	0.000010	mg/L	2019-04-07	
Calcium, total	61.1	0.20	mg/L	2019-04-07	
Chromium, total	0.00275	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00169	0.00010	mg/L	2019-04-07	
Copper, total	0.00667	0.00040	mg/L	2019-04-07	
Iron, total	1.45	0.010	mg/L	2019-04-07	
Lead, total	0.00077	0.00020	mg/L	2019-04-07	
Lithium, total	0.00070	0.00010	mg/L	2019-04-07	
Magnesium, total	7.94	0.010	mg/L	2019-04-07	
Manganese, total	0.0831	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00038	0.00010	mg/L	2019-04-07	
Nickel, total	0.00267	0.00040	mg/L	2019-04-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-04-07	
Potassium, total	1.01	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	7.7	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	12.1	0.10	mg/L	2019-04-07	
Strontium, total	0.188	0.0010	mg/L	2019-04-07	
Sulfur, total	13.7	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	0.0631	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000919	0.000020	mg/L	2019-04-07	



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SB2 (9040043-06) | Matrix: Water | Sampled: 2019-03-30 12:15, Continued

Total Metals, Continued

Vanadium, total	0.0042	0.0010	mg/L	2019-04-07	
Zinc, total	0.0063	0.0040	mg/L	2019-04-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-04-07	

LE-1 (9040043-07) | Matrix: Water | Sampled: 2019-03-30 14:30

Anions

Chloride	3240	0.10	mg/L	2019-04-03	
Fluoride	< 0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	1.42	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	1660	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

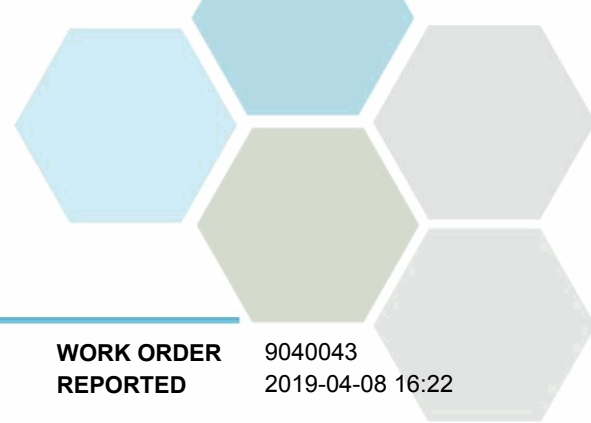
EPHw10-19	< 250	250	µg/L	2019-04-04	
EPHw19-32	< 250	250	µg/L	2019-04-04	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	78	60-140	%	2019-04-04	

Calculated Parameters

Hardness, Total (as CaCO3)	3100	0.500	mg/L	N/A	
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Dissolved Metals

Aluminum, dissolved	0.0129	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0074	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.210	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	0.000536	0.000010	mg/L	2019-04-05	
Calcium, dissolved	862	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00155	0.00050	mg/L	2019-04-05	
Cobalt, dissolved	0.00048	0.00010	mg/L	2019-04-05	
Copper, dissolved	0.00164	0.00040	mg/L	2019-04-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	0.00021	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	231	0.010	mg/L	2019-04-05	
Manganese, dissolved	12.1	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Molybdenum, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9040043-07) | Matrix: Water | Sampled: 2019-03-30 14:30, Continued

Dissolved Metals, Continued

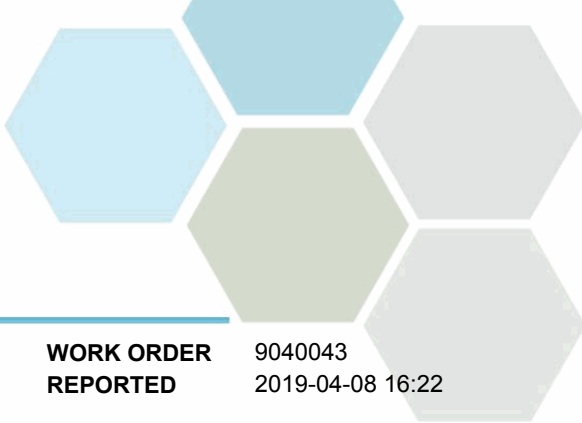
Nickel, dissolved	0.00596	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-04-05	
Potassium, dissolved	23.3	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	6.3	1.0	mg/L	2019-04-05	
Silver, dissolved	0.000080	0.000050	mg/L	2019-04-05	
Sodium, dissolved	1650	0.10	mg/L	2019-04-05	
Strontium, dissolved	4.26	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	722	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000044	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	0.0233	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Colour, True	13	5.0	CU	2019-04-02	
Conductivity (EC)	12200	2.0	µS/cm	2019-04-05	
pH	6.66	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-04-05	
Turbidity	0.10	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	



TEST RESULTS

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Analyte	Result	RL	Units	Analyzed	Qualifier
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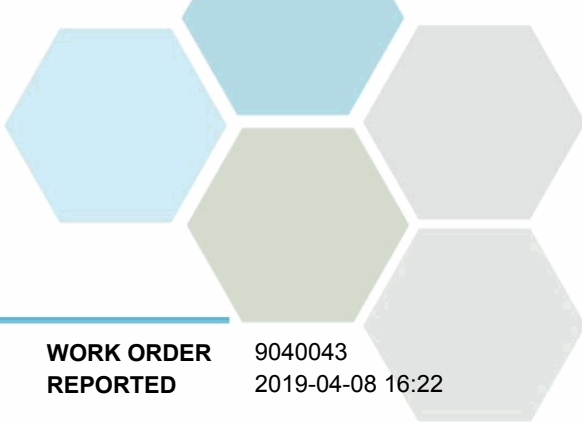
LE-1 (9040043-07) | Matrix: Water | Sampled: 2019-03-30 14:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	< 0.030	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	< 0.020	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	61	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	115	50-140	%	2019-04-04	
Surrogate: Perylene-d12	107	50-140	%	2019-04-04	

Total Metals

Aluminum, total	0.0361	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	0.00061	0.00050	mg/L	2019-04-07	
Barium, total	0.0072	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.230	0.0050	mg/L	2019-04-07	
Cadmium, total	0.000519	0.000010	mg/L	2019-04-07	
Calcium, total	864	0.20	mg/L	2019-04-07	
Chromium, total	0.00132	0.00050	mg/L	2019-04-07	
Cobalt, total	0.00048	0.00010	mg/L	2019-04-07	
Copper, total	0.00156	0.00040	mg/L	2019-04-07	
Iron, total	< 0.010	0.010	mg/L	2019-04-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-04-07	
Lithium, total	0.00032	0.00010	mg/L	2019-04-07	
Magnesium, total	223	0.010	mg/L	2019-04-07	
Manganese, total	11.4	0.00020	mg/L	2019-04-07	
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	< 0.00010	0.00010	mg/L	2019-04-07	
Nickel, total	0.00556	0.00040	mg/L	2019-04-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-04-07	
Potassium, total	22.5	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	6.1	1.0	mg/L	2019-04-07	
Silver, total	0.000061	0.000050	mg/L	2019-04-07	
Sodium, total	1600	0.10	mg/L	2019-04-07	
Strontium, total	4.19	0.0010	mg/L	2019-04-07	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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LE-1 (9040043-07) | Matrix: Water | Sampled: 2019-03-30 14:30, Continued

Total Metals, Continued

Sulfur, total	688	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000046	0.000020	mg/L	2019-04-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-04-07	
Zinc, total	0.0214	0.0040	mg/L	2019-04-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-04-07	

SW1 (9040043-08) | Matrix: Water | Sampled: 2019-03-30 13:30

Anions

Chloride	12.0	0.10	mg/L	2019-04-03	
Fluoride	< 0.10	0.10	mg/L	2019-04-03	
Nitrate (as N)	0.375	0.010	mg/L	2019-04-03	HT1
Nitrite (as N)	< 0.010	0.010	mg/L	2019-04-03	HT1
Sulfate	77.2	1.0	mg/L	2019-04-03	

BCMOE Aggregate Hydrocarbons

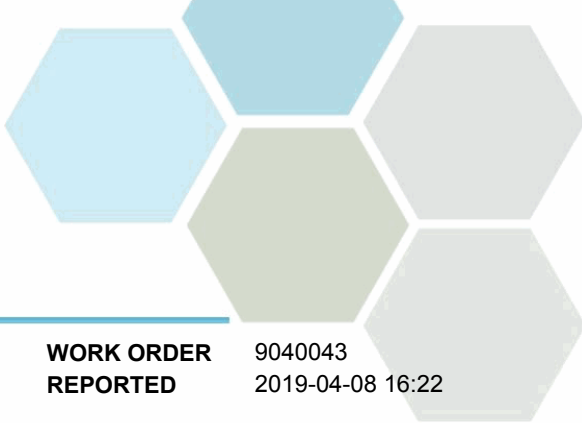
EPHw10-19	< 250	250	µg/L	2019-04-04	S09
EPHw19-32	< 250	250	µg/L	2019-04-04	S09
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	54	60-140	%	2019-04-04	S09

Calculated Parameters

Chromium, Trivalent	< 0.00100	0.00100	mg/L	N/A	
Hardness, Total (as CaCO3)	179	0.500	mg/L	N/A	

Dissolved Metals

Aluminum, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Barium, dissolved	0.0093	0.0050	mg/L	2019-04-05	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Boron, dissolved	0.0151	0.0050	mg/L	2019-04-05	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2019-04-05	
Calcium, dissolved	58.9	0.20	mg/L	2019-04-05	
Chromium, dissolved	0.00099	0.00050	mg/L	2019-04-05	



TEST RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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SW1 (9040043-08) | Matrix: Water | Sampled: 2019-03-30 13:30, Continued

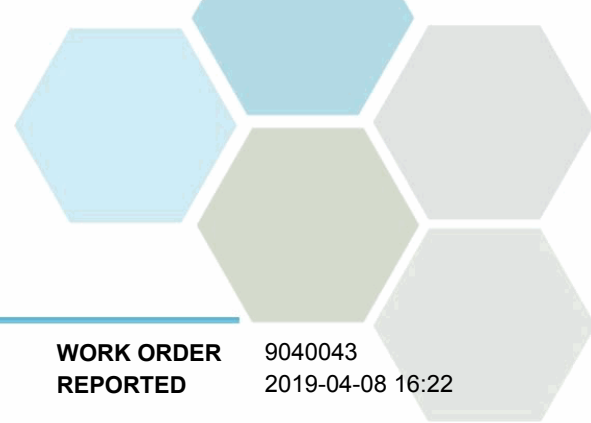
Dissolved Metals, Continued

Cobalt, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Copper, dissolved	0.00082	0.00040	mg/L	2019-04-05	
Iron, dissolved	< 0.010	0.010	mg/L	2019-04-05	
Lead, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Lithium, dissolved	0.00013	0.00010	mg/L	2019-04-05	
Magnesium, dissolved	7.77	0.010	mg/L	2019-04-05	
Manganese, dissolved	0.00105	0.00020	mg/L	2019-04-05	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, dissolved	0.00067	0.00010	mg/L	2019-04-05	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2019-04-05	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2019-04-05	
Potassium, dissolved	0.59	0.10	mg/L	2019-04-05	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Silicon, dissolved	4.6	1.0	mg/L	2019-04-05	
Silver, dissolved	< 0.000050	0.000050	mg/L	2019-04-05	
Sodium, dissolved	7.91	0.10	mg/L	2019-04-05	
Strontium, dissolved	0.155	0.0010	mg/L	2019-04-05	
Sulfur, dissolved	28.7	3.0	mg/L	2019-04-05	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2019-04-05	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2019-04-05	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	
Tin, dissolved	< 0.00020	0.00020	mg/L	2019-04-05	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2019-04-05	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Uranium, dissolved	0.000909	0.000020	mg/L	2019-04-05	
Vanadium, dissolved	< 0.0010	0.0010	mg/L	2019-04-05	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2019-04-05	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2019-04-05	

General Parameters

Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2019-04-02	
Chromium, Hexavalent	< 0.0010	0.0010	mg/L	2019-04-02	
Colour, True	< 5.0	5.0	CU	2019-04-02	
Conductivity (EC)	409	2.0	µS/cm	2019-04-05	
pH	7.33	0.10	pH units	2019-04-05	HT2
Solids, Total Suspended	< 2.0	2.0	mg/L	2019-04-05	
Turbidity	< 0.10	0.10	NTU	2019-04-02	

Polycyclic Aromatic Hydrocarbons (PAH)



TEST RESULTS

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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
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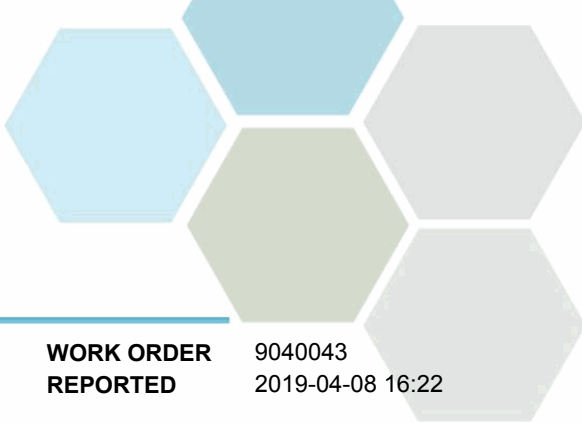
SW1 (9040043-08) | Matrix: Water | Sampled: 2019-03-30 13:30, Continued

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Acenaphthene	< 0.050	0.050	µg/L	2019-04-04	
Acenaphthylene	< 0.200	0.200	µg/L	2019-04-04	
Acridine	< 0.050	0.050	µg/L	2019-04-04	
Anthracene	< 0.010	0.010	µg/L	2019-04-04	
Benz(a)anthracene	0.018	0.010	µg/L	2019-04-04	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2019-04-04	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2019-04-04	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2019-04-04	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Chrysene	< 0.050	0.050	µg/L	2019-04-04	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2019-04-04	
Fluoranthene	0.042	0.030	µg/L	2019-04-04	
Fluorene	< 0.050	0.050	µg/L	2019-04-04	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2019-04-04	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2019-04-04	
Naphthalene	< 0.200	0.200	µg/L	2019-04-04	
Phenanthrene	< 0.100	0.100	µg/L	2019-04-04	
Pyrene	0.024	0.020	µg/L	2019-04-04	
Quinoline	< 0.050	0.050	µg/L	2019-04-04	
Surrogate: Acridine-d9	83	50-140	%	2019-04-04	
Surrogate: Naphthalene-d8	135	50-140	%	2019-04-04	
Surrogate: Perylene-d12	129	50-140	%	2019-04-04	

Total Metals

Aluminum, total	0.0099	0.0050	mg/L	2019-04-07	
Antimony, total	< 0.00020	0.00020	mg/L	2019-04-07	
Arsenic, total	< 0.00050	0.00050	mg/L	2019-04-07	
Barium, total	0.0096	0.0050	mg/L	2019-04-07	
Beryllium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Bismuth, total	< 0.00010	0.00010	mg/L	2019-04-07	
Boron, total	0.0169	0.0050	mg/L	2019-04-07	
Cadmium, total	< 0.000010	0.000010	mg/L	2019-04-07	
Calcium, total	59.4	0.20	mg/L	2019-04-07	
Chromium, total	0.00093	0.00050	mg/L	2019-04-07	
Cobalt, total	< 0.00010	0.00010	mg/L	2019-04-07	
Copper, total	0.00107	0.00040	mg/L	2019-04-07	
Iron, total	< 0.010	0.010	mg/L	2019-04-07	
Lead, total	< 0.00020	0.00020	mg/L	2019-04-07	
Lithium, total	0.00023	0.00010	mg/L	2019-04-07	
Magnesium, total	8.02	0.010	mg/L	2019-04-07	
Manganese, total	0.00291	0.00020	mg/L	2019-04-07	



TEST RESULTS

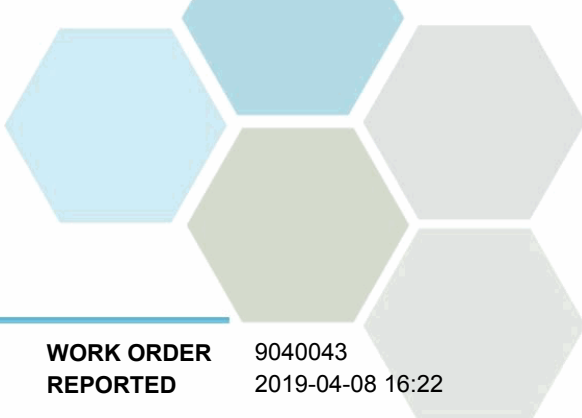
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (9040043-08) Matrix: Water Sampled: 2019-03-30 13:30, Continued					
<i>Total Metals, Continued</i>					
Mercury, total	< 0.000010	0.000010	mg/L	2019-04-08	
Molybdenum, total	0.00068	0.00010	mg/L	2019-04-07	
Nickel, total	0.00053	0.00040	mg/L	2019-04-07	
Phosphorus, total	< 0.050	0.050	mg/L	2019-04-07	
Potassium, total	0.64	0.10	mg/L	2019-04-07	
Selenium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Silicon, total	4.8	1.0	mg/L	2019-04-07	
Silver, total	< 0.000050	0.000050	mg/L	2019-04-07	
Sodium, total	8.26	0.10	mg/L	2019-04-07	
Strontium, total	0.159	0.0010	mg/L	2019-04-07	
Sulfur, total	29.2	3.0	mg/L	2019-04-07	
Tellurium, total	< 0.00050	0.00050	mg/L	2019-04-07	
Thallium, total	< 0.000020	0.000020	mg/L	2019-04-07	
Thorium, total	< 0.00010	0.00010	mg/L	2019-04-07	
Tin, total	< 0.00020	0.00020	mg/L	2019-04-07	
Titanium, total	< 0.0050	0.0050	mg/L	2019-04-07	
Tungsten, total	< 0.0010	0.0010	mg/L	2019-04-07	
Uranium, total	0.000901	0.000020	mg/L	2019-04-07	
Vanadium, total	< 0.0010	0.0010	mg/L	2019-04-07	
Zinc, total	< 0.0040	0.0040	mg/L	2019-04-07	
Zirconium, total	< 0.00010	0.00010	mg/L	2019-04-07	

Sample Qualifiers:

- HT1 The sample was prepared and/or analyzed past the recommended holding time.
- HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
- S09 The surrogate recovery for this sample is outside of established control limits .



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Allterra Construction
P17-932

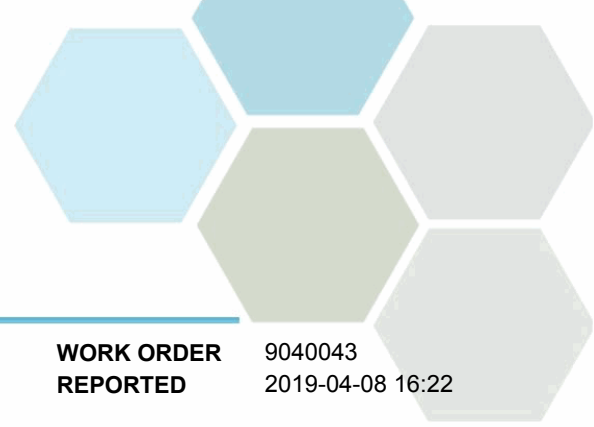
WORK ORDER REPORTED 9040043
2019-04-08 16:22

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

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

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
CU	Colour Units (referenced against a platinum cobalt standard)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
pH units	pH < 7 = acidic, pH > 7 = basic
µg/L	Micrograms per litre
µS/cm	Microsiemens per centimetre
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association



APPENDIX 1: SUPPORTING INFORMATION

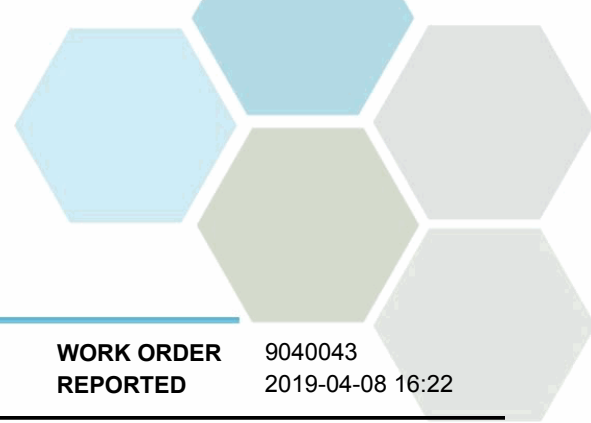
REPORTED TO Allterra Construction
PROJECT P17-932

WORK ORDER 9040043
REPORTED 2019-04-08 16:22

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

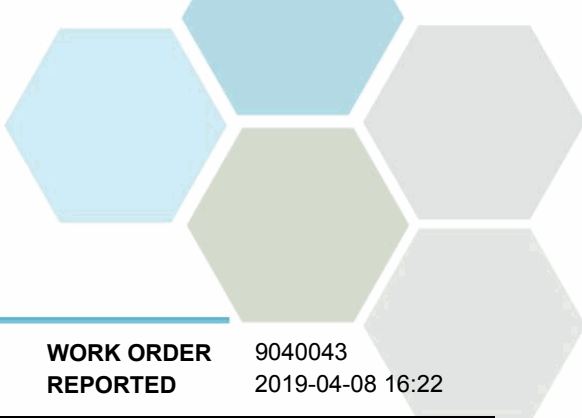
WORK ORDER REPORTED 9040043
2019-04-08 16:22

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 B9D0121									
Blank (B9D0121-BLK1)			Prepared: 2019-04-03, Analyzed: 2019-04-03						
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 (B9D0121-BS1)			Prepared: 2019-04-03, Analyzed: 2019-04-03						
Chloride	16.1	0.10 mg/L	16.0		100	90-110			
Fluoride	3.99	0.10 mg/L	4.00		100	88-108			
Nitrate (as N)	4.03	0.010 mg/L	4.00		101	93-108			
Nitrite (as N)	1.96	0.010 mg/L	2.00		98	85-114			
Sulfate	15.9	1.0 mg/L	16.0		99	91-109			
Duplicate (B9D0121-DUP1)			Source: 9040043-02		Prepared: 2019-04-03, Analyzed: 2019-04-03				
Chloride	14.1	0.10 mg/L		14.2			< 1		10
Fluoride	< 0.10	0.10 mg/L		< 0.10					10
Nitrate (as N)	< 0.010	0.010 mg/L		< 0.010					10
Nitrite (as N)	< 0.010	0.010 mg/L		< 0.010					6
Sulfate	40.3	1.0 mg/L		40.7			< 1		6
Matrix Spike (B9D0121-MS1)			Source: 9040043-02		Prepared: 2019-04-03, Analyzed: 2019-04-03				
Chloride	30.0	0.10 mg/L	16.0	14.2	99	75-125			
Fluoride	4.01	0.10 mg/L	4.00	< 0.10	98	75-125			
Nitrate (as N)	4.00	0.010 mg/L	4.00	< 0.010	100	75-125			
Nitrite (as N)	1.84	0.010 mg/L	2.00	< 0.010	92	80-120			
Sulfate	56.4	1.0 mg/L	16.0	40.7	98	75-125			
BCMOE Aggregate Hydrocarbons, Batch B9D0205									
Blank (B9D0205-BLK1)			Prepared: 2019-04-03, Analyzed: 2019-04-03						
EPHw10-19	< 250	250 µg/L							S09
EPHw19-32	< 250	250 µg/L							S09
Surrogate: 2-Methylnonane (EPH/F2-4)	161	µg/L	444		36	60-140			S09



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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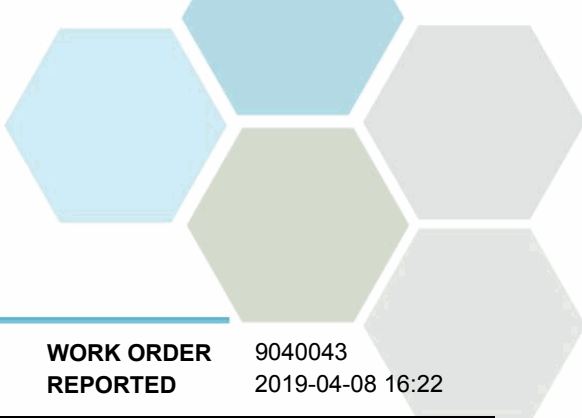
BCMOE Aggregate Hydrocarbons, Batch B9D0205, Continued

LCS (B9D0205-BS2)			Prepared: 2019-04-03, Analyzed: 2019-04-03						
EPHw10-19	20000	250 µg/L	15400	130	70-130				
EPHw19-32	25500	250 µg/L	22100	115	70-130				
Surrogate: 2-Methylnonane (EPH/F2-4)	326	µg/L	444	73	60-140				

Dissolved Metals, Batch B9D0410

Blank (B9D0410-BLK1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0010	0.0010 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

Blank (B9D0410-BLK2)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							
Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0050	0.0050 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							



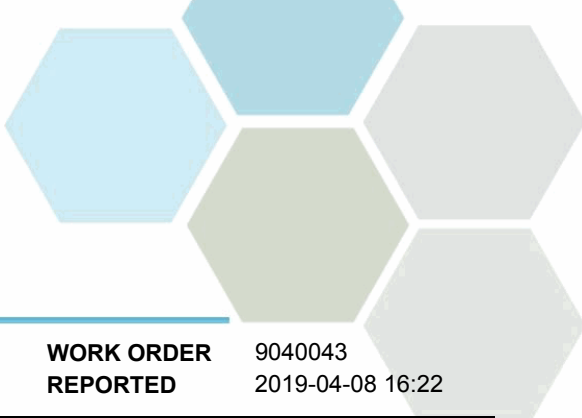
APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B9D0410, Continued									
Blank (B9D0410-BLK2), Continued					Prepared: 2019-04-05, Analyzed: 2019-04-05				
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 (B9D0410-BS1)					Prepared: 2019-04-05, Analyzed: 2019-04-05				
Aluminum, dissolved	0.0201	0.0050 mg/L	0.0200		100	80-120			
Antimony, dissolved	0.0215	0.00020 mg/L	0.0200		107	80-120			
Arsenic, dissolved	0.0206	0.00050 mg/L	0.0200		103	80-120			
Barium, dissolved	0.0193	0.0050 mg/L	0.0200		97	80-120			
Beryllium, dissolved	0.0197	0.00010 mg/L	0.0200		98	80-120			
Bismuth, dissolved	0.0214	0.00010 mg/L	0.0200		107	80-120			
Boron, dissolved	0.0205	0.0050 mg/L	0.0200		102	80-120			
Cadmium, dissolved	0.0203	0.000010 mg/L	0.0200		101	80-120			
Calcium, dissolved	2.18	0.20 mg/L	2.00		109	80-120			
Chromium, dissolved	0.0197	0.00050 mg/L	0.0200		98	80-120			
Cobalt, dissolved	0.0199	0.00010 mg/L	0.0200		100	80-120			
Copper, dissolved	0.0209	0.00040 mg/L	0.0200		105	80-120			
Iron, dissolved	2.08	0.010 mg/L	2.00		104	80-120			
Lead, dissolved	0.0209	0.00020 mg/L	0.0200		105	80-120			
Lithium, dissolved	0.0192	0.00010 mg/L	0.0200		96	80-120			
Magnesium, dissolved	1.93	0.010 mg/L	2.00		97	80-120			
Manganese, dissolved	0.0202	0.00020 mg/L	0.0200		101	80-120			
Molybdenum, dissolved	0.0202	0.00010 mg/L	0.0200		101	80-120			
Nickel, dissolved	0.0205	0.00040 mg/L	0.0200		102	80-120			
Phosphorus, dissolved	1.99	0.050 mg/L	2.00		99	80-120			
Potassium, dissolved	1.80	0.10 mg/L	2.00		90	80-120			
Selenium, dissolved	0.0219	0.00050 mg/L	0.0200		109	80-120			
Silicon, dissolved	2.0	1.0 mg/L	2.00		101	80-120			
Silver, dissolved	0.0203	0.000050 mg/L	0.0200		101	80-120			
Sodium, dissolved	1.92	0.10 mg/L	2.00		96	80-120			
Strontium, dissolved	0.0194	0.0010 mg/L	0.0200		97	80-120			



APPENDIX 2: QUALITY CONTROL RESULTS

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WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B9D0410, Continued

LCS (B9D0410-BS1), Continued				Prepared: 2019-04-05, Analyzed: 2019-04-05					
Sulfur, dissolved	4.6	3.0 mg/L	5.00	91	80-120				
Tellurium, dissolved	0.0220	0.00050 mg/L	0.0200	110	80-120				
Thallium, dissolved	0.0212	0.000020 mg/L	0.0200	106	80-120				
Thorium, dissolved	0.0201	0.00010 mg/L	0.0200	101	80-120				
Tin, dissolved	0.0215	0.00020 mg/L	0.0200	108	80-120				
Titanium, dissolved	0.0209	0.0050 mg/L	0.0200	105	80-120				
Tungsten, dissolved	0.0215	0.0010 mg/L	0.0200	107	80-120				
Uranium, dissolved	0.0219	0.000020 mg/L	0.0200	109	80-120				
Vanadium, dissolved	0.0194	0.0010 mg/L	0.0200	97	80-120				
Zinc, dissolved	0.0232	0.0040 mg/L	0.0200	116	80-120				
Zirconium, dissolved	0.0197	0.00010 mg/L	0.0200	98	80-120				

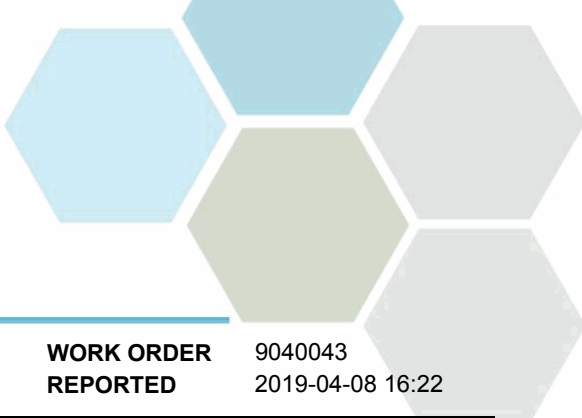
Reference (B9D0410-SRM1)				Prepared: 2019-04-05, Analyzed: 2019-04-05					
Aluminum, dissolved	0.215	0.0050 mg/L	0.233	92	79-114				
Antimony, dissolved	0.0487	0.00020 mg/L	0.0430	113	89-123				
Arsenic, dissolved	0.472	0.00050 mg/L	0.438	108	87-113				
Barium, dissolved	3.00	0.0050 mg/L	3.35	90	85-114				
Beryllium, dissolved	0.211	0.00010 mg/L	0.213	99	79-122				
Boron, dissolved	1.59	0.0050 mg/L	1.74	92	79-117				
Cadmium, dissolved	0.231	0.000010 mg/L	0.224	103	89-112				
Calcium, dissolved	7.44	0.20 mg/L	7.69	97	85-120				
Chromium, dissolved	0.436	0.00050 mg/L	0.437	100	87-113				
Cobalt, dissolved	0.127	0.00010 mg/L	0.128	100	90-117				
Copper, dissolved	0.863	0.00040 mg/L	0.844	102	90-115				
Iron, dissolved	1.35	0.010 mg/L	1.29	104	86-112				
Lead, dissolved	0.114	0.00020 mg/L	0.112	102	90-113				
Lithium, dissolved	0.0977	0.00010 mg/L	0.104	94	77-127				
Magnesium, dissolved	6.37	0.010 mg/L	6.92	92	84-116				
Manganese, dissolved	0.336	0.00020 mg/L	0.345	97	85-113				
Molybdenum, dissolved	0.426	0.00010 mg/L	0.426	100	87-112				
Nickel, dissolved	0.860	0.00040 mg/L	0.840	102	90-114				
Phosphorus, dissolved	0.486	0.050 mg/L	0.495	98	74-119				
Potassium, dissolved	2.68	0.10 mg/L	3.19	84	78-119				
Selenium, dissolved	0.0389	0.00050 mg/L	0.0331	117	89-123				
Sodium, dissolved	16.8	0.10 mg/L	19.1	88	81-117				
Strontium, dissolved	0.895	0.0010 mg/L	0.916	98	82-111				
Thallium, dissolved	0.0404	0.000020 mg/L	0.0393	103	90-113				
Uranium, dissolved	0.249	0.000020 mg/L	0.266	94	87-113				
Vanadium, dissolved	0.854	0.0010 mg/L	0.869	98	85-110				
Zinc, dissolved	1.00	0.0040 mg/L	0.881	114	88-114				

Dissolved Metals, Batch B9D0420

Blank (B9D0420-BLK1)				Prepared: 2019-04-05, Analyzed: 2019-04-05					
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Reference (B9D0420-SRM1)				Prepared: 2019-04-05, Analyzed: 2019-04-05					
Mercury, dissolved	0.00412	0.000010 mg/L	0.00489	84	80-120				

Dissolved Metals, Batch B9D0575

Blank (B9D0575-BLK1)				Prepared: 2019-04-08, Analyzed: 2019-04-08					
Mercury, dissolved	< 0.000010	0.000010 mg/L							

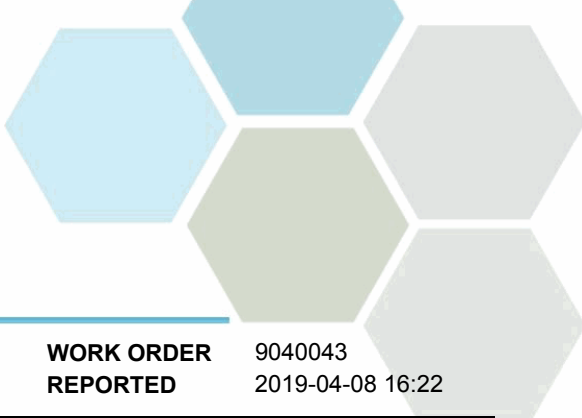


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B9D0575, Continued									
Reference (B9D0575-SRM1)			Prepared: 2019-04-08, Analyzed: 2019-04-08						
Mercury, dissolved	0.00429	0.000010 mg/L	0.00489		88	80-120			
General Parameters, Batch B9D0097									
Blank (B9D0097-BLK1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B9D0097-BLK2)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
Blank (B9D0097-BLK3)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0 mg/L							
LCS (B9D0097-BS1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	105	1.0 mg/L	100		105	92-106			
LCS (B9D0097-BS2)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	106	1.0 mg/L	100		106	92-106			
LCS (B9D0097-BS3)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Alkalinity, Total (as CaCO3)	105	1.0 mg/L	100		105	92-106			
General Parameters, Batch B9D0109									
Blank (B9D0109-BLK1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Chromium, Hexavalent	< 0.0010	0.0010 mg/L							
LCS (B9D0109-BS1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Chromium, Hexavalent	0.101	0.0010 mg/L	0.100		101	90-111			
Matrix Spike (B9D0109-MS1)			Source: 9040043-08		Prepared: 2019-04-02, Analyzed: 2019-04-02				
Chromium, Hexavalent	0.0911	0.0010 mg/L	0.100	< 0.0010	91	70-116			
General Parameters, Batch B9D0174									
Blank (B9D0174-BLK1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Colour, True	< 5.0	5.0 CU							
LCS (B9D0174-BS1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Colour, True	20	5.0 CU	20.0		99	85-115			
General Parameters, Batch B9D0188									

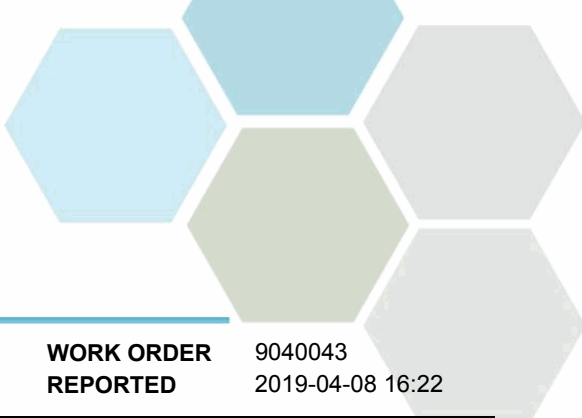


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
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WORK ORDER REPORTED 9040043
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B9D0188, Continued									
Blank (B9D0188-BLK1)			Prepared: 2019-04-02, Analyzed: 2019-04-02						
Turbidity	< 0.10	0.10 NTU							
Duplicate (B9D0188-DUP1)			Source: 9040043-06 Prepared: 2019-04-02, Analyzed: 2019-04-02						
Turbidity	67.9	0.10 NTU		69.2			2	18	
General Parameters, Batch B9D0380									
Blank (B9D0380-BLK1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B9D0380-BS1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Solids, Total Suspended	104	10.0 mg/L	100		104	83-107			
General Parameters, Batch B9D0421									
Blank (B9D0421-BLK1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B9D0421-BS1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Conductivity (EC)	149	2.0 µS/cm	147		101	90-110			
Reference (B9D0421-SRM1)			Prepared: 2019-04-05, Analyzed: 2019-04-05						
Conductivity (EC)	1030	2.0 µS/cm	1000		103	95-105			
General Parameters, Batch B9D0422									
Duplicate (B9D0422-DUP2)			Source: 9040043-08 Prepared: 2019-04-05, Analyzed: 2019-04-05						
pH	7.28	0.10 pH units		7.33			< 1	4	
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9D0205									
Blank (B9D0205-BLK1)			Prepared: 2019-04-03, Analyzed: 2019-04-03						
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	2.62	µg/L	4.38		60	50-140			

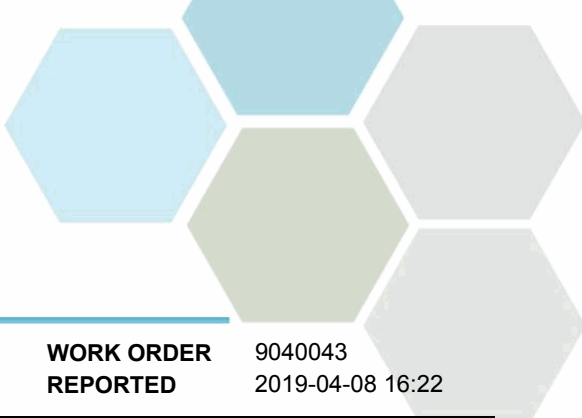


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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B9D0205, Continued									
Blank (B9D0205-BLK1), Continued					Prepared: 2019-04-03, Analyzed: 2019-04-03				
Surrogate: Naphthalene-d8	5.58	µg/L	4.47		125	50-140			
Surrogate: Perylene-d12	5.53	µg/L	4.47		124	50-140			
LCS (B9D0205-BS1)					Prepared: 2019-04-03, Analyzed: 2019-04-03				
Acenaphthene	4.10	0.050 µg/L	4.40		93	58-125			
Acenaphthylene	4.19	0.200 µg/L	4.40		95	54-128			
Acridine	4.02	0.050 µg/L	4.44		90	50-112			
Anthracene	4.60	0.010 µg/L	4.44		104	66-125			
Benzo(a)anthracene	4.41	0.010 µg/L	4.44		99	59-123			
Benzo(a)pyrene	4.98	0.010 µg/L	4.40		113	62-116			
Benzo(b+j)fluoranthene	8.07	0.050 µg/L	8.89		91	69-121			
Benzo(g,h,i)perylene	5.31	0.050 µg/L	4.40		121	58-129			
Benzo(k)fluoranthene	4.82	0.050 µg/L	4.44		108	67-128			
2-Chloronaphthalene	3.25	0.100 µg/L	4.44		73	50-140			
Chrysene	4.25	0.050 µg/L	4.42		96	58-125			
Dibenz(a,h)anthracene	5.13	0.010 µg/L	4.42		116	58-126			
Fluoranthene	5.77	0.030 µg/L	4.36		132	67-133			
Fluorene	4.21	0.050 µg/L	4.40		96	55-122			
Indeno(1,2,3-cd)pyrene	4.86	0.050 µg/L	4.44		109	62-126			
1-Methylnaphthalene	3.82	0.100 µg/L	4.38		87	53-125			
2-Methylnaphthalene	3.86	0.100 µg/L	4.36		89	52-122			
Naphthalene	4.16	0.200 µg/L	4.44		94	50-130			
Phenanthrene	4.61	0.100 µg/L	4.40		105	67-127			
Pyrene	5.86	0.020 µg/L	4.44		132	68-133			
Quinoline	5.07	0.050 µg/L	4.44		114	51-140			
Surrogate: Acridine-d9	3.26	µg/L	4.38		74	50-140			
Surrogate: Naphthalene-d8	4.00	µg/L	4.47		89	50-140			
Surrogate: Perylene-d12	4.87	µg/L	4.47		109	50-140			
LCS Dup (B9D0205-BSD1)					Prepared: 2019-04-03, Analyzed: 2019-04-03				
Acenaphthene	4.57	0.050 µg/L	4.40		104	58-125	11	16	
Acenaphthylene	4.76	0.200 µg/L	4.40		108	54-128	13	16	
Acridine	4.10	0.050 µg/L	4.44		92	50-112	2	26	
Anthracene	4.88	0.010 µg/L	4.44		110	66-125	6	14	
Benzo(a)anthracene	4.64	0.010 µg/L	4.44		104	59-123	5	23	
Benzo(a)pyrene	4.72	0.010 µg/L	4.40		107	62-116	5	16	
Benzo(b+j)fluoranthene	8.73	0.050 µg/L	8.89		98	69-121	8	14	
Benzo(g,h,i)perylene	5.47	0.050 µg/L	4.40		124	58-129	3	25	
Benzo(k)fluoranthene	5.04	0.050 µg/L	4.44		114	67-128	5	18	
2-Chloronaphthalene	4.30	0.100 µg/L	4.44		97	50-140	28	30	
Chrysene	4.48	0.050 µg/L	4.42		101	58-125	5	24	
Dibenz(a,h)anthracene	5.30	0.010 µg/L	4.42		120	58-126	3	23	
Fluoranthene	5.35	0.030 µg/L	4.36		123	67-133	8	18	
Fluorene	4.59	0.050 µg/L	4.40		104	55-122	9	16	
Indeno(1,2,3-cd)pyrene	4.95	0.050 µg/L	4.44		111	62-126	2	22	
1-Methylnaphthalene	4.45	0.100 µg/L	4.38		102	53-125	15	16	
2-Methylnaphthalene	4.42	0.100 µg/L	4.36		102	52-122	14	17	
Naphthalene	4.86	0.200 µg/L	4.44		109	50-130	16	18	
Phenanthrene	4.87	0.100 µg/L	4.40		111	67-127	5	14	
Pyrene	5.36	0.020 µg/L	4.44		121	68-133	9	18	
Quinoline	4.89	0.050 µg/L	4.44		110	51-140	4	12	
Surrogate: Acridine-d9	3.37	µg/L	4.38		77	50-140			
Surrogate: Naphthalene-d8	5.43	µg/L	4.47		122	50-140			
Surrogate: Perylene-d12	5.02	µg/L	4.47		112	50-140			



APPENDIX 2: QUALITY CONTROL RESULTS

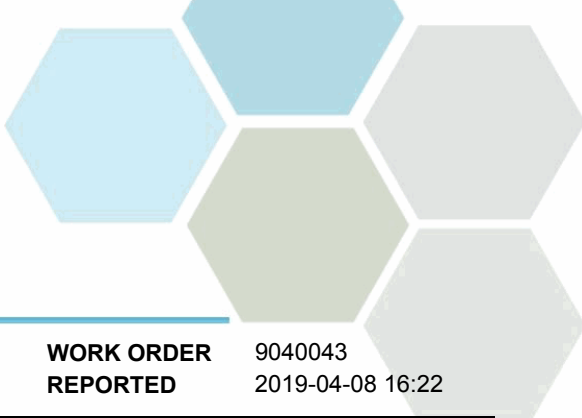
REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9D0318									
Blank (B9D0318-BLK1)			Prepared: 2019-04-04, Analyzed: 2019-04-08						
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B9D0318-BLK2)			Prepared: 2019-04-04, Analyzed: 2019-04-08						
Mercury, total	< 0.000010	0.000010 mg/L							
Duplicate (B9D0318-DUP2)			Source: 9040043-04		Prepared: 2019-04-04, Analyzed: 2019-04-08				
Mercury, total	< 0.000010	0.000010 mg/L		< 0.000010				20	
Matrix Spike (B9D0318-MS2)			Source: 9040043-05		Prepared: 2019-04-04, Analyzed: 2019-04-08				
Mercury, total	0.000254	0.000010 mg/L	0.000250	< 0.000010	100	70-130			
Reference (B9D0318-SRM1)			Prepared: 2019-04-04, Analyzed: 2019-04-08						
Mercury, total	0.00466	0.000010 mg/L	0.00489		95	80-120			
Reference (B9D0318-SRM2)			Prepared: 2019-04-04, Analyzed: 2019-04-08						
Mercury, total	0.00447	0.000010 mg/L	0.00489		92	80-120			

Total Metals, Batch B9D0399

Blank (B9D0399-BLK1)			Prepared: 2019-04-04, Analyzed: 2019-04-07						
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							

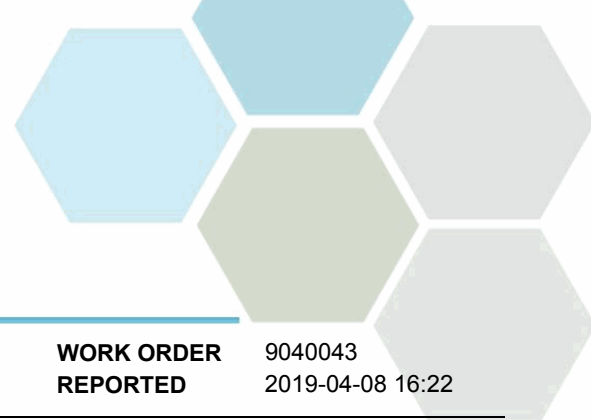


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9D0399, Continued									
Blank (B9D0399-BLK1), Continued					Prepared: 2019-04-04, Analyzed: 2019-04-07				
Zirconium, total	< 0.00010	0.00010 mg/L							
Blank (B9D0399-BLK2)					Prepared: 2019-04-04, Analyzed: 2019-04-07				
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 (B9D0399-BLK3)					Prepared: 2019-04-04, Analyzed: 2019-04-07				
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							

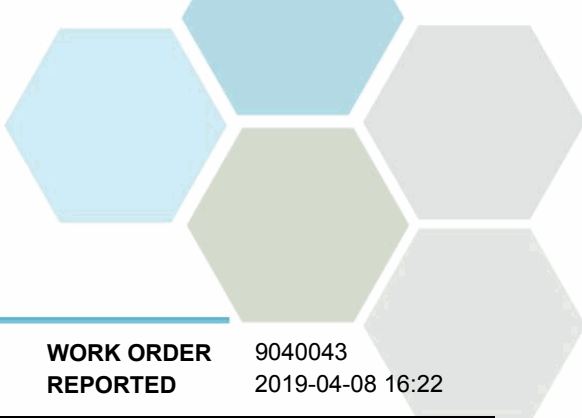


APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9D0399, Continued									
Blank (B9D0399-BLK3), Continued					Prepared: 2019-04-04, Analyzed: 2019-04-07				
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 (B9D0399-BS1)					Prepared: 2019-04-04, Analyzed: 2019-04-07				
Aluminum, total	0.0200	0.0050 mg/L	0.0200		100	80-120			
Antimony, total	0.0198	0.00020 mg/L	0.0200		99	80-120			
Arsenic, total	0.0210	0.00050 mg/L	0.0200		105	80-120			
Barium, total	0.0197	0.0050 mg/L	0.0200		98	80-120			
Beryllium, total	0.0213	0.00010 mg/L	0.0200		106	80-120			
Bismuth, total	0.0212	0.00010 mg/L	0.0200		106	80-120			
Boron, total	0.0221	0.0050 mg/L	0.0200		110	80-120			
Cadmium, total	0.0208	0.000010 mg/L	0.0200		104	80-120			
Calcium, total	2.02	0.20 mg/L	2.00		101	80-120			
Chromium, total	0.0201	0.00050 mg/L	0.0200		100	80-120			
Cobalt, total	0.0205	0.00010 mg/L	0.0200		102	80-120			
Copper, total	0.0211	0.00040 mg/L	0.0200		105	80-120			
Iron, total	1.82	0.010 mg/L	2.00		91	80-120			
Lead, total	0.0211	0.00020 mg/L	0.0200		105	80-120			
Lithium, total	0.0219	0.00010 mg/L	0.0200		109	80-120			
Magnesium, total	1.95	0.010 mg/L	2.00		97	80-120			
Manganese, total	0.0197	0.00020 mg/L	0.0200		99	80-120			
Molybdenum, total	0.0190	0.00010 mg/L	0.0200		95	80-120			
Nickel, total	0.0205	0.00040 mg/L	0.0200		103	80-120			
Phosphorus, total	2.18	0.050 mg/L	2.00		109	80-120			
Potassium, total	1.86	0.10 mg/L	2.00		93	80-120			
Selenium, total	0.0227	0.00050 mg/L	0.0200		113	80-120			
Silicon, total	2.1	1.0 mg/L	2.00		103	80-120			
Silver, total	0.0204	0.000050 mg/L	0.0200		102	80-120			
Sodium, total	1.99	0.10 mg/L	2.00		100	80-120			
Strontium, total	0.0198	0.0010 mg/L	0.0200		99	80-120			
Sulfur, total	4.6	3.0 mg/L	5.00		92	80-120			
Tellurium, total	0.0206	0.00050 mg/L	0.0200		103	80-120			
Thallium, total	0.0214	0.000020 mg/L	0.0200		107	80-120			
Thorium, total	0.0201	0.00010 mg/L	0.0200		100	80-120			
Tin, total	0.0198	0.00020 mg/L	0.0200		99	80-120			



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Allterra Construction
P17-932

WORK ORDER REPORTED 9040043
2019-04-08 16:22

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B9D0399, Continued									
LCS (B9D0399-BS1), Continued					Prepared: 2019-04-04, Analyzed: 2019-04-07				
Titanium, total	0.0195	0.0050 mg/L	0.0200		97	80-120			
Tungsten, total	0.0202	0.0010 mg/L	0.0200		101	80-120			
Uranium, total	0.0219	0.000020 mg/L	0.0200		109	80-120			
Vanadium, total	0.0203	0.0010 mg/L	0.0200		102	80-120			
Zinc, total	0.0221	0.0040 mg/L	0.0200		111	80-120			
Zirconium, total	0.0202	0.00010 mg/L	0.0200		101	80-120			
Reference (B9D0399-SRM1)					Prepared: 2019-04-04, Analyzed: 2019-04-07				
Aluminum, total	0.284	0.0050 mg/L	0.303		94	82-114			
Antimony, total	0.0486	0.00020 mg/L	0.0511		95	88-115			
Arsenic, total	0.122	0.00050 mg/L	0.118		103	88-111			
Barium, total	0.774	0.0050 mg/L	0.823		94	83-110			
Beryllium, total	0.0519	0.00010 mg/L	0.0496		105	80-119			
Boron, total	3.58	0.0050 mg/L	3.45		104	80-118			
Cadmium, total	0.0500	0.000010 mg/L	0.0495		101	90-110			
Calcium, total	10.8	0.20 mg/L	11.6		93	85-113			
Chromium, total	0.246	0.00050 mg/L	0.250		98	88-111			
Cobalt, total	0.0388	0.00010 mg/L	0.0377		103	90-114			
Copper, total	0.516	0.00040 mg/L	0.486		106	90-117			
Iron, total	0.449	0.010 mg/L	0.488		92	90-116			
Lead, total	0.207	0.00020 mg/L	0.204		102	90-110			
Lithium, total	0.417	0.00010 mg/L	0.403		103	79-118			
Magnesium, total	3.70	0.010 mg/L	3.79		98	88-116			
Manganese, total	0.102	0.00020 mg/L	0.109		94	88-108			
Molybdenum, total	0.184	0.00010 mg/L	0.198		93	88-110			
Nickel, total	0.248	0.00040 mg/L	0.249		100	90-112			
Phosphorus, total	0.212	0.050 mg/L	0.227		94	72-118			
Potassium, total	6.66	0.10 mg/L	7.21		92	87-116			
Selenium, total	0.133	0.00050 mg/L	0.121		110	90-122			
Sodium, total	7.07	0.10 mg/L	7.54		94	86-118			
Strontium, total	0.368	0.0010 mg/L	0.375		98	86-110			
Thallium, total	0.0840	0.000020 mg/L	0.0805		104	90-113			
Uranium, total	0.0304	0.000020 mg/L	0.0306		99	88-112			
Vanadium, total	0.379	0.0010 mg/L	0.386		98	87-110			
Zinc, total	2.55	0.0040 mg/L	2.49		102	90-113			

QC Qualifiers:

- S02 Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
- S09 The surrogate recovery for this sample is outside of established control limits .

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: 8 TAT: 5	CARO Analytical Services #110 - 4011 Viking Way Richmond, BC V6V 2K9 Phone: (604) 279-1499 Fax: (604) 279-1599	Number: March 2019 Shipped via: Harbour Air Tracking #: SDG:

#	Sample Information	Analyses	Containers
# 1	MW6 03/30/2019 11:30 Grab / Water	Alkalinity, all (KEL) TAT: 5 Anions in Water by IC, 5 Analytes (KEL) TAT: 5 Colour, True - 456 nm (KEL) TAT: 5 Conductivity in Water (RMD) TAT: 5 L/HEPH in Water (RMD) TAT: 5 Mercury, diss 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 03/30/2019 12:50 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 03/30/2019 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)

#	Sample ID / Date / Time / Location	Analyses	Containers
# 4	MW2 03/30/2019 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)
# 5	SB1 03/30/2019 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)
# 6	SB2 03/30/2019 12:15 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)
# 7	LE-1 03/30/2019 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)

#	SW1	Analyses	Containers
# 8	03/30/2019 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 +Cr6 (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) C09_125 mL Plastic (CN/Cr6) (1) C10_125 mL Plastic (H2SO4) (1) C11_1 L Plastic (General) (1) S05_125 mL Plastic (Metals-F) (1) S06_40 mL Vial (Mercury-F) (1)

Relinquished by	Date/Time	Accepted by	Date/Time