



Wetland 06 - Fall 2018 Monitoring Data Results

Project SWCRR
Report To Hemmera Envirochem Inc.
Maxxam Job No. B888854
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RESULTS OF ANALYSIS

Sample ID	WQ2	WQ3	WQ4B	WQ4A	WQ5B
Date Sampled	10/11/2018	10/11/2018	10/11/2018	10/11/2018	10/11/2018
Time Sampled	11:50	11:00	12:18	14:00	13:15
Maxxam Sample ID	UN3686	UN3687	UN3688	UN3689	UN3690
Nature	WATER	WATER	WATER	WATER	WATER
Chain Of Custody Number	567842-01-01	567842-01-01	567842-01-01	567842-01-01	567842-01-01
Alkalinity @25C (pp, total), CO3,HCO3,OH					
Alkalinity (total) as CaCO3	410	310	-	-	-
Phenolphthalein Alkalinity	<1.0	<1.0	-	-	-
Bicarbonate	510	380	-	-	-
Carbonate	<1.0	<1.0	-	-	-
Hydroxide (OH)	<1.0	<1.0	-	-	-
Biochemical Oxygen Demand					
biochemical oxygen demand	<2.0	3.5	<2.0	<2.0	<2.0
Cadmium - low level CCME - Dissolved					
Cadmium (Cd)	<0.000020	<0.000020	-	-	-
Chloride by Automated Colourimetry					
Dissolved Chloride	12	29	-	-	-
Chemical Oxygen Demand					
Chemical Oxygen Demand	15	37	-	-	-
Oxygen (Dissolved, winkler)					
Dissolved Oxygen	11	4.3	9.3	1.9	13
Conductivity @25C					
Conductivity	850	710	-	-	-
Hardness					
Hardness (CaCO3)	400	310	-	-	-
Elements by ICP - Dissolved					
Iron (Fe)	0.10	0.064	-	-	-
Lithium (Li)	0.026	<0.020	-	-	-
Magnesium (Mg)	53	43	-	-	-
Manganese (Mn)	0.065	0.025	-	-	-
Potassium (K)	3.6	6.8	-	-	-
Sodium (Na)	44	34	-	-	-
Strontium (Sr)	0.74	0.52	-	-	-
Sulphur as S	20	14	-	-	-
Phosphorus (P)	<0.10	<0.10	-	-	-
Barium (Ba)	0.11	0.21	-	-	-
Silicon (Si)	5.2	1.4	-	-	-
Boron (B)	0.040	0.041	-	-	-
Calcium (Ca)	73	52	-	-	-

Elements by ICPMS - Dissolved					
Aluminum (Al)	0.0034	0.0034	-	-	-
Chromium (Cr)	<0.0010	<0.0010	-	-	-
Cobalt (Co)	<0.00030	<0.00030	-	-	-
Copper (Cu)	0.00036	<0.00020	-	-	-
Lead (Pb)	<0.00020	<0.00020	-	-	-
Antimony (Sb)	<0.00060	<0.00060	-	-	-
Molybdenum (Mo)	0.0019	0.0057	-	-	-
Nickel (Ni)	0.00066	0.0014	-	-	-
Selenium (Se)	0.0014	0.00040	-	-	-
Silver (Ag)	<0.00010	<0.00010	-	-	-
Arsenic (As)	0.00061	0.0012	-	-	-
Thallium (Tl)	<0.00020	<0.00020	-	-	-
Tin (Sn)	<0.0010	<0.0010	-	-	-
Titanium (Ti)	<0.0010	<0.0010	-	-	-
Uranium (U)	0.0048	0.0083	-	-	-
Vanadium (V)	<0.0010	<0.0010	-	-	-
Zinc (Zn)	0.013	<0.0030	-	-	-
Beryllium (Be)	<0.0010	<0.0010	-	-	-
Ion Balance					
Ionic Balance	0.84	0.50	-	-	-
Sum of cations, anions					
Anion Sum	9.9	7.9	-	-	-
Cation Sum	10	7.8	-	-	-
Ammonia-N (Total)					
Ammonia as N	<0.015	0.039	-	-	-
Nitrate and Nitrite					
Nitrate (as NO ₃)	0.60	<0.044	1.3	3.4	22
Nitrite (NO ₂)	<0.033	<0.033	<0.033	<0.033	0.14
Nitrate + Nitrite-N (calculated)					
Nitrate plus Nitrite (N)	0.14	<0.014	0.30	0.76	5.0
Nitrogen (Nitrite - Nitrate) by IC					
Nitrate (as N)	0.14	<0.010	0.30	0.76	4.9
Nitrite (as N)	<0.010	<0.010	<0.010	<0.010	0.043
pH @25°C					
pH	8.25	8.09	-	-	-
Orthophosphate by Konelab					
Ortho Phosphate (P)	0.0034	<0.0030	0.0031	<0.0030	<0.0030
Sulphate by Automated Colourimetry					
Sulphate (SO ₄)	59	40	-	-	-
Total Dissolved Solids (Filt. Residue)					
TDS	460	390	-	-	-
Total Dissolved Solids (Calculated)					
TDS (calculated)	490	390	-	-	-
Total Kjeldahl Nitrogen					
Total Kjeldahl Nitrogen	0.44	0.90	-	-	-
Phosphorus -P (Total, Dissolved)					

Phosphours (P)	0.0045	0.0085	-	-	-
Total Phosphorus					
Phosphorus (P)	0.021	0.080	-	-	-
Total Suspended Solids (NFR)					
TSS	9.7	25	-	-	-
Turbidity					
Turbidity	5.4	17	0.83	0.84	23



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Flow Data For October 11

Site	Channel Width (m)	Depth* (m)			Velocity* (m/sec)			Discharge (m ³ /sec)	Comments
		RMID	MID	LMID	RMID	MID	LMID		
FL 1	0.49	0.07	0.07	0.07	0	0.15	0	-	Insufficient velocity to calculate a discharge
FL 2	1.15	0.14	0.23	0.28	-	-	-	-	Channel had water present but no measurable velocity in the channel
FL 3	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey
FL 4	-	-	-	-	-	-	-	-	Channel was dry at the time of the survey

* RMID= right mid channel, MID= mid channel, LMID= left mid channel
 (-)= null result

In-situ Water Quality Parameters

Site	Temperature	Dissolved Oxygen (mg/l)	pH	Conductivity (µS/cm)
WQ1	-	-	-	-
WQ2	1.1	9.8	6.5	833
WQ3	0.5	5.8	6.8	688
WQ4a	4.0	2.2	6.8	742
WQ4b	2.7	9.2	6.7	798
WQ5a	-	-	-	-
WQ5b	2.1	9.3	6.9	713
WQ5c	-	-	-	-

(-)= null result