MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT: OCTOBER 2012

PRESENTED TO THE NUNAVUT WATER BOARD

Contact:

David Frenette
Environment and Health & Safety Coordinator
AGNICO-EAGLE **Mines Ltd**
Exploration Division Canada
C.P. 87
765, Chemin de la mine Goldex
Val-d'Or (Qc) Canada
J9P 4N9
Phone : 1 (819) 874-5980 (poste. 3622)
Cel : 1 (819) 355-9271
David.frenette@agnico-eagle.com

This monthly report is delivered under water license 2BB-MEL0914, PART J, items 13.

1. The Licensee shall maintain Monitoring Stations at the following locations:

Table 1: Monitoring stations

Monitoring Program Station Number	**Description**	**Status**
MEL-1	Raw water supply intake at Meliadine Lake	Active (volume cubic metres)
MEL-2	Raw water supply intake at Pump Lake	Active (volume cubic metres)
MEL-3	Immediately downstream of old grey water sump prior to effluent entering wetland area, when flow observed	Active
MEL-3a	Immediately downstream of upgraded sump prior to the effluent entering upgraded wetland area, when flow is observed	Active
MEL-4	At a point immediately upstream of the discharge from the wetland area / upgraded wetland area to Meliadine Lake	Active
MEL-5	Point of discharge for the Bermed Fuel Containment Facilities	Active
MEL-6	Point of discharge for the contaminated soil storage	Active
MEL-7	Final effluent discharge from the BIODISK treatment system	Active
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste Landfill	Active (New)

2. ***The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling and other purposes from all sources.***

   The consumption of fresh water for the site was **10.7 m3/day** for the month of October 2012; 0 m^3/day for the drills and 10.7m^3/day for the camp.

3. ***The Licensee shall provide the GPS co-ordinates of all locations where sources of water are utilized for all purposes.*** *In UTM nad 1983*

- Camp water source: East 541943,0 ; North 6989174,0

4. ***Licensee shall sample at Monitoring Program Station MEL-3, MEL-3a, MEL-4 and MEL-7, monthly during Sewage treatment, effluent discharge and during periods of flow at the point of entry into Meliadine Lake. Samples shall be analyzed for the following parameters:***

   Biochemical Oxygen Demand – BOD_5
   Total Suspended Solids
   Oil and Grease (and visual)
   Fecal Coliforms
   pH

   See part 8 for the monitoring results.

5. ***The Licensee shall, prior to the release of effluent from the Bermed Fuel Containment Facilities at Monitoring Program Station MEL-5 and the contaminated soil storage at MEL-6 for the purpose of demonstrating compliance, sample for the parameters listed under Part D, item 17.***

   - No discharge for the month of October

6. ***The Licensee shall obtain representative samples of the water column below any ice where required under part F, item 7. Monitoring shall include but not limited to the following:***

   Total Suspended Solids
   pH
   Electrical Conductivity, and
   Total trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and Trace Arsenic and Mercury.

   - No drilling on ice for the month of October.

7. **The Licensee shall analyze the samples obtained at Monitoring Program Station MEL-8 for the following parameters:**
   pH
   Total Suspended Solids (TSS)
   Oil & Grease
   Total Trace metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Ba, Cd, Cr, Cu, Pb, Ni, Se, Sn, Zn); and
   Trace Arsenic and Mercury

   The Non-Hazardous Waste Landfill is not constructed yet.

8. Water quality monitoring

Station: STP-OUT		October				
DATE	**Limits**	**01/10/2012**	**08/10/2012**	**15/10/2012**	**23/10/2012**	**30/10/2012**
Ammonia as N		2.7	0.5	1.7	2.6	8.8
Biochemical Oxygen Demand	80	16.2	29.1	<6.0	<6.0	6.0
Heterotrophic Plate Count (AAHB)		>3000	>3000	>3000	100.0	>3000
Nitrate-N		14.3	8.4	11.1	3.5	16.0
Nitrate and Nitrite as N		14.5	8.7	11.3	3.6	16.1
Nitrite-N		0.2	0.3	0.2	0.1	0.1
Oil & Grease-(IR)	5	<1	<1.0	<1.0	<1.0	<1
Phosphorus (P)-Total		15.0	8.6	12.6	7.7	12.3
TKN		8.9	7.4	9.2	5.7	12.2
Total Suspended Solids	100	26.0	26.0	25.0	8.0	15.0
Transmitance %		31.9	49.3	40.9	41.0	23.6
pH	6.5-9	7.9	7.8	7.0	7.3	7.0
Fecal Coliforms	1000	110,000	46,000	24,000	43	9,300
Total Coliforms		110,000	46,000	24,000	43	24,000

By the end of September, our disinfection treatment (UV) broke. Replacement and spare parts are ordered and should be at the camp site, the December 4th.

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			A7-8																	
Year			2007		2008		2010				2011					2012				
Date Sampled	Units	CCME	18/07/2007	07/10/2011	21/06/2008	14/07/2008	20/06/2010	22/07/2010	26/08/2010	23/09/2010	2011/06/23	2011/07/12	2011/08/28	2011/09/11	2011/10/09	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690
LAB			-	-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																				
Water Temperature	oC		17.8	1.9	6.85	16,70	3	19.3	11.1	6.5	-	-	13.7	4.63	1.2	7.96	11.5	11.9	1.6	4.5
pH	pH units		8.12	8.02	-	6.53	7.5	8.1	7.33	7.76	-	-	7.24	7.21	7.17	12.3	7.82	7.77	9.14	7.69
Conductivity	(µS/cm)				74	109	-	-	-	-	-	-	0	165	188	177	201	215	220	190
Laboratory-Measured																				
Ion balance	%		90.5	97.5	-	106	Low EC	-	-	-	-	-	101	-	-	102	-	-	104	95.5
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	1	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	-	<0.05	<0.02	<0.05	<0.050	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.0002	-	<0.00002	<0.00002	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	0.0042	0.007	-	-	-	-	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0052	0.002
Phosphorus (P)-Total Reactive	mg/L		-	<0.02	<0.002	<0.004	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.001	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.2	0.208	0.4	0.35	-	<1	<1	-	-	0.38	0.5	0.4	0.21	0.31	0.3	<0.20	0.27
Total Suspended Solids	mg/L		-	3	3	3	-	6	2	2	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	9	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	33	24.8	27	14.9	42	42	46	30.3	32.7	36.6	37.6	37.5	-	35	38	39	40
Bicarbonate (HCO3)	mg/L		37	40	24.8	33	18.1	42	42	46	37	39.8	44.7	45.9	45.8	-	43	46	48	48
Carbonate (CO3)	mg/L		<5.0	<5.0	<2.0	<5.0	<5.0	-	<2	<2	<0.60	<0.40	<0.60	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<2.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.60	<0.40	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	15.1	15.4	9.78	-	-	-	-	-	24.6	23.5	26.3	24.2	27.1	29.9	30	26.9
Magnesium (Mg)-Dissolved	mg/L		-	-	2.03	1.79	1.31	-	-	-	-	-	3.02	3.01	3.34	3.01	3.26	3.44	3.94	4.02
Potassium (K)-Dissolved	mg/L		-	-	2	0.93	0.63	-	-	-	-	-	1.41	1.28	1.54	1.52	1.48	1.61	1.59	1.48
Sodium (Na)-Dissolved	mg/L		-	-	2.5	2.61	1.9	-	-	-	-	-	4.95	4.35	5.37	4.75	5.44	5.32	6.55	6.37
Chloride	mg/L		12	17	16.9	17	13.2	31.9	-	33.6	8.95	28.8	32.1	30.9	31.9	34.2	38.7	40.6	41.1	41.5
Conductivity	umhos/cm		106	135	113	118	81.1	249	303	177	93.6	159	176	175	178	188	205	181	227	234
Fluoride	mg/L	0.12	-	-	<0.02	-	-	-	-	-	<0.10	<0.10	0.1	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		41	52	46	49	29.8	79	64	79	30.6	64.9	68.8	79.6	75.8	72.6	94.2	88.3	83.6	99.4
Nitrate-N	mg/L	13	<0.1	<0.1	0.0168	<0.1	<0.050	0.02	0.02	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	-	<0.1	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.001	<0.05	<0.050	0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.2	4.1	2.78	2.1	1.36	7	-	4	2.07	3.15	3.48	4.27	4.88	4.47	5.24	5.24	5.54	5.93
TDS (Calculated)	mg/L		51	64	-	-	37.1	166	202	118	46.5	81	91.6	94.3	93.6	90.2	152	125	148	152
Aluminum (Al)-Total	mg/L	0.1	0.01	-	0.005	0.0023	<0.010	0.529*	0.021	0.04	0.0066	<0.0050	0.021	<0.020	<0.020	0.0077	0.0065	<0.0050	0.0055	<0.0050
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.0005	<0.00003	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0023	-	0.00115	0.003	0.00108	0.0029	0.0022	<0.0005	0.00046	0.00235	0.0028	0.0026	0.0016	0.00136	0.00208	0.00187	0.00187	0.00147
Barium (Ba)-Total	mg/L		0.014	-	0.02	0.0143	0.0125	0.0197	0.016	0.0164	0.0117	0.0199	0.019	0.0207	0.0172	0.0234	0.0243	0.0218	0.0199	0.0235
Beryllium (Be)-Total	mg/L		<0.001	-	<0.001	<0.0002	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.05	-	<0.01	<0.002	<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	0.000017	<0.00005	<0.000050	<0.00008	<0.00008	0.00015*	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000015	0.00001	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	-	10.8	25.3	21.3	25.3	10.3	21.7	22.8	26.1	25.1	24.4	31.3	29.6	27.6	33.5
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	0.0068	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.001	0.00026	<0.0050	<0.0006	<0.0006	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0003	<0.0001	<0.0020	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.001	-	0.001	0.0009	<0.0010	0.0011	0.0009	0.001	0.00074	0.00065	<0.0020	<0.0020	<0.0020	0.00062	0.00094	0.00073	0.00092	0.00074
Iron (Fe)-Total	mg/L	0.3	-	-	0.067	0.138	0.078	<0.01	<0.01	0.18	<0.10	0.12	0.11	0.17	<0.10	<0.10	0.1	-	0.1	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	<0.0005	<0.0001	<0.00010	<0.0003	<0.0003	<0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	0.000119	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		0.01	-	0.005	-	<0.010	<0.1	<0.1	<0.1	<0.0020	0.0051	0.012	0.0125	0.0077	0.0083	0.0092	0.009	0.0095	0.0099
Magnesium (Mg)-Total	mg/L		-	-	2.03	1.8	1.42	3.9	2.7	4	1.2	2.63	2.87	3.53	3.2	3.03	3.9	3.52	3.57	3.83
Manganese (Mn)-Total	mg/L		0.014	-	0.00646	0.0241	0.0292	0.0199	0.0056	0.0098	0.0145	0.0191	0.0164	0.0223	0.0089	0.013	0.0139	0.00814	0.013	0.00479
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.001	<0.00016	<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	0.0002	0.00025	0.00025	0.00026	0.00023
Nickel (Ni)-Total	mg/L	Equation	0.002	-	0.001	0.00051	<0.0020	0.0012	0.0015	0.0038	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	2	0.95	0.71	0.89	0.84	2.1	1.08	1.14	1.25	1.52	1.31	1.31	1.61	1.51	1.6	1.71
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	-	-	0.00115	0.00124	0.00149	0.00159	0.00134	0.00141	0.00176	0.00165	0.0017	0.00181
Selenium (Se)-Total	mg/L	0.001	<0.0004	-	<0.001	<0.0002	<0.00040	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	-	-	0.143	0.512	0.57	0.74	0.91	0.564	0.433	0.343	0.479	0.472
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.00002	<0.0001	<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	2.5	2.6	2.3	6.3	3.9	5.7	4.76	4.09	4.59	5.43	4.71	4.52	6.28	5.6	5.85	5.97
Strontium (Sr)-Total	mg/L		-	-	-	0.0837	-	0.15	0.14	0.15	0.0321	0.14	0.147	0.155	0.14	0.173	0.206	0.182	0.181	0.201
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0001	-	<0.0002	<0.00003	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00005	-	<0.0005	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.001	-	0.01	-	<0.0010	0.02	<0.01	<0.01	0.00022	<0.00020	<0.0010	<0.0010	<0.0010	0.00056	0.00053	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00047	0.00023	0.00017	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.0001	-	<0.0002	<0.00005	<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.001	-	<0.001	<0.00019	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.006	-	0.005	0.0028	<0.0040	<0.001	<0.001	0.009	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0031	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ortho-Phosphate (PO4-P)	mg/L															-	-	-	-	-
Sodium Adsorption Ratio		0.03	-	<0.01	<0.001	<0.001	<0.010		0.05	<0.01	-	-	-	-	-	-	0.26	0.25	0.28	0.3
Turbidity	NTU		-	0.45	-	-	-	0.74	0.43	0.34	0.68	0.81	0.54	1.32	0.57	0.45	0.68	0.68	1.13	0.36
pH	pH units	6.5-9.0	7.7	7.7	7.11	7.6	7.4	7.17	7.78	7.53	7.73	7.88	7.95	7.83	7.81	-	7.85	7.77	7.63	7.8

Waterbody			A8												
Year			2007		2008	2009	2010		2011		2012				
Date Sampled	Units	CCME	18/07/2007	08/10/2007	15/07/2008	27/04/2009	20/06/2010	23/09/2010	2011/07/12	22/07/2011	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			0540681, 6986702	0540681, 6986702	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments															
Water Temperature	oC		17.6	0.5	14.14	0.10	2.8	6.7	-	20.4	7.55	12.8	14.4	1.8	4.1
pH	pH units		8.06	7.81	7.8	6.41	7.7	7.67	-	8.24	13.8	7.87	7.94	9.04	7.79
Conductivity	(µS/cm)		-	-	101	489	-	-	-	-	180	207	232	222	180
Laboratory-Measured															
Ion balance	%		91.2	96.7	107	102	-	-	-	-	99.6	-	-	93.9	97.6
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	1.5	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	-	<0.050	<0.050	0.212	<0.050	<0.05	<0.050	<0.05	<0.010	<0.010	<0.010	0.011	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.0002	-	<0.00002	<0.00002	<0.00010	<0.00001	<0.000050	<0.00001	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	0.005	0.0073	-	-	0.01	-	0.0017	<0.010	<0.010	0.0045	0.0026
Phosphorus (P)-Total Reactive	mg/L		-	0.02	0.003	0.0065	-	-	-	-	0.0011	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.2	0.2	1.01	0.41	2	-	-	0.25	0.36	0.3	<0.20	0.3
Total Suspended Solids	mg/L		-	3	17	5	-	1	<5.0	5	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	33	28	125	9.6	43	32.6	42	-	35	46	40	39
Bicarbonate (HCO3)	mg/L		37	40	34	153	11.7	43	39.8	42	-	42	56	49	48
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<0.60	-	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<0.40	<2	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	14.8	71.8	6.66	-	-	-	24	28.3	33.7	27.1	28.5
Magnesium (Mg)-Dissolved	mg/L		-	-	1.75	8.95	0.93	-	-	-	3.07	3.25	3.75	3.87	3.89
Potassium (K)-Dissolved	mg/L		-	-	0.87	4.07	<0.50	-	-	-	1.56	1.44	1.72	1.49	1.46
Sodium (Na)-Dissolved	mg/L		-	-	2.42	13	1.5	-	-	-	4.72	5.53	5.5	5.36	5.78
Chloride	mg/L		12	17	16	78.4	9.26	33.8	29.3	30.6	34.2	38.8	41.5	40.8	41.7
Conductivity	umhos/cm		106	134	117	514	55.4	195	160	248	188	205	190	228	233
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		41	51	49	216	20.5	78	64.4	76	72.6	90.5	99.4	113	101
Nitrate-N	mg/L	13	0.1	0.1	0.1	0.052	<0.050	0.14	<0.050	0.01	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	<0.1	<0.071	<0.071	-	<0.071	-	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.050	<0.050	<0.050	<0.050	<0.050	<0.01	<0.050	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.2	4.1	2.1	9.82	1,14	3	3.3	8	4.71	5.24	5.42	5.53	5.67
TDS (Calculated)	mg/L		51	64	57	261	25.3	130	81.5	165	91.3	158	134	148	151
Aluminum (Al)-Total	mg/L	0.1	0.01	-	0.0018	0.005	<0.010	0.002	<0.0050	<0.002	0.0077	0.0093	<0.0050	0.013	<0.0050
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00003	<0.0002	<0.0040	<0.0001	<0.00020	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0024	-	0.00003	0.0037	0.00074	0.0049	0.0019	0.0029	0.00136	0.00255	0.00213	0.00123	0.00161
Barium (Ba)-Total	mg/L		0.014	-	0.0128	0.077	0.0086	0.016	0.0203	0.0184	0.0234	0.0253	0.0239	0.0146	0.0238
Beryllium (Be)-Total	mg/L		0.001	-	0.0002	0.001	<0.0010	0.0006	<0.00020	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	0.001	-	-	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.05	-	<0.002	<0.05	<0.050	<0.01	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.00005	<0.00001	<0.000050	0.00014	<0.000010	<0.00008	0.000015	<0.000010	<0.000010	0.000018	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	-	7.2	25.2	21.4	24.2	24.4	30.1	33.3	38.2	34.5
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.00006	<0.004	<0.0050	0.0053	<0.0010	<0.0006	<0.0010	<0.0010	<0.0010	0.0031	<0.0010
Cobalt (Co)-Total	mg/L		<0.002	-	0.00011	<0.0003	<0.0020	-	<0.00020	-	<0.00020	<0.00020	<0.00020	0.0002	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.002	-	0.0017	0.0013	<0.0010	0.0008	0.0006	0.0006	0.00062	0.00101	0.00115	0.00115	0.00078
Iron (Fe)-Total	mg/L	0.3	0.16	-	0.072	-	0.052	0.18	0.11	<0.01	<0.10	0.17	<0.10	2.97	<0.10
Lead (Pb)-Total	mg/L	Equation	0.0007	-	<0.00006	0.005	<0.00010	0.0027	<0.000090	0.0197	0.000119	<0.000090	<0.000090	0.0551	<0.000090
Lithium (Li)-Total	mg/L		<0.01	-	-	0.0136	<0.010	<0.1	0.006	<0.1	0.0083	0.0091	0.0082	0.0062	0.0099
Magnesium (Mg)-Total	mg/L		-	-	-	-	0.96	3.8	2.68	3.9	3.03	3.73	3.94	4.27	3.73
Manganese (Mn)-Total	mg/L		0.012	-	0.0069	0.0855	0.0469	0.0106	0.0151	0.0157	0.013	0.0371	0.00647	0.0065	0.00521
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	0.00015	<0.0001	<0.0050	<0.0005	<0.00020	<0.0005	0.0002	0.00023	0.00022	<0.00020	0.00023
Nickel (Ni)-Total	mg/L	Equation	<0.002	-	0.00042	0.0025	<0.0020	0.0035	<0.0020	0.0012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	<0.20	-	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	-	-	0.46	2.2	1.16	0.89	1.31	1.56	1.62	1.74	1.73
Rubidium (Rb)-Total	mg/L		-	-	-	-	-		0.0013	-	0.00141	0.00172	0.00184	0.00113	0.00185
Selenium (Se)-Total	mg/L	0.001	<0.008	-	<0.0003	<0.0005	<0.00040	<0.001	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L			-	-	-		-	0.358	-	0.564	0.419	0.655	0.339	0.494
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.0001	<0.00002	<0.00010	<0.0005	<0.00010	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	-	-	1.7	5.5	4.1	5.9	4.52	6.03	5.89	6.07	6.16
Strontium (Sr)-Total	mg/L		-	-	0.082	0.408	-	0.15	0.149	0.14	0.173	0.198	0.186	0.118	0.211
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<0.00020	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0001	-	<0.00003	<0.0002	<0.00010	-	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.05	-	-	<0.0005	<0.050	<0.001	<0.00020	<0.001	<0.00020	<0.00020	<0.00020	0.00078	<0.00020
Titanium (Ti)-Total	mg/L		<0.001	-	-	-	<0.0010	<0.01	<0.00020	0.01	0.00056	0.0005	<0.00050	0.00068	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	<0.0010	-	0.00047	0.00018	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.0001	-	<0.00005	0.000061	<0.00010	<0.001	<0.00010	<0.001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.001	-	0.00016	<0.001	<0.0010	<0.0005	<0.00020	<0.0005	<0.00020	<0.00020	<0.00020	0.00057	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.009	-	0.0008	0.0104	<0.0040	0.006	<0.0050	<0.001	0.0031	<0.0020	<0.0020	0.0052	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	0.26	0.24	0.25	0.27
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.001	<0.001	<0.010	<0.01	-	0.02	-	-	-	-	-
Turbidity	NTU		-	0.5	-	-	-	0.36	0.57	0.7	0.47	0.53	0.39	1.04	0.48
pH	pH units	6.5-9.0	7.8	7.7	7.7	7.76	7.18	7.42	7.87	7.04	-	7.83	7.98	7.62	7.81

Waterbody			A9											
Year			2007		2010				2011		2012			
Date Sampled	Units	CCME	2007/07/18	2007/10/07	20/06/2010	22/07/2010	26/08/2010	23/09/2010	2011/06/22	2011/07/12	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments															
Water Temperature	oC		21.7	0.7	12.1	19.5	-	4.2	-	-	7.48	10.9	13	1	4
pH	pH units		8.6	7.79	8	8.39	7.66	7.68	-	-	18.2	7.81	7.71	9.06	7.97
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	483	726	972	1046	1080
Laboratory-Measured															
Ion balance	%		101	96.5	90.9	-	-	-	-	-	99.7	-	-	102	108
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.5	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	-	<0.050	<0.050	0.05	0.09	<0.05	<0.050	<0.050	<0.010	<0.010	<0.010	0.011	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.0005	-	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.01	0.019	<0.010	<0.010	<0.010	0.0088	0.0038
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.3	0.84	-	1	<1	-	-	0.53	0.69	0.68	0.57	0.46
Total Suspended Solids	mg/L		-	3	-	4	12	3	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		52	60	34.6	58	65	83	35.9	61.7	-	46	57	62	60
Bicarbonate (HCO3)	mg/L		64	74	42.2	58	<2	83	43.8	75.2	-	56	69	76	74
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	-	<2	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	59.8	-	-	-	-	-	63.8	101	134	140	160
Magnesium (Mg)-Dissolved	mg/L		-	-	6.2	-	-	-	-	-	7.95	11	13.2	17.8	18.9
Potassium (K)-Dissolved	mg/L		-	-	2.64	-	-	-	-	-	2.7	3.51	4.83	5.69	4.97
Sodium (Na)-Dissolved	mg/L		-	-	7.9	-	-	-	-	-	10.5	18.3	19.7	25.8	23.2
Chloride	mg/L		182	282	123	193	-	175	52.3	113	111	180	234	268	282
Conductivity	umhos/cm		759	1100	502	852	857	600	251	501	508	721	762	1060	1130
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		300	422	175	299	212	303	109	213	192	304	381	430	487
Nitrate-N	mg/L	13	0.1	0.1	<0.050	0.02	0.09	0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		0.1	0.1	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		13.3	21.6	6.6	14	-	10	5.89	15.8	25.1	30.2	31.2	33	35.2
TDS (Calculated)	mg/L		353	518	227	568	-	400	128	259	243	558	555	686	733
Aluminum (Al)-Total	mg/L	0.1	<0.01	-	<0.010	<0.002	0.024	<0.002	0.0294	0.0059	0.0066	0.0086	<0.0050	0.0158	<0.0050
Antimony (Sb)-Total	mg/L		0.0004	-	0.00058	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0041	-	0.00203	0.0041	0.0038	0.0079	0.00242	0.00405	0.00245	0.00344	0.00361	0.00349	0.00237
Barium (Ba)-Total	mg/L		0.099	-	0.0709	0.0785	0.0776	0.0783	0.0431	0.0706	0.0624	0.105	0.106	0.109	0.121
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.05	-	<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	0.00033	<0.000010	<0.000010	0.00002	0.000013	0.000013	0.000015	<0.000010
Calcium (Ca)-Total	mg/L		-	-	66.9	97.6	72.6	99.3	36.8	71.8	69.3	101	129	146	168
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.0050	<0.0006	<0.0006	0.0071	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00031	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.004	-	0.0012	0.0023	0.0025	0.002	0.00127	0.00234	0.00168	0.00224	0.00214	0.00226	0.0016
Iron (Fe)-Total	mg/L	0.3	0.179	-	0.144	<0.01	0.08	0.89	0.37	0.23	0.21	0.19	0.19	0.28	0.1
Lead (Pb)-Total	mg/L	Equation	0.0004	-	<0.00010	0.016	-	<0.0003	0.000103	<0.000090	0.000104	0.00235	0.000251	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		0.04	-	0.03	<0.1	<0.1	<0.1	0.0111	0.0203	0.0248	0.042	0.0539	0.0614	0.0567
Magnesium (Mg)-Total	mg/L		-	-	6.75	13.4	7.5	13.5	4.28	8.28	7.54	12.5	14.1	16.1	16.3
Manganese (Mn)-Total	mg/L		0.013	-	0.0039	0.0069	0.0219	0.0076	0.0219	0.0153	0.00752	0.0143	0.00784	0.0269	0.00729
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.0050	<0.0005	<0.0005	<0.0005	0.0002	0.00038	0.00036	0.00034	0.00052	0.00038	0.00029
Nickel (Ni)-Total	mg/L	Equation	<0.005	-	0.0029	0.0075	0.0069	0.0129	0.0026	0.0028	0.0025	0.0037	0.0044	0.0049	0.0041
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	2.94	2.8	-	5.1	1.67	2.7	2.73	3.8	4.63	5.43	5.75
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00167	0.00291	0.00258	0.00363	0.00449	0.00477	0.00472
Selenium (Se)-Total	mg/L	0.001	0.0022	-	<0.00040	0.001	-	0.006	<0.0010	0.0014	<0.0010	0.0017	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	1.14	0.541	0.176	1.11	1.39	1.81	2.09
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	9.1	20.6	-	16	5.12	9.79	9.34	20.4	21.3	22.3	22.8
Strontium (Sr)-Total	mg/L		-	-	-	0.64	-	0.82	0.267	0.542	0.488	0.758	1.06	-	1.11
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0001	-	<0.00010	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.05	-	<0.00010	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.001	-	<0.0010	0.06	0.03	0.04	0.00116	0.00045	0.00087	0.00125	0.0013	0.00146	0.00131
Tungsten (W)-Total	mg/L		<0.001	-	-	-	-	-	<0.0010	<0.0010	0.0002	0.00011	0.00012	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.0001	-	<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00016	0.00015
Vanadium (V)-Total	mg/L		<0.001	-	<0.0010	<0.0005	0.002	<0.0005	<0.00020	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.008	-	<0.0040	<0.001	0.013	0.01	<0.0050	<0.0050	0.0032	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	0.46	0.43	0.47	0.46
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.003	-	<0.01	-	-	-	-	-	-	-
Turbidity	NTU		-	0.5	-	0.92	2.1	0.73	0.71	1.53	0.84	0.88	1.31	2.73	1.74
pH	pH units	6.5-9.0	7.9	7.8	7.79	7.73	-	7.9	7.63	8.1	-	7.93	7.95	7.84	7.98

Waterbody			B2-1											
Year			2010		2011					2012				
Date Sampled	Units	CCME	22/07/2010	23/09/2010	23/06/2011	12/07/2011	28/08/2011	11/09/2011	09/10/2011	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			-	-	-	-	-	-	-	544790-6971714	544790-6971714	544790-6971714	544790-6971714	544790-6971714
LAB			-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments														
Water Temperature	oC		18.9	6.3	-	-	14.2	4.88	1	7.8	10.9	12.5	1.8	4.4
pH	pH units		7.69	7.8	-	-	7.31	7.15	7.35	7.4	8.6	8.02	9.46	9.56
Conductivity	(µS/cm)		-	-	-	-	0	94	107	83	91	114	126	70
Laboratory-Measured														
Ion balance	%		-	-	-	-	103	-	-	Low EC	-	-	97.5	95.7
Biochemical Oxygen Demand	mg/L		-	-	-	1.3	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.05	0.09	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	0.012	0.012	0.017	0.012	<0.010	<0.010	<0.010	<0.010	0.019	0.0066
Phosphorus (P)-Total Reactive	mg/L		-	-	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	3	-	-	0.21	0.4	0.37	<0.20	0.3	0.36	0.26	0.36
Total Suspended Solids	mg/L		3	2	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	6	6
Alkalinity, Total (as CaCO3)	mg/L		41	53	25.5	25.1	33.3	32.7	33.3	-	28	32	34	36
Bicarbonate (HCO3)	mg/L		41	53	31.1	30.7	40.7	39.9	40.7	-	35	40	42	43
Carbonate (CO3)	mg/L		-	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	-	-	14.2	13.2	15.2	9.7	13.2	12.9	15.3	14.5
Magnesium (Mg)-Dissolved	mg/L		-	-	-	-	1.54	1.53	1.61	1.12	1.4	1.34	1.52	1.88
Potassium (K)-Dissolved	mg/L		-	-	-	-	1.11	0.91	1.1	0.93	0.837	0.877	0.994	0.979
Sodium (Na)-Dissolved	mg/L		-	-	-	-	4.14	3.82	4.51	2.48	3.75	3.28	4.38	4.76
Chloride	mg/L		8.5	11.2	11.7	7.9	9.92	10.8	11	7.57	9.73	11.3	12.3	12.4
Conductivity	umhos/cm		144	123	97.8	79	105	105	110	75	98	102	119	126
Fluoride	mg/L	0.12	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		45	50	29.8	30.1	40.6	41.3	43.4	28.8	40.4	40.5	43.8	49.9
Nitrate-N	mg/L	13	0.02	0.45	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.01	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		7	11	3.93	2.39	3.18	3.73	5	2.53	3.82	4.26	4.7	5.1
TDS (Calculated)	mg/L		96	82	49.6	39.9	54	55	57.7	39	76	54	78	82
Aluminum (Al)-Total	mg/L	0.1	0.41	0.002	0.0965	0.0073	0.044	0.042	<0.020	0.0061	0.0089	<0.0050	0.0071	<0.0050
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.001	0.0056*	0.00037	0.00099	0.002	0.0014	<0.0010	0.00064	0.00109	0.00115	0.00106	0.00096
Barium (Ba)-Total	mg/L		0.0122	0.0104	0.0135	0.0108	0.0136	0.0137	0.0114	0.0107	0.0128	0.0125	0.0126	0.0141
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.01	<0.01	<0.010	<0.010	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000161	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		14.5	16.3	9.57	10.2	13.8	13.8	14.6	9.08	13.6	13.7	14.7	17.3
Cesium (Cs)-Total	mg/L		-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0006	0.0059*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.0516	0.0011	0.00112	0.00066	<0.0020	<0.0020	0.0025	0.00094	0.00126	0.00115	0.00127	0.0013
Iron (Fe)-Total	mg/L	0.3	<0.01	0.19	0.15	0.11	0.48	0.26	<0.10	<0.10	0.1	0.13	0.2	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.0003	<0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	0.000185	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.1	<0.1	<0.0020	<0.0020	0.0051	0.0025	0.0027	<0.0020	<0.0020	0.0022	0.0028	0.0023
Magnesium (Mg)-Total	mg/L		2.1	2.3	1.42	1.12	1.52	1.65	1.68	1.06	1.59	1.51	1.73	1.6
Manganese (Mn)-Total	mg/L		0.0201	0.0118	0.0111	0.0153	0.0604	0.0219	0.0116	0.0146	0.0117	0.0226	0.0278	0.0105
Molybdenum (Mo)-Total	mg/L	0.073	<0.0005	<0.0005	0.0002	0.00021	<0.00050	<0.00050	<0.00050	<0.00020	0.00026	0.00031	0.00029	0.00032
Nickel (Ni)-Total	mg/L	Equation	0.0014	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		0.59	1.7	1.31	0.67	1.1	1.05	0.99	0.841	0.893	0.906	0.968	1.08
Rubidium (Rb)-Total	mg/L		-		0.00183	0.00078	0.00126	0.00114	0.00102	0.00082	0.001	0.00103	0.00109	0.00119
Selenium (Se)-Total	mg/L	0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	0.464	0.157	0.4	0.41	0.31	0.239	0.303	0.297	0.449	0.338
Silver (Ag)-Total	mg/L	0.0001	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		5.6	6.2	6.33	2.49	4.12	4.35	4.4	2.37	4.13	4	4.63	4.57
Strontium (Sr)-Total	mg/L		0.06	0.07	0.0444	0.0472	0.0627	0.0614	0.0589	0.0465	0.0616	0.0605	0.0636	0.0739
Tellurium (Te)-Total	mg/L		-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.01	<0.01	0.00559	0.00033	0.0013	0.0029	<0.0010	0.00043	<0.00050	<0.00050	0.00052	<0.00050
Tungsten (W)-Total	mg/L		-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.0005	<0.0005	0.00037	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.001	0.005	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.006	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03								-	0.26	0.23	0.3	0.31
Ortho-Phosphate (O-PO4)	mg/L		0.01	<0.01	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU		0.59	0.45	1.57	0.67	1.94	0.87	0.72	0.38	0.68	1.05	2.23	0.86
pH	pH units	6.5-9.0	6.97	7.46	7.6	7.79	7.7	7.72	7.74	-	7.77	7.58	7.55	7.82

Waterbody			A13														
Year			2007		2010				2011					2012			
Date Sampled	Units	CCME	2007/08/12	2007/10/07	20/06/2010	22/10/2010	26/08/2010	23/09/2010	2011/06/22	2011/07/12	2011/08/29	2011/09/11	2011/10/09	21/06/2012	28/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			0539828, 6988676	0539828, 6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																		
Water Temperature	oC		10.4	0.3	13.4	19.2	9	4.2	-	-	7.8	5.12	0.3	8.6	15.4	16.9	1.8	4.7
pH	pH units		7.56	7.66	7.7	8.42	7.59	7.69	-	-	8.28	7.3	7.2	7.89	7.56	8.04	7.95	7.84
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	-	1576	1489	432	1583	2007	1878	1940
Laboratory-Measured																		
Ion balance	%		103	94.1	91.2	-	-	-	-	-	92.6	-	-	94.4	-	-	96.8	99.2
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.06	0.31	<0.050	0.05	0.08	<0.05	<0.050	<0.050	<0.050	0.123	<0.050	0.042	<0.010	<0.010	0.035	0.018
Mercury (Hg)-Total	mg/L	0.000026	-	-	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.02	0.02	-	-	-	-	0.011	0.014	0.011	0.011	<0.010	<0.010	<0.010	<0.010	0.01	0.0039
Phosphorus (P)-Total Reactive	mg/L		-	<0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.013	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.6	0.6	0.7	-	<1	<1	-	-	1.07	0.66	0.38	0.44	0.55	0.8	0.47	0.39
Total Suspended Solids	mg/L		4	3	-	4	3	<1	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	18	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	51	22.6	60	55	55	30.4	42.4	96	25.1	31.7	36	41	55	46	48
Bicarbonate (HCO3)	mg/L		37	62	27.6	60	55	55	37.1	51.7	117	30.6	38.7	44	50	67	56	58
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<12	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<6.8	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	103	-	-	-	-	-	390	226	179	57.9	228	281	249	255
Magnesium (Mg)-Dissolved	mg/L		-	-	6.57	-	-	-	-	-	46.5	21.8	21.6	6.94	22.7	27	32.4	25.9
Potassium (K)-Dissolved	mg/L		-	-	4.97	-	-	-	-	-	11.1	7.78	4.9	2.88	8.04	9.9	9.95	6.44
Sodium (Na)-Dissolved	mg/L		-	-	12.9	-	-	-	-	-	36.7	24.6	23.5	12.3	46.6	54.1	51.8	35.7
Chloride	mg/L		716	372	228	197	-	230	42.2	85	877	511	364	109	440	558	549	508
Conductivity	umhos/cm		2370	1460	835	947	953	676	212	369	2450	1560	1220	482	1450	1230	1900	1890
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.50	<0.50	<0.10	-	-	-	-	<0.50
Hardness (as CaCO3)	mg/L		1020	487	284	321	245	343	76.7	159	1070	712	571	160	653	790	789	789
Nitrate-N	mg/L	13	0.1	0.5	<0.050	0.02	0.07	0.09	<0.050	<0.050	<0.25	<0.25	<0.050	<0.050	<0.25	<0.25	<0.25	<0.25
Nitrate and Nitrite as N	mg/L		0.1	0.6	<0.071	-	-	-	<0.071	<0.071	<0.35	<0.35	<0.071	<0.071	<0.35	<0.35	<0.35	<0.35
Nitrite-N	mg/L	0.197	<0.05	0.08	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.25	<0.25	<0.050	<0.050	<0.25	<0.25	<0.25	<0.25
Sulfate	mg/L		14.3	77.2	4.73	14	-	20	5.96	6.13	25.4	63.4	56	24.8	73	62.8	85.9	68.7
TDS (Calculated)	mg/L		1170	719	374	-	635	450	101	186	1440	896	681	386	1140	943	1240	1230
Aluminum (Al)-Total	mg/L	0.1	-	-	0.048	<0.002	0.004	0.002	0.0216	0.0126	0.021	0.025	<0.020	0.0698	<0.050	0.0095	0.0206	<0.0050
Antimony (Sb)-Total	mg/L		-	-	<0.0016	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	-	-	0.032	0.0049	0.0017	<0.0005	0.00164	0.00293	0.0039	0.0027	0.0023	0.00201	0.0031	0.00453	0.00321	0.00271
Barium (Ba)-Total	mg/L		-	-	0.0751	0.0838	0.0873	0.0882	0.0297	0.0527	0.321	0.209	0.149	0.0523	0.194	0.221	0.194	0.193
Beryllium (Be)-Total	mg/L		-	-	<0.0040	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	-	-	<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.030	<0.030	<0.030	0.016	<0.10	0.011	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	-	-	<0.000050	<0.00008	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.00010	0.000024	0.000025	<0.000010
Calcium (Ca)-Total	mg/L		-	-	107	105	82.8	110	25	53.9	359	240	198	54	222	267	270	278
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		-	-	<0.0050	<0.0006	0.0006	0.0064*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		-	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00050	0.00086	<0.00050	0.00028	<0.0020	<0.00020	0.00047	0.00041
Copper (Cu)-Total	mg/L	Equation	-	-	<0.0040	0.0025	0.0017	0.0012	0.00124	0.00182	<0.0020	0.0025	<0.0020	0.00152	0.0024	0.00244	0.00202	0.00174
Iron (Fe)-Total	mg/L	0.3	-	-	0.507	<0.01	0.57*	1.5*	0.42	0.34	<0.10	0.82	0.48	0.45	<1.0	0.35	0.59	0.75
Lead (Pb)-Total	mg/L	Equation	-	-	0.00051	<0.0003	<0.0003	0.0033	<0.000090	0.000098	<0.0010	<0.0010	<0.0010	0.000105	<0.00090	0.000166	0.000124	<0.000090
Lithium (Li)-Total	mg/L		-	-	0.065	<0.1	<0.1	<0.1	0.0064	0.0136	0.182	0.101	0.0578	0.0232	0.092	0.122	0.1	0.0896
Magnesium (Mg)-Total	mg/L		-	-	6.73	14.4	9.2	16.8	3.44	5.96	43.3	27.3	18.7	8.34	24.3	29.8	27.6	23.4
Manganese (Mn)-Total	mg/L		-	-	0.111	0.0248	0.0217	0.0427	0.019	0.014	0.0123	0.0894	0.078	0.0279	0.0155	0.00845	0.0644	0.0614
Molybdenum (Mo)-Total	mg/L	0.073	-	-	<0.0050	<0.0005	<0.0005	<0.0005	0.00033	0.00031	<0.00050	<0.00050	<0.00050	0.00064	<0.0020	0.00103	0.00049	0.00035
Nickel (Ni)-Total	mg/L	Equation	-	-	0.0051	0.0072	0.008	0.0139	0.0024	<0.0020	0.0029	0.0082	<0.0020	0.0042	<0.020	0.0063	0.0062	0.0059
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	5.12	3.7	2.8	5	1.23	1.97	10.4	8.04	5.29	3.8	8	10.3	8.76	7.55
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00128	0.00188	0.00938	0.00644	0.00379	0.00278	0.0067	0.00852	0.00675	0.00563
Selenium (Se)-Total	mg/L	0.001	-	-	0.0052	0.0002	0.003	0.006	<0.0010	0.0011	<0.0050	0.0168	<0.0050	<0.0010	<0.010	<0.0010	0.0026	<0.0010
Silicon (Si)-Total	mg/L		-	-	-		-	-	0.793	0.509	2.94	3.12	2.32	0.7	1.56	1.62	2.59	2.64
Silver (Ag)-Total	mg/L	0.0001	-	-	<0.0020	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	13.2	21.4	10.3	15.6	5.11	7.6	33.3	31	19.6	16.6	45.9	56.6	46.2	33.3
Strontium (Sr)-Total	mg/L		-	-	-	0.88	-	0.83	0.16	0.353	2.32	1.91	1.12	0.428	1.86	2.26	-	1.93
Tellurium (Te)-Total	mg/L		-	-	-	-	0.71	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	-	-	<0.00040	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		-	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		-	-	<0.0024	0.08	0.04	0.05	0.00064	0.00052	0.0017	0.0016	0.0014	0.00334	<0.0050	0.0027	0.00244	0.00224
Tungsten (W)-Total	mg/L		-	-	-	-	-		<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00047	<0.0010	0.00021	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	-	-	<0.00040	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	0.00023	0.00016	0.00011
Vanadium (V)-Total	mg/L		-	-	<0.0020	<0.0005	0.0006	<0.0005	<0.00020	0.0002	<0.0020	<0.0020	<0.0020	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	-	-	<0.016	<0.001	0.005	0.022	<0.0050	<0.0050	<0.020	<0.020	<0.020	<0.0020	<0.020	<0.0020	0.0024	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.0040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		1.9	3.6	-	1.2	0.4	5	1.56	1.26	1.45	3.64	3.05	3.19	2.17	2.33	5.46	7.96
pH	pH units	6.5-9.0	7.5	7.7	7.51	7.52	7.68	7.61	7.82	7.97	7.8	7.54	7.71	7.50	7.91	8	7.64	7.98
Ortho-Phosphate (PO4-P)	mg/L		<0.01	<0.01	<0.010	0.01	0.08	<0.01	-	-	-	-	-	-	-	-		-
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	-	-	0.79	0.82	0.72	0.57

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			A15																	
Year			2007		2010				2011					2012						
Date Sampled	Units	CCME	2007/08/12	2007/10/07	20/06/2010	22/07/2010	26/08/2010	23/09/2010	2011/06/22	2011/07/12	2011/08/29	2011/09/11	2011/10/09	21/06/2012	28/07/2012	18/08/2012	17/09/2012	01/10/2012		
GPS Coordinates			0539732, 6988798	0539732, 6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798		
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB		
Field Measurments																				
Water Temperature	oC		23.8	1.9	14.2	19.2	8.8	3.4	-	-	7.2	3.93	0.3	1.3	15.6	17.4	1.3	4.3		
pH	pH units		8.29	7.04	7.7	8.2	7.55	7.76	-	-	8.75	7.07	7.15	7.41	7.17	7.84	7.96	7.55		
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	0	1302	1354	432	1771	2312	1038	2250		
Laboratory-Measured																				
Ion balance	%		100	92.9	103	-	-	-	-	-	97.2	-	-	94.9	-	-	95.1	93.4		
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	1.8	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0		
Ammonia as N	mg/L	2.33	-	<0.05	<0.050	0.06	0.05	<0.05	0.056	<0.050	<0.050	<0.050	<0.050	0.034	<0.010	<0.010	0.02	0.033		
Mercury (Hg)-Total	mg/L	0.000026	<0.0004	-	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020		
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	<0.010	0.018	0.012	<0.010	0.011	<0.010	<0.010	0.0033	0.0066	0.0033		
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.023	<0.010	<0.010	<0.010	<0.010		
Total Kjeldahl Nitrogen	mg/L		-	0.6	0.91	-	<1	<1	-	-	1.06	0.42	0.45	0.43	0.55	0.68	0.32	0.38		
Total Suspended Solids	mg/L		-	4	-	10	10	3	-	<5.0	-	-	<5.0	7	5	6	<5.0	5		
Alkalinity, Total (as CaCO3)	mg/L		36	51	27.6	65	56	54	23.7	41.5	12.6	26.6	30.8	27	35	46	44	36		
Bicarbonate (HCO3)	mg/L		44	62	33.7	65	56	54	28.9	50.6	15.4	32.4	37.6	33	43	56	53	44		
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<12	<12	<12	<12	<12		
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<6.8	<6.8	<6.8	<6.8	<6.8		
Calcium (Ca)-Dissolved	mg/L		-	-	71.7	-	-	-	-	-	577	196	188	253	258	329	240	298		
Magnesium (Mg)-Dissolved	mg/L		-	-	8.73	-	-	-	-	-	48.3	21.1	21.1	20.7	25.1	28.1	30.9	30.5		
Potassium (K)-Dissolved	mg/L		-	-	3.19	-	-	-	-	-	20.9	6.45	5.25	13.1	8.69	9.82	9.25	6.34		
Sodium (Na)-Dissolved	mg/L		-	-	9.9	-	-	-	-	-	77.3	22.5	20.2	40.2	56.2	62.8	47.4	35.4		
Chloride	mg/L		210	267	141	313	-	223	22.9	100	1250	409	362	149	511	635	527	646		
Conductivity	umhos/cm		807	1020	547	1372	961	702	128	416	3230	1310	1220	676	1610	1340	767	2330		
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.50	<0.50	<0.10	-	-	-	-	<0.50		
Hardness (as CaCO3)	mg/L		317	384	215	489	248	350	52.7	182	1400	613	487	711	737	912	95.1	975		
Nitrate-N	mg/L	13	<0.1	<0.1	<0.050	0.01	0.05	0.02	<0.050	<0.050	<0.25	<0.25	<0.050	<0.25	<0.25	<0.25	<0.25	<0.25		
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	<0.071	-	-	-	<0.071	<0.071	<0.35	<0.35	<0.071	<0.35	<0.35	<0.35	<0.35	<0.35		
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.050	<0.01	-	0.01	<0.050	<0.050	<0.25	<0.25	<0.050	<0.25	<0.25	<0.25	<0.25	<0.25		
Sulfate	mg/L		6.8	16.8	7.7	9	-	25	1.56	5.84	106	66.2	54.2	24.3	96.8	83.7	93.3	71.4		
TDS (Calculated)	mg/L		368	471	259	-	641	468	61.4	208	2090	753	640	1390	1230	793	1200	1520		
Aluminum (Al)-Total	mg/L	0.1	0.04	-	0.015	0.006	0.065	0.008	0.0265	0.0333	0.032	0.028	0.03	0.0613	<0.050	0.0073	0.0183	0.0066		
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Arsenic (As)-Total	mg/L	0.005	0.0032	-	0.00299	0.0054	0.0015	0.0068*	0.00101	0.00305	0.0036	0.0019	0.0029	0.0134	0.0028	0.00437	0.00308	0.00308		
Barium (Ba)-Total	mg/L		0.123	-	0.0713	0.1248	0.0892	0.0805	0.0231	0.0548	0.403	0.17	0.152	0.224	0.221	0.254	0.193	0.249		
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Boron (B)-Total	mg/L	1.5	<0.050	-	<0.050	<0.01	<0.01	<0.01	<0.010	0.011	<0.030	<0.030	<0.030	0.047	<0.10	0.011	<0.010	<0.010		
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000049	<0.00010	0.000015	0.000027	0.000037		
Calcium (Ca)-Total	mg/L		-	-	74.4	165	84.4	110	17.4	62.5	494	203	166	251	250	313	259	347		
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010		
Chromium (Cr)-Total	mg/L		<0.005	-	<0.0050	<0.0006	<0.0006	0.0070*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.010	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	0.00027	<0.00020	<0.00050	0.00061	<0.00050	0.00096	<0.0020	<0.00020	0.00059	0.00053		
Copper (Cu)-Total	mg/L	Equation	0.003	-	0.0015	0.0026	0.0015	0.0011	0.00092	0.00178	0.0026	0.0022	<0.0020	0.00182	0.0021	0.002	0.00182	0.00132		
Iron (Fe)-Total	mg/L	0.3	0.695	-	0.218	0.18	0.84*	1.8*	0.38	0.44	0.77	0.45	0.86	1.77	<1.0	0.56	0.69	1.47		
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	0.00011	<0.0003	0.0036	0.0008	<0.000090	0.000096	<0.0010	<0.0010	<0.0010	0.00179	<0.00090	<0.000090	0.000101	0.000137		
Lithium (Li)-Total	mg/L		0.03	-	0.026	<0.1	<0.1	<0.1	0.0034	0.0166	0.258	0.0718	0.052	0.216	0.101	0.142	0.0852	0.122		
Magnesium (Mg)-Total	mg/L		-	-	8.62	18.6	9.1	18.3	2.23	6.29	41.1	25.6	17.8	20.1	27.2	32	29.2	26.5		
Manganese (Mn)-Total	mg/L		0.006	-	0.0679	0.0043	0.0291	0.0739	0.0596	0.00917	0.0525	0.036	0.0949	0.174	0.0086	0.0167	0.116	0.145		
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.0050	0.0005	<0.0005	<0.0005	0.00022	0.00094	<0.00050	<0.00050	<0.00050	0.00234	<0.0020	0.00081	0.00049	0.00041		
Nickel (Ni)-Total	mg/L	Equation	0.006	-	0.0051	0.0094	0.0071	0.0152	0.0026	0.0022	0.0045	0.0065	<0.0020	0.0049	<0.020	0.0061	0.0055	0.0065		
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0	<0.10	<0.10	<0.10		
Potassium (K)-Total	mg/L		-	-	3.26	4.3	2.1	5.1	0.801	1.96	17.4	6.68	4.55	12.4	8.73	10.7	8.61	7.77		
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00101	0.00251	0.0167	0.00473	0.00343	0.0142	0.0075	0.00933	0.00565	0.00592		
Selenium (Se)-Total	mg/L	0.001	0.0012	-	0.00157	0.005	0.002	0.01	<0.0010	0.0017	<0.0050	0.013	<0.0050	<0.0010	<0.010	<0.0010	0.0019	<0.0010		
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.945	0.826	0.73	2.87	2.77	0.903	1.67	1.39	2.69	2.48		
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010		
Sodium (Na)-Total	mg/L		-	-	9.8	22.1	9.6	13.6	2.26	6.48	63.8	26.6	17.1	38.8	56.2	65.1	46.5	36.2		
Strontium (Sr)-Total	mg/L		-	-	-	1.2	0.69	0.78	0.102	0.444	4.18	1.54	1.16	2.59	2.18	2.82	1.8	2.54		
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Thallium (Tl)-Total	mg/L	0.0008	<0.0002	-	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010		
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010		
Tin (Sn)-Total	mg/L		<0.050	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Titanium (Ti)-Total	mg/L		<0.001	-	<0.0010	0.11	0.04	0.05	0.00065	0.00056	0.0013	0.0015	0.0015	0.00221	<0.0050	0.00319	0.00223	0.00268		
Tungsten (W)-Total	mg/L		<0.0010	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00063	<0.0010	0.00013	0.00014	<0.00010		
Uranium (U)-Total	mg/L	0.015	<0.0002	-	<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	0.00017	<0.00010	<0.00010		
Vanadium (V)-Total	mg/L		0.001	-	0.0016	<0.0005	<0.0005	<0.0005	<0.00020	0.00021	<0.0020	<0.0020	<0.0020	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020		
Zinc (Zn)-Total	mg/L	0.03	<0.004	-	<0.0040	<0.001	0.006	0.011	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0066	<0.020	<0.0020	0.0028	0.0104		
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.0040	<0.00040	<0.00040	<0.00040		
Turbidity	NTU		-	1.6	-	3.8	6.9	1.7	1.2	2	10.1	0.67	3.13	12	3.49	3.6	4.42	14		
pH	pH units	6.5-9.0	7.7	7.5	7.66	7.69	7.7	7.48	7.65	7.97	7.18	7.6	7.66	7.48	7.83	7.89	7.62	7.84		
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.002	0.07	<0.01	-	-	-	-	-	-	-	-	-	-		
Sodium Adsorption Ratio			-		-	-	-	-	-	-	-	-	-	-	0.89	83.7	0.73	0.52		
Total Oil and Grease	mg/L		-	<1.0	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-		

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			A38											
Year			2007		2010				2011		2012			
Date Sampled	Units	CCME	2007/07/18	2007/10/07	20/06/2010	22/07/2010	26/08/2010	23/09/2010	2011/06/22	2011/07/12	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments															
Water Temperature	oC		20.4	0.9	9.1	19.2	9.4	4.4	-	-	7.53	11.5	13.5	1	5
pH	pH units		8.49	7.68	7.9	8.69	7.69	7.58	-	-	15	7.73	7.38	9.66	7.73
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	715	793	905	1022	1050
Laboratory-Measured															
Ion balance	%		95.7	97.2	104	-	-	-	-	-	104	-	-	103	109
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	-	0.05	0.2	0.06	0.05	<0.05	<0.050	<0.050	0.097	0.011	0.019	0.064	0.022
Mercury (Hg)-Total	mg/L	0.000026	<0.0002	-	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.011	0.013	0.0029	<0.010	0.013	0.0116	0.0061
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.0010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.6	1.32	-	<1	<1	-	-	0.59	0.82	1.04	0.39	0.68
Total Suspended Solids	mg/L		-	6	-	5	1	2	-	<5.0	<5.0	5	<5.0	7	<5.0
Alkalinity, Total (as CaCO3)	mg/L		76	76	50.7	60	79	97	54.9	71.8	-	62	69	85	80
Bicarbonate (HCO3)	mg/L		93	92	61.8	60	79	97	67	87.6	-	76	84	104	98
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	53.5	-	-	-	-	-	78.1	90.9	87.7	118	125
Magnesium (Mg)-Dissolved	mg/L		-	-	8.19	-	-	-	-	-	13.4	14.8	13.6	20.4	20.5
Potassium (K)-Dissolved	mg/L		-	-	4.11	-	-	-	-	-	6.25	6.88	6.66	9	7.65
Sodium (Na)-Dissolved	mg/L		-	-	18.3	-	-	-	-	-	40.4	40.4	44	48.6	44.1
Chloride	mg/L		86	118	89.6	175	-	185	68.5	158	162	185	208	250	240
Conductivity	umhos/cm		456	609	461	996	932	629	372	671	744	784	736	1040	1030
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		179	224	167	278	210	286	133	252	257	291	311	366	387
Nitrate-N	mg/L	13	0.1	0.1	0.655	0.31	0.04	0.06	0.102	<0.050	1.1	0.225	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		0.1	0.1	0.655	-	-	-	0.102	<0.071	1.1	0.225	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.050	0.02	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		11.4	28.2	25.3	48	-	35	18.3	33.9	38.9	42.2	39.1	39.9	39.1
TDS (Calculated)	mg/L		221	294	232	-	621	419	190	370	378	552	537	678	668
Aluminum (Al)-Total	mg/L	0.1	0.02	-	0.014	<0.002	0.015	0.002	0.0239	0.0068	0.0058	0.0065	0.0067	0.0271	<0.0050
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0042	-	0.00285	0.0046	0.0027	0.0114*	0.00274	0.0046	0.00233	0.00341	0.00467	0.00609	0.00272
Barium (Ba)-Total	mg/L		0.042	-	0.0394	0.0611	0.0535	0.0572	0.0342	0.0618	0.059	0.0765	0.0723	0.0791	0.0803
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.050	-	<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	0.00021*	<0.000010	<0.000010	0.000013	<0.000010	<0.000010	0.000018	<0.000010
Calcium (Ca)-Total	mg/L		-	-	49.7	83.4	65.6	85.5	42.5	79.9	81	88	97	116	126
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.0050	<0.0006	<0.0006	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	0.00025	0.00058	0.00022
Copper (Cu)-Total	mg/L	Equation	0.003	-	0.0013	0.0031	0.0021	0.0024	0.0011	0.00204	0.0012	0.00182	0.00206	0.002	0.00121
Iron (Fe)-Total	mg/L	0.3	0.17	-	0.063	<0.01	<0.01	0.80*	0.24	0.27	0.11	0.12	0.35	0.61	0.13
Lead (Pb)-Total	mg/L	Equation	0.0003	-	<0.00010	0.0632	0.0098*	0.0014	0.00018	0.000148	0.000153	<0.000090	<0.000090	0.000239	<0.000090
Lithium (Li)-Total	mg/L		<0.02	-	<0.010	<0.1	<0.1	<0.1	0.0085	0.0173	0.0224	0.0264	0.0283	0.0361	0.0367
Magnesium (Mg)-Total	mg/L		-	-	7.35	17	11.1	17.8	6.59	12.8	12.4	16.9	16.6	18.5	17.4
Manganese (Mn)-Total	mg/L		0.009	-	0.0058	0.0072	0.0082	0.0102	0.0123	0.00991	0.00328	0.00692	0.0202	0.0464	0.0152
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.0050	<0.0005	<0.0005	<0.00005	0.00035	0.00053	0.00058	0.0006	0.00063	0.00046	0.00035
Nickel (Ni)-Total	mg/L	Equation	0.004	-	0.0027	0.0068	0.0062	0.0129	0.0024	0.0029	<0.0020	0.0027	0.004	0.0043	0.0038
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	3.61	6.2	5.1	9.3	3.11	5.54	5.82	7.48	7.85	8.12	8.35
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00257	0.00434	0.00425	0.00542	0.00561	0.00498	0.00539
Selenium (Se)-Total	mg/L	0.001	0.007	-	0.00084	<0.001	<0.001	<0.001	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.222	0.154	0.126	0.336	0.734	1.28	0.935
Silver (Ag)-Total	mg/L	0.0001	<0.004	-	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	16.7	45.5	25.5	39.6	17.7	36.3	36.4	40.3	43.4	48.4	40.8
Strontium (Sr)-Total	mg/L		-	-	-	0.72	0.63	0.73	0.32	0.666	0.707	0.757	0.881	-	0.941
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0001	-	<0.00010	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.05	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0010	-	<0.0010	0.06	0.03	0.04	0.00079	0.00052	0.00098	0.00109	0.00162	0.00161	0.00113
Tungsten (W)-Total	mg/L		<0.0010	-	-	-	-		<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	0.0002	-	0.00033	<0.001	<0.001	<0.001	0.00018	0.00033	0.0004	0.0003	0.0003	0.00045	0.00042
Vanadium (V)-Total	mg/L		<0.0010	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	0.00025	<0.00020	0.0002	<0.00020	0.00036	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.012	-	<0.0040	<0.001	0.005	0.005	<0.0050	<0.0050	<0.0020	0.0023	<0.0020	0.0021	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	1.04	1.16	1.1	0.96
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.01	0.07	<0.01	-	-	-	-	-	-	-
Turbidity	NTU		-	1.9	-	1.1	0.92	0.69	1.15	1.3	0.68	0.98	1.87	3.93	1.15
pH	pH units	6.5-9.0	8.2	7.8	7.96	7.94	7.59	7.87	8.04	8.21	-	8.08	7.97	7.92	8.08

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			A54																	
Year			2007		2008	2010				2011						2012				
Date Sampled	Units	CCME	12/08/2007	2007/10/07	15/07/2008	20/06/2010	22/07/2010	26/08/2010	23/09/2010	22/06/2011	12/07/2011	29/08/2011	11/09/2011	09/10/2011	21/06/2012	28/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			0540135 - 6988794	0540135 - 6988794	0540180 - 6988827	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments																				
Water Temperature	oC		11.2	0.3	13.8	10.4	18.1	9.8	4.1	-	-	9.5	4.92	0.4	9.6	14.6	14.2	1.6	4.7
pH	pH units		8.11	8.17	6.94	8	8.93	7.55	7.78	-	-	8.52	7.41	7.15	8.95	6.91	7.75	8.02	7.89
Conductivity	(µS/cm)		-	-	895	-	-	-	-	-	-	0	1202	1187	670	866	930	1766	1070
Laboratory-Measured																				
Ion balance	%		107	96.1	103	92.9	-	-	-	-	-	99.7	-	-	97.8	-	-	101	108
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	-	1.9	-	-	-	<6.0	<0.6	<0.6	<0.6	<6.0
Ammonia as N	mg/L	2.33	<0.05	<0.05	1.11	0.739	<0.05	0.25	0.13	0.176	0.121	<0.050	0.264	0.67	0.87	0.023	0.011	<0.010	0.023
Mercury (Hg)-Total	mg/L	0.000026	-	-	0.02	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.02	0.02	0.009	-	-	-	-	0.012	0.014	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	0.0071	0.0042
Phosphorus (P)-Total Reactive	mg/L		-	0.02	<0.004	-	-	-	-	<0.010	<5.0	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.7	0.5	2.2	1.58	-	<1	<1	-	-	1.19	1.21	1.59	1.24	0.72	0.81	0.22	0.7
Total Suspended Solids	mg/L		4	3	5	-	8	1	2	-	-	-	-	<5.0	<5.0	5	<5.0	6	<5.0
Alkalinity, Total (as CaCO3)	mg/L		49	68	47	49.4	56	56	60	51.4	53.8	48.8	68.1	64.1	58	54	50	51	63
Bicarbonate (HCO3)	mg/L		60	83	57	60.2	36	56	60	62.8	65.7	59.5	83	78.1	70	66	61	62	76
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<12	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<5.0	10	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<6.8	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	-	49.9	-	-	-	-	-	105	121	141	72.7	98.2	86	245	125
Magnesium (Mg)-Dissolved	mg/L		-	-	-	7.64	-	-	-	-	-	24.7	23	27.2	11.4	16.6	14.1	29.5	19.7
Potassium (K)-Dissolved	mg/L		-	-	-	3.8	-	-	-	-	-	11.2	11.2	11.9	5.33	8.25	7.69	9.51	8.72
Sodium (Na)-Dissolved	mg/L		-	-	-	17.9	-	-	-	-	-	70.6	70.6	82.6	30.8	46.8	47.1	47	54.1
Chloride	mg/L		134	151	214	94.6	174	-	235	75.9	209	305	335	394	149	203	220	513	255
Conductivity	umhos/cm		618	720	944	498	1005	1079	727	403	815	1070	1150	1380	676	849	762	1780	1140
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.50	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		236	258	337	156	271	248	329	126	296	307	429	432	228	341	308	754	372
Nitrate-N	mg/L	13	<.01	<0.1	4.9	1.25	1.4	0.82	0.84	0.68	1.18	<0.050	0.809	2.92	1.27	1.52	0.609	<0.25	0.499
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	5.1	1.25	-	-	-	0.68	1.18	<0.071	0.809	2.92	1.27	1.52	0.609	<0.35	0.499
Nitrite-N	mg/L	0.197	<0.05	<0.05	0.14	<0.050	0.05	-	0.01	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.25	<0.050
Sulfate	mg/L		19.8	37.2	39.9	29.5	57	-	60	22.7	45.4	52.2	64	84.1	38.6	51.6	50	61	55.3
TDS (Calculated)	mg/L		291	348	469	239	670	719	485	200	456	599	691	778	532	672	582	1160	743
Aluminum (Al)-Total	mg/L	0.1	-	-	0.0024	0.044	<0.002	<0.002	<0.002	0.126	0.0063	<0.020	<0.020	<0.020	0.017	<0.050	<0.0050	0.0424	<0.0050
Antimony (Sb)-Total	mg/L		-	-	<0.0002	<0.00040	<0.0001	<0.0001	0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	0.00022	<0.0020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	-	-	0.0009	0.00323	0.0044	<0.0017	0.0035	0.00314	0.00356	0.0025	0.0034	0.0034	0.00335	0.0029	0.00259	0.00382	0.00224
Barium (Ba)-Total	mg/L		-	-	0.0618	0.0401	0.049	0.0533	0.0539	0.0341	0.0644	0.0659	0.0899	0.0877	0.055	0.0658	0.0626	0.2	0.0707
Beryllium (Be)-Total	mg/L		-	-	<0.0002	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	-	-	<0.0006	<0.050	<0.01	<0.01	<0.01	<0.010	0.014	<0.030	<0.030	<0.030	0.019	<0.10	0.012	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	-	-	<0.00005	<0.000050	<0.00008	<0.00008	0.00012	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000031	<0.00010	<0.000010	0.000023	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	50.7	79.3	77.4	95.8	39.9	91.5	106	126	133	72	105	95	256	122
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		-	-	<0.00006	<0.0050	<0.0006	<0.0006	0.0091	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		-	-	<0.0001	<0.0020	-	-		0.00027	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<0.00020	0.0004	<0.00020
Copper (Cu)-Total	mg/L	Equation	-	-	<0.0001	0.0014	0.0021	0.0015	0.002	0.00155	0.00148	<0.0020	<0.0020	<0.0020	0.00126	<0.0020	0.00103	0.00228	0.00084
Iron (Fe)-Total	mg/L	0.3	-	-	0.022	0.107	<0.01	<0.01	0.71*	0.32	0.2	<0.10	0.32	0.12	0.19	<1.0	<0.10	0.7	<0.10
Lead (Pb)-Total	mg/L	Equation	-	-	0.00006	0.0002	<0.0003	<0.0003	0.0019	0.000533	0.000156	<0.0010	<0.0010	<0.0010	0.000495	<0.00090	<0.000090	0.00018	<0.000090
Lithium (Li)-Total	mg/L		-	-	-	<0.010	<0.1	<0.1	<0.1	0.0083	0.0223	0.0263	0.0389	0.0324	0.023	0.026	0.0281	0.114	0.0311
Magnesium (Mg)-Total	mg/L		-	-	-	7.76	17.7	13.2	22	6.46	16.5	20.8	27.8	24.2	11	18.9	17.4	27.7	16.3
Manganese (Mn)-Total	mg/L		-	-	0.0017	0.0039	0.0046	0.0097	0.0079	0.00878	0.0079	0.0119	0.0248	0.0084	0.00609	0.0056	0.00889	0.0524	0.0102
Molybdenum (Mo)-Total	mg/L	0.073	-	-	0.00049	<0.0050	<0.0005	<0.0005	<0.0005	0.00042	0.00064	0.00053	<0.00050	<0.00050	0.0008	<0.0020	0.00068	0.0004	0.00048
Nickel (Ni)-Total	mg/L	Equation	-	-	0.001	0.0033	0.0048	0.0064	0.0134	0.0033	0.003	<0.0020	0.0054	<0.0020	0.0031	<0.020	0.0033	0.0053	0.0034
Phosphorus (P)-Total	mg/L		-	-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	-	3.97	6.2	6.8	11.6	3.16	7.01	9.28	11.8	11	5.22	8.98	8.81	8.74	9.45
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	-	0.00291	0.00569	0.00616	0.0078	0.00745	0.00426	0.0065	0.00613	0.00622	0.00643
Selenium (Se)-Total	mg/L	0.001	-	-	<0.0001	0.00102	<0.001	<0.001	<0.001	<0.0010	0.0023	<0.0050	<0.0050	<0.0050	<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	-	0.414	0.249	0.4	0.64	0.48	0.292	<0.50	0.411	2.2	0.395
Silver (Ag)-Total	mg/L	0.0001	-	-	<0.0001	<0.00050	<0.0005	<0.005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	-	18.2	51.3	34.6	52.5	21.6	54	57.9	83.1	80.7	32.1	48.9	49	42.7	45.2
Strontium (Sr)-Total	mg/L		-	-	0.83	-	0.73	0.78	0.85	0.295	0.789	0.876	1.19	1.14	0.622	0.957	0.926	1.9	1.01
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	-	-	<0.00003	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		-	-	-	<0.050	<0.001	<0.001	<0.001	0.00753	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		-	-	-	<0.0010	0.05	0.03	0.05	0.00402	0.00055	<0.0010	<0.0010	0.0014	0.00158	<0.0050	0.00148	0.0028	0.0015
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00017	<0.0010	<0.00010	0.00012	<0.00010
Uranium (U)-Total	mg/L	0.015	-	-	0.00026	0.00041	<0.001	<0.001	<0.001	0.00027	0.00043	<0.00050	<0.00050	0.00072	0.00045	<0.0010	0.00035	0.00017	0.0005
Vanadium (V)-Total	mg/L		-	-	<0.00005	<0.0010	<0.0005	<0.0005	<0.0005	0.00025	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.0020	<0.00020	0.00024	<0.00020
Zinc (Zn)-Total	mg/L	0.03	-	-	<0.0008	<0.0040	<0.001	0.001	0.011	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0034	<0.020	<0.0020	0.0024	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.0040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		<0.1	0.65	-	-	0.94	0.96	0.39	3.34	1.13	0.83	0.94	0.74	1.52	0.89	1.05	4.56	0.61
Ortho-Phosphate (PO4-P)	mg/L		<0.01	<0.01	<0.001	<0.010	0.01	0.09	<0.01		-	-	-	-	-	-	-	-	-
pH	pH units	6.5-9.0	7.8	7.9	8	7.97	8.24	7.72	7.72	8.06	8.11	7.99	7.97	8.04	7.90	8.04	8.02	7.74	8.14
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	-	-	-	1.15	1.24	0.68	1.19
Total Oil and Grease	mg/L		-	<1.0	0.6	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-

Waterbody			P-1												
Year			2010				2011					2012				
Date Sampled	Units	CCME	20/06/2010	22/07/2010	26/08/2010	23/09/2010	15/06/2011	12/07/2011	29/08/2011	11/09/2011	09/10/2011	21/06/2012	28/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966
Source			-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments																
Water Temperature	oC		11.6	18.2	9	4.2			8.3	3.43	0.3	8.0	14.4	14.8	1.6	4
pH	pH units		8	7.5	7.63	7.68			8.75	7.13	7.25	8.3	7.88	8.2	8.2	8.33
Conductivity	(µS/cm)		-	-	-				0	560	620	95	282	824	1005	450
Laboratory-Measured																
Ion balance	%		93.1	-	-	-	-	-	101	-	-	101	-	-	104	111
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	3.5	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	1.07	0.1	2.9	2	0.052	<0.050	<0.050	<0.050	<0.050	0.011	0.012	<0.010	0.035	0.015
Mercury (Hg)-Total	mg/L	0.000026	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	-	-	0.023	0.037	<0.010	<0.010	<0.010	0.021	0.014	0.01	0.0038	0.0068
Phosphorus (P)-Total Reactive	mg/L		-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		2.04	-	3	-	-	-	1.27	0.97	0.68	0.41	0.99	1	0.51	0.79
Total Suspended Solids	mg/L		-	4	1	1	-	<5.0	-	-	<5.0	<5.0	5	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		51.2	142	136	168	27.5	127	128	133	120	30	98	119	56	152
Alkalinity Bicarbonate (HCO3)	mg/L		62.5	142	136	168	33.5	155	156	162	146	37	119	142	68	172
Alkalinity Carbonate (CO3)	mg/L		<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<12	<12	<12	<12	<12
Alkalinity Hydroxide (OH)	mg/L		<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<6.8	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		33.3	-	-	-	-	-	72.6	83.5	78.2	14.5	45.5	45.8	108	74.1
Magnesium (Mg)-Dissolved	mg/L		4.17	-	-	-	-	-	11.1	11.2	11.7	2.00	5.32	5.35	18.3	9
Potassium (K)-Dissolved	mg/L		2.46	-	-	-	-	-	4.95	4.54	3.51	1.30	2.64	2.89	9.74	3.6
Sodium (Na)-Dissolved	mg/L		6.5	-	-	-	-	-	17.9	17.6	19.4	2.97	7.86	7.08	59.2	11.8
Chloride	mg/L		39.2	92.1	-	255	6.28	33.1	96.3	107	97.3	9.08	25.5	31.1	250	46
Conductivity	umhos/cm		290	737	1177	898	85.2	313	525	587	604	108	274	232	1030	498
Fluoride	mg/L	0.12	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		100	256	343	516	34.4	158	221	255	236	38.5	133	155	347	208
Nitrate-N	mg/L	13	1.54	0.02	6.5*	1	0.073	<0.050	<0.050	0.059	0.072	0.218	<0.050	<0.050	0.255	<0.050
Nitrate and Nitrite as N	mg/L		1.54	-	-	-	0.073	<0.071	<0.071	<0.071	0.072	0.218	<0.071	<0.071	0.255	<0.071
Nitrite-N	mg/L	0.197	<0.050	0.03	-	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		17.6	21	-	68	3.72	4.09	4.86	12.8	41.8	7.70	11.4	5.56	55.1	21.4
TDS (Calculated)	mg/L		141	-	784	599	42.8	184	284	318	319	76.0	214	181	667	324
Aluminum (Al)-Total	mg/L	0.1	0.018	<0.002	0.006	<0.002	0.133	0.0149	0.021	0.022	<0.020	0.0600	0.0063	<0.0050	0.0062	<0.0050
Antimony (Sb)-Total	mg/L		<0.00040	<0.0001	0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0067	0.0216	0.0023	0.0012	0.00379	0.0125	0.0041	0.0045	0.0027	0.00746	0.00801	0.00688	0.00245	0.00468
Barium (Ba)-Total	mg/L		0.0234	0.0554	0.0841	0.126	0.0114	0.0544	0.0531	0.0606	0.0471	0.0129	0.0309	0.036	0.062	0.0446
Beryllium (Be)-Total	mg/L		<0.0010	<0.0005	<0.0005	0.001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000050	<0.00008	<0.00008	0.00028	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		32.2	82.7	120	172	11.3	53.8	70.8	82.4	75.4	12.4	43.5	51.4	108	72
Cesium (Cs)-Total	mg/L		-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0050	<0.0006	<0.0006	0.0103*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0020	-	-	-	0.00042	0.00119	<0.00050	<0.00050	<0.00050	<0.00020	0.00022	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.0013	0.0011	0.0022	0.0043*	0.00202	0.00347	0.0023	0.0025	0.002	0.00136	0.00224	0.00226	0.00107	0.00156
Iron (Fe)-Total	mg/L	0.3	0.064	<0.01	<0.01	1.3*	0.3	0.73	0.3	0.64	0.25	0.17	0.4	0.55	<0.10	0.34
Lead (Pb)-Total	mg/L	Equation	0.00015	0.0003	0.0029	<0.0003	0.000904	0.000344	<0.0010	<0.0010	<0.0010	0.000657	0.000178	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.010	<0.1	<0.1	<0.1	<0.0020	<0.0020	0.0046	0.0066	0.0052	<0.0020	<0.0020	0.0028	0.0319	0.0033
Magnesium (Mg)-Total	mg/L		4.13	12	10.6	21.2	1.51	5.82	10.7	12	11.7	1.85	5.84	6.56	18.9	9.92
Manganese (Mn)-Total	mg/L		0.0246	0.26	0.0065	1.389	0.0435	0.452	0.0159	0.0367	0.0301	0.0169	0.0232	0.0108	0.00878	0.0148
Molybdenum (Mo)-Total	mg/L	0.073	<0.0050	<0.0005	<0.0005	<0.0005	0.00031	0.00076	0.00079	0.00113	<0.00050	0.00054	0.00059	0.00056	0.00052	0.00053
Nickel (Ni)-Total	mg/L	Equation	0.003	0.007	0.011	0.0386	<0.0020	0.0038	0.003	0.0043	<0.0020	<0.0020	0.0036	0.0035	0.0031	0.004
Phosphorus (P)-Total	mg/L		<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		2.48	4	6.2	11.1	1.02	2.85	4.99	4.68	3.53	1.22	2.71	3.22	9.18	3.77
Rubidium (Rb)-Total	mg/L		-	-	-	-	0.00125	0.00312	0.00394	0.0035	0.00245	0.00122	0.00248	0.00297	0.00621	0.0031
Selenium (Se)-Total	mg/L	0.001	0.00061	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	1.1	0.202	<0.30	0.81	1.24	0.286	0.156	0.257	0.421	0.677
Silver (Ag)-Total	mg/L	0.0001	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		6.8	22.1	18.9	32.7	2.12	7.78	17.5	19	17.2	3.00	7.95	9.36	49.1	10.3
Strontium (Sr)-Total	mg/L		-	0.44	0.8	0.95	0.0635	0.311	0.49	0.555	0.418	0.0704	0.248	0.289	0.9	0.405
Tellurium (Te)-Total	mg/L		-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0010	0.05	0.02	0.1	0.00371	0.00055	<0.0010	<0.0010	<0.0010	0.00163	<0.00050	<0.00050	0.0011	0.00078
Tungsten (W)-Total	mg/L		-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	0.0003	<0.001	<0.001	0.001	<0.00010	0.00018	0.00054	0.00062	0.00059	<0.00010	0.00016	0.00022	0.00038	0.00069
Vanadium (V)-Total	mg/L		<0.0010	<0.0005	<0.0005	<0.0005	0.00036	0.00022	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.00020	0.00022
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.001	0.004	0.015	<0.0050	0.0118	<0.020	<0.020	<0.020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		-	1.4	0.51	0.24	2.86	2.84	1.92	3.13	1.26	2.4	2.04	1.69	1.17	2.42
Ortho-Phosphate (O-PO4)	mg/L		<0.010	0.01	0.08	<0.01	-	-	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	0.29	0.26	1.15	0.35
Total Oil and Grease	mg/L		-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
pH	pH units	6.5-9.0	7.98	7.54	7.59	7.3	7.73	8.21	8.28	8.28	8.11	7.41	8.27	8.31	7.84	8.54

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			CONTROLE LAKE																			
Year			2007		2008	2009	2010				2011						2012					
Date Sampled	Units	CCME	07/07/2007	07/10/2007	08/07/2008	09/04/2009	20/06/2010	22/07/2010	26/08/2010	23/09/2010	23/06/2011	11/07/2011	12/07/2011	28/08/2011	11/09/2011	09/10/2011	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			0535001 - 6986333	0535001 - 6986333	0534632 - 6986546	0534632 - 6986546	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	0534324, 6986637	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333
LAB			-	-	-	-	-	-	-	-	ALS LAB	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																						
Water Temperature	oC		16.4	0.2	14.12	1.05	4.1	18.5	11	6.5	-	16.7	-	14.7	6.06	1.9	7.84	11.7	13	3.5	4.5
pH	pH units		7.83	7.92	-	6.26	7.4	8.08	7.02	7.8	-	7.7	-	7.69	7.15	7.27	8.7	8.1	8.33	8.94	7.75
Conductivity	(µS/cm)		-	-	64	175	-	-		-	-	80	-	0	74	79	62	165	70	68	20
Laboratory-Measured																						
Ion balance	%		Low EC	Low EC	Low EC	103	Low EC	-	-	-	-	-	-	-	-	-	Low EC	-	-	Low EC	Low EC
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	-	<0.05	<0.05	0.075	<0.050	0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.0002	-	<0.00002	<0.00002	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.00002	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	0.009	0.0057	-	-	-	-	0.011	0.0043	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0036	0.0019
Phosphorus (P)-Total Reactive	mg/L		-	0.02	0.003	0.0056	-	-	-	-	<0.010	0.0025	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.3	0.3	0.73	0.56	-	<1	<1	-	0.25	-	0.4	0.3	0.37	0.22	0.28	0.25	<0.20	0.22
Total Suspended Solids	mg/L		-	5	3	3	-	3	2	1	-	<3.0	<5.0	-	-	<5.0	<5.0	9	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		21	22	22	62.4	22.3	29	28	32	40	26.3	25.3	27.2	27.4	27.3	-	23	25	25	25
Bicarbonate (HCO3)	mg/L		26	27	26	76.2	27.2	29	28	32	48.8	32.1	30.8	33.2	33.4	33.3	-	28	31	31	31
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.5	<0.60	<0.60	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.5	<0.40	<0.40	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	7.02	23.6	7.01	-	-	-	-	8.51	-	10	10.1	9.76	8.85	8.78	8.18	9.15	8.22
Magnesium (Mg)-Dissolved	mg/L		-	-	0.765	2.46	0.89	-	-	-	-	1.13	-	1.12	1.11	1.03	1.12	0.996	0.844	0.922	1.05
Potassium (K)-Dissolved	mg/L		-	-	0.79	2.47	0.91	-	-	-	-	1.11	-	1.25	1.05	1.07	0.87	0.885	0.875	0.984	0.894
Sodium (Na)-Dissolved	mg/L		-	-	3.25	10.5	3	-	-	-	-	4.72	-	4.97	4.67	4.72	4.61	4.06	3.31	4.06	4.15
Chloride	mg/L		6	7	6	18.1	4.93	8	-	9.1	34.9	8.21	8.02	8.5	8.78	8.74	7.78	7.15	7.6	7.87	7.83
Conductivity	umhos/cm		60.3	76.5	68.2	193	59.7	103	161	88	200	81.4	78.2	85.2	85.6	86.3	79	75	75	80	86
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	-	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		17	24	22	69.1	21.2	27	24	30	75	26.7	27.1	28.8	30.5	29.2	26.7	27.5	26	26.2	29.3
Nitrate-N	mg/L	13	0.1	0.1	0.1	0.05	<0.050	0.01	0.05	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		0.1	0.1	0.1	<0.071	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.05	<0.05	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.9	3.6	2.2	4.71	0.97	5	-	3	3.56	1.76	1.89	1.96	2.04	2.3	2.48	2.09	2.07	2.08	2.18
TDS (Calculated)	mg/L		35	38	35	99.3	31.1	-	107	59	96.5	41.1	40.8	44.2	45	44.1	41.9	56	41	52	56
Aluminum (Al)-Total	mg/L	0.1	0.02	-	0.0036	<0.005	<0.010	0.086	0.018	0.008	0.0081	0.006	0.0069	0.026	<0.020	<0.020	<0.0050	0.0073	<0.0050	0.0068	<0.0050
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00003	<0.0002	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	0.0001	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	<0.0004	-	0.00039	0.00116	<0.00040	<0.0005	<0.0005	0.0055*	0.00158	0.00059	0.00046	<0.0010	<0.0010	<0.0010	0.00041	0.00048	0.00051	0.00051	0.00047
Barium (Ba)-Total	mg/L		0.008	-	0.00691	0.0241	0.0095	0.0074	0.0068	0.0071	0.026	0.00782	0.00881	0.00764	0.00829	0.00788	0.0102	0.00837	0.00761	0.00709	0.00788
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0002	<0.001	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	0.0005	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	0.0001	-	-	-	-	<0.00020	0.00005	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.05	-	<0.004	<0.05	<0.050	<0.01	<0.01	<0.01	<0.010	0.0052	<0.010	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.00005	<0.00001	<0.000050	<0.00008	<0.00008	0.00017*	<0.000010	0.00001	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	-	6.98	9	8	9.9	24.8	9.28	9.07	9.74	10.3	9.83	8.73	9.2	8.72	8.79	10.2
Cesium (Cs)-Total	mg/L		-	-	-	0.0216	-	-	-	-	<0.00010	-	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.00006	0.0022	<0.0050	<0.0006	<0.0006	0.0056*	<0.0010	<0.0001	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0001	<0.0003	<0.0020	-	-	-	<0.00020	<0.0001	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.002	-	0.0008	0.0017	<0.0010	0.0007	0.0013	0.0011	0.0007	0.00094	0.00082	<0.0020	<0.0020	<0.0020	0.00077	0.00106	0.0008	0.00102	0.00094
Iron (Fe)-Total	mg/L	0.3	0.049	-	0.024	-	0.099	<0.01	<0.01	0.11	0.11	0.052	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.0004	-	<0.00005	<0.0005	<0.00010	0.0049	0.0052	<0.0003	<0.000090	<0.00005	<0.000090	<0.0010	<0.0010	<0.0010	0.000118	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.01	-	-	<0.005	<0.010	<0.1	<0.01	<0.1	0.0076	<0.005	<0.0020	0.006	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L		-	-	-	-	0.88	1.2	0.93	1.3	3.16	1.17	1.07	1.08	1.18	1.14	1.03	1.1	1.02	1.04	0.944
Manganese (Mn)-Total	mg/L		0.007	-	0.003	0.0042	0.0151	<0.0005	0.0013	0.004	0.0396	0.00396	0.00361	0.0103	0.0029	0.003	0.0102	0.00572	0.005	0.00337	0.0021
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.00012	<0.001	<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	0.000191	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	Equation	<0.002	-	0.0004	0.0013	<0.0020	0.0005	0.0006	0.0015	<0.0020	0.00057	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	-	-	<0.20	-	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	-	-	0.9	0.55	0.55	1.6	1.41	1.07	0.956	1.21	1.1	1	0.908	0.961	0.923	1.02	1.06
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	-	-	0.00163	-	0.00097	0.00115	0.00126	0.00104	0.00093	0.00106	0.00101	0.00104	0.00114
Selenium (Se)-Total	mg/L	0.001	<0.0009	-	<0.0001	<0.001	<0.00040	<0.001	<0.001	<0.001	<0.0010	0.0001	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	-	-	1.17	0.119	0.077	<0.30	<0.30	<0.30	0.139	0.163	0.148	0.128	0.127
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.0001	<0.00002	<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	0.00001	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		-	-	-	-	2.9	5.5	3.7	5.4	4.65	4.85	4.67	4.91	5.17	4.7	4.06	4.61	4.3	4.59	4.22
Strontium (Sr)-Total	mg/L		-	-	0.0245	0.0759	-	<0.05	<0.05	<0.05	0.157	0.0328	0.0281	0.0304	0.0323	0.0293	0.0298	0.0289	0.0281	0.027	0.0331
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00020	-	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0001	-	<0.00003	<0.002	<0.00010	-	-	-	<0.00010	0.00005	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00010	-	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.05	-	-	<0.0005	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.0001	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0001	-	-	-	<0.0010	<0.01	<0.01	<0.01	0.00021	0.0003	0.00025	<0.0010	<0.0010	<0.0010	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	-	-	<0.0010	-	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.0001	-	<0.00005	0.000021	<0.00010	<0.001	<0.001	<0.001	<0.00010	0.000024	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.001	-	0.00014	<0.001	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.0001	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.01	-	0.0008	<0.005	<0.0040	<0.001	0.001	0.005	<0.0050	<0.003	<0.0050	<0.020	<0.020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00040	-	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03															-	0.35	0.29	0.39	0.36
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.001	<0.001	<0.010	0.01	0.04	<0.01	-	<0.0010	-	-	-	-	-	-	-	-	-
Turbidity	NTU		-	1.16	-	-	-	0.4	0.71	0.39	0.63	-	0.6	0.63	0.36	0.49	0.49	0.36	0.76	0.46	0.74
pH	pH units	6.5-9.0	7.6	7.5	7.5	7.65	7.49	6.85	7.67	7.25	7.93	7.84	7.79	7.79	7.77	7.71	-	7.64	7.55	7.53	7.76

Waterbody			MEL-1																	
			2008	2009		2010				2011						2012				
Date Sampled	Units	CCME	16/07/2008	28/04/2009	28/07/2009	20/06/2010	22/07/2010	27/08/2010	24/09/2010	28/06/2011	12/07/2011	31/07/2011	29/08/2011	12/09/2011	11/10/2011	21/06/2012	25/07/2012	20/08/2012	18/09/2012	01/10/2012
GPS Coordinates			0542070 - 6989338	0542070 - 6989338	0542025 - 6989302	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	0542025, 6989302	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																				
Water Temperature	oC		11.28	0.33	13.92	4.2	15	10.2	5.4	-	-	14.8	11.4	5.3	0.9	3	10.1	11.1	4.6	3
pH	pH units		7.17	6.87	6.97	7.1	7.56	6.79	7.71	-	-	7.3	8.54	7.16	7.13	7.82	8.11	8.56	8.75	6.68
Conductivity	(µS/cm)		49	90.6	62	-	-	-	-	-	-	66	0	104	66	40	61	57	69	20
Laboratory-Measured																				
Fecal Coliforms	MPN/100mL		-	-	-	-	-	-	-	-	-	-	<3	15	<3	<1	<1	<1	>200	<3
Total Coliforms	mg/L		-	-	-	-	-	-	-	2	-	-	-	-	-	<1	<1	3	>200	7
E. Coli	mg/L		-	-	-	-	-	-	-	<1	-	-	-	-	-	<1	<1	<1	1	<3
Total Oil and Grease	mg/L		<0.5	-	-	-	-	-	-	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<2.0	<1.0
Ion balance	%		Low EC	98.5	Low EC	Low EC	-	-	-	-	-	-	-	-	-	Low EC	-	-	-	Low EC
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	<1	-	2	1.3	-	<1.0	6.6	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.050	<0.050	<0.050	<0.050	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.020	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.00002	<0.00002	<0.00002	<0.00010	<0.00001	0.00023	<0.00001	<0.000050	<0.000050	0.00002	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.004	0.0106	0.0047	-	-	-	-	<0.010	<0.010	0.0037	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-
Phosphorus (P)-Total Reactive	mg/L		0.002	0.0082	0.0027	-	-	-	-	-	-	0.0025	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.2	0.36	0.36	<0.20	-	1	1	-	-	<0.20	0.2	0.21	0.24	0.2	<0.20	<0.20	<0.20	0.3
Total Suspended Solids	mg/L		3	4	3	-	3	1	3	-	<5.0	<3.0	-	-	<5.0	9.0	<5.0	<5.0	<5.0	<5.0
Phosphorus (P)-Total	mg/L															-	-	0.0036	0.003	0.008
Alkalinity, Total (as CaCO3)	mg/L		12	26.2	12.7	<5.0	36	19	23	20	17.7	15.1	18.4	22.4	19	14.1	17.3	17.9	17.7	18.9
Bicarbonate (HCO3)	mg/L		14	32	15.5	5.6	36	19	23	24.4	21.7	18.4	22.4	27.3	23.2	17.2	21.1	21.8	21.6	23
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.5	<0.60	<0.60	<0.60	<0.60	<1.2	<1.2	<0.60	<0.60
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	<0.5	<0.40	<0.40	<0.40	<0.34	<0.68	<0.68	<0.34	<0.34
Calcium (Ca)-Dissolved	mg/L		0.501	9.93	5.76	1.58	-	-	-	-	-	6.04	7.51	10.8	8.54	5.6	6.47	6.98	7.58	9.18
Magnesium (Mg)-Dissolved	mg/L		0.817	1.64	0.94	0.23	-	-	-	-	-	1.18	1.12	1.41	1.25	0.797	1.04	1.09	1.33	1.22
Potassium (K)-Dissolved	mg/L		0.75	1.48	0.71	<0.50	-	-	-	-	-	0.913	0.96	0.98	1.02	0.31	0.76	0.836	0.96	1.09
Sodium (Na)-Dissolved	mg/L		3.34	7	3.5	<1.0	-	-	-	-	-	4.28	4.75	5.06	4.93	2.3	4.02	3.92	4.82	4.37
Chloride	mg/L		6	12.6	7.55	1.51	7.5	-	9	7.45	7.87	7.74	8.41	11.7	8.6	5.25	7.79	7.67	8.6	8.64
Conductivity	umhos/cm		56.6	104	60.9	13.9	87	136	75	70.8	67.9	66.8	70	96.5	76.2	52	70	68	74	84
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10	<0.10	<0.10	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		17	31.5	18.3	4.9	22	17	22	22.6	20.1	20.6	28.5	29.7	22.9	20.1	20.6	20.9	21.7	27.2
Nitrate-N	mg/L	13	0.1	0.05	0.05	<0.050	0.02	0.38	0.14	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		<0.071	<0.071	<0.071	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.050	<0.050	<0.050	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		2.8	5.17	2.75	0.83	2	-	<1	2.77	3.04	2.9	3.26	11.4	4.17	2.55	3.37	3.16	3.91	4.01
TDS (Calculated)	mg/L		27	53.5	28.8	42	58	90	50	34.8	33.6	32.2	37	53.4	37.7	28	44	39	46	0.3
Aluminum (Al)-Total	mg/L	0.1	0.0028	<0.005	<0.005	<0.010	<0.002	0.02	<0.002	0.0087	0.0063	0.003	0.054	<0.020	<0.020	0.0112	0.0116	0.0062	<0.020	0.0066
Antimony (Sb)-Total	mg/L		0.00003	0.00026	0.0005	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.0001	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00026	0.0005	0.0005	<0.00040	0.0016	<0.0005	0.0024	0.00043	0.00037	0.00034	<0.0010	<0.0010	<0.0010	0.00049	0.00037	0.00038	<0.0010	0.00047
Barium (Ba)-Total	mg/L		0.00594	0.01013	0.02	<0.0030	0.0068	0.0067	0.0056	0.00828	0.00769	0.00708	0.00577	0.0101	0.00711	0.00752	0.00733	0.00725	0.00749	0.00802
Beryllium (Be)-Total	mg/L		<0.0002	<0.001	<0.001	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0005	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L		-	<0.001	-	-	-	-	-	<0.00020	<0.00020	<0.00005	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Boron (B)-Total	mg/L	1.5	0.003	0.05	<0.0001	<0.05	<0.01	<0.01	<0.01	<0.010	<0.010	0.0031	<0.030	<0.030	<0.030	0.012	<0.010	<0.010	<0.030	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.00005	<0.00001	<0.00001	<0.000050	<0.00008	<0.00008	0.00016	<0.000010	<0.000010	<0.00001	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010	<0.000010	<0.00020	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	1.92	6.6	5.5	7	7.2	6.31	6.8	9.36	9.69	7.21	6.5	6.64	6.57	6.59	8.47
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	-	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Chromium (Cr)-Total	mg/L		0.00006	<0.0001	<0.0001	<0.0050	<0.0006	<0.0006	<0.0006	<0.0010	<0.0010	<0.0001	<0.0020	<0.00050	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010
Cobalt (Co)-Total	mg/L		<0.001	0.003	0.003	<0.0020	-	-	-	<0.00020	<0.00020	<0.0001	<0.00050	<0.0020	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.0007	0.0017	0.001	<0.0010	0.0017	0.0009	0.0005	0.00094	0.00086	0.0008	0.0026	<0.00050	<0.0020	0.00081	0.00087	0.00083	<0.0020	0.00119
Iron (Fe)-Total	mg/L	0.3	0.017	-	0.03	0.027	<0.01	<0.01	0.05	<0.10	<0.10	0.024	0.28	0.11	<0.10	<0.10	<0.10	<0.10	0.19	<0.10
Lead (Pb)-Total	mg/L	Equation	0.00005	0.0005	0.0005	<0.00010	<0.0003	<0.0003	0.0226	<0.000090	<0.000090	<0.00005	<0.0010	<0.0010	<0.0010	<0.000090	<0.000090	<0.000090	<0.0010	<0.000090
Lithium (Li)-Total	mg/L		-	<0.005	<0.005	<0.010	<0.1	<0.1	<0.1	<0.0020	<0.0020	<0.005	0.0061	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004	<0.0020
Magnesium (Mg)-Total	mg/L		-	-	1.01	0.26	1.4	0.87	1.3	1.13	1.06	1.16	1.25	1.35	1.19	0.939	0.969	1.09	1.26	1.48
Manganese (Mn)-Total	mg/L		0.0021	0.0016	0.00286	0.0073	0.001	0.0014	0.0024	0.00625	0.0079	0.00426	0.0063	0.0097	0.0058	0.0136	0.00534	0.00505	0.0061	0.0066
Molybdenum (Mo)-Total	mg/L	0.073	0.00006	0.001	0.001	<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	0.000073	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Nickel (Ni)-Total	mg/L	Equation	0.0053	<0.001	<0.001	<0.0020	0.0089	0.0006	0.0014	<0.0020	<0.0020	0.00067	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	-	<0.020	-	-	-	<0.20	<0.20	-	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.50	<0.10
Potassium (K)-Total	mg/L		-	-	-	0.15	0.27	0.37	1.1	0.818	0.74	0.901	0.8	0.95	0.83	0.707	0.762	0.776	0.78	0.945
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	-	0.00115	0.00119	-	0.00114	0.00134	0.00117	0.00079	0.0011	0.00113	0.00126	0.00136
Selenium (Se)-Total	mg/L	0.001	<0.0001	<0.001	<0.001	<0.00040	<0.001	<0.001	<0.001	0.0014	<0.0010	<0.0001	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	-	0.224	0.228	0.233	<0.30	0.39	<0.30	0.281	<0.50	0.242	<0.30	0.276
Silver (Ag)-Total	mg/L	0.0001	<0.0001	<0.00002	<0.00002	<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.00001	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Sodium (Na)-Total	mg/L		-	-	-	<1.0	5.9	3.3	4.8	3.41	3.95	4.29	3.95	4.86	4.32	2.46	3.94	3.98	4.36	5.09
Strontium (Sr)-Total	mg/L		0.0243	0.0458	-	-	<0.05	<0.05	<0.05	0.0392	0.0293	0.031	0.0274	0.0471	0.0324	0.0296	0.0318	0.0307	0.0316	0.0359
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	-	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00003	<0.0002	<0.0002	<0.00010	-	-	-	<0.00010	<0.00010	<0.00005	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.0050	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	-	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Tin (Sn)-Total	mg/L		-	<0.0005	0.00075	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.0001	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020	<0.00020	<0.00060	<0.00020
Titanium (Ti)-Total	mg/L		-	-	-	<0.0010	<0.01	<0.01	<0.01	0.00047	0.00037	<0.0003	<0.0010	<0.0010	<0.0010	0.00036	0.00076	<0.00050	<0.0010	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	-	<0.0010	<0.0010	-	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00005	<0.0002	<0.0002	<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	0.000015	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Vanadium (V)-Total	mg/L		0.00009	<0.001	<0.001	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0001	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0008	0.0054	0.005	<0.0040	<0.001	0.002	0.002	<0.0050	<0.0050	<0.003	<0.020	<0.020	<0.020	0.0046	<0.0020	<0.0020	<0.020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	-	<0.00040	<0.00040	-	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.0010	<0.00040
Oil & Grease	mg/L															-	-	<1.0	-	-
Ortho-Phosphate (PO4-P)	mg/L		<0.001	<0.001	<0.0001	<0.010	0.01	0.02	<0.01	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU		-	-	-	-	0.25	0.41	0.29	0.6	0.54	-	0.32	0.36	1.01	0.75	0.67	0.72	0.54	0.52
pH	pH units	6.5-9.0	7.4	7.46	7.41	6.93	6.65	7.43	7.04	7.5	7.63	7.66	7.54	7.53	7.55	7.26	7.58	7.37	7.33	7.63

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody			MELIADINE RIVER																
Year			2008		2010				2011					2012					
Date Sampled	Units	CCME	21/06/2008	19/07/2008	21/06/2010	22/07/2010	26/08/2010	23/09/2010	23/06/2011	12/07/2011	28/08/2011	11/09/2011	09/10/2011	25/06/2012	29/07/2012	18/08/2012	17/09/2012	01/10/2012
GPS Coordinates			0530714, 6989630	0530712, 6989681	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																		
Water Temperature	oC		5.63	12.7	-	-	11.4	5.4	-	-	14.2	3.53	0.8	687	10.3	8.6	1.4	2.1
pH	pH units		-	6.78	-	-	6.9	7.94	-	-	7.77	7.56	7.17	17.68	8016	7.77	8.84	7.54
Conductivity	(µS/cm)		42	63	-	-	-	-	-	-	0	69	149	62	77	78	102	430
Laboratory-Measured																		
Ion balance	%		-	Low EC	Low EC	-	-	-	-	-	-	-	-	Low EC	-	-	98.2	102
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	<1.0	-	-	-	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.00002	<0.00002	<0.00010	<0.00001	0.00021	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.0025	0.004	-	-	-	-	0.012	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0024	0.0017
Phosphorus (P)-Total Reactive	mg/L		<0.002	<0.002	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.167	<0.2	0.47	-	<1	1	-	-	<0.20	0.26	0.26	<0.20	<0.20	<0.20	<0.20	<0.20
Total Suspended Solids	mg/L		<5.0	<5.0	-	3	<1	3	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		17.8	16	25.4	39	22	28	25.5	27	22.7	37.9	29.2	-	21	23	25	31
Bicarbonate (HCO3)	mg/L		17.8	19	31	39	22	28	31.1	33	27.7	46.2	35.6	-	25	28	30	38
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<12	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	-	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		7.76	5.96	8.96	-	-	-	-	-	9.2	17.3	12.8	7.22	8.17	7.44	10.7	16.6
Magnesium (Mg)-Dissolved	mg/L		1.13	0.853	1.33	-	-	-	-	-	1.46	3.24	2.35	1.05	1.23	1.08	1.59	9.75
Potassium (K)-Dissolved	mg/L		2	0.75	1.13	-	-	-	-	-	1.32	2.02	1.62	0.77	0.971	0.928	1.3	3.54
Sodium (Na)-Dissolved	mg/L		3.9	3.2	5	-	-	-	-	-	7.26	13.7	11.1	4.09	5.5	4.22	7.41	58.3
Chloride	mg/L		6.91	5	9.51	10.7	-	13.8	11.7	18.2	11.9	30.9	22.4	6.89	10.1	9.95	15.9	115
Conductivity	umhos/cm		68.8	64.2	88.5	89	152	101	97.8	120	94.3	195	144	68	84	83	113	481
Fluoride	mg/L	0.12	0.021	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		24	20	27.9	29	21	28	29.8	34.8	26.6	61	42.9	22.4	27.5	26	31.7	81.5
Nitrate-N	mg/L	13	<0.005	0.1	<0.050	0.04	0.41	0.14	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		-	0.1	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.01	<0.050	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.11	2.8	3.44	2	-	2	3.93	4.99	3.57	14.4	8.36	3.06	3.48	3.4	4.75	14.8
TDS (Calculated)	mg/L		-	30	44.6	-	101	67	49.6	64	48.3	108	75.1	37.5	60	47	73	313
Aluminum (Al)-Total	mg/L	0.1	<0.0005	0.0019	0.011	<0.002	0.015	<0.002	0.0965	0.0114	0.034	<0.020	<0.020	0.0129	0.0089	<0.0050	0.0055	0.0146
Antimony (Sb)-Total	mg/L		<0.0005	<0.00003	<0.00040	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	<0.0005	<0.00003	<0.00040	0.0009	<0.0005	0.0008	0.00037	0.00032	<0.0010	<0.0010	<0.0010	0.00025	0.00026	0.00025	0.00028	0.00054
Barium (Ba)-Total	mg/L		0.02	0.00689	0.0133	0.0087	0.0095	0.009	0.0135	0.0145	0.00885	0.0152	0.0113	0.00955	0.0101	0.00962	0.0102	0.0213
Beryllium (Be)-Total	mg/L		<0.0010	<0.0002	<0.0010	<0.0005	<0.0005	0.0016	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	<0.1	<0.003	<0.050	<0.01	<0.01	<0.01	<0.010	0.014	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010	0.028
Cadmium (Cd)-Total	mg/L	Equation	0.000017	<0.00005	<0.000050	<0.00008	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000016	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		-	-	9.72	8.5	6.8	8.6	9.57	10.5	8.48	18.5	13.1	6.7	8.59	8.29	9.69	16.5
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.001	<0.00006	<0.0050	<0.0006	<0.0006	0.0021*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0003	<0.0001	<0.0020	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.001	0.0007	0.0011	0.0008	0.0011	0.0006	0.00112	0.00119	<0.0020	<0.0020	<0.0020	0.00085	0.00124	0.00088	0.00105	0.00126
Iron (Fe)-Total	mg/L	0.3	<0.03	<0.01	0.057	<0.01	<0.01	0.07	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.0005	<0.00005	<0.00010	<0.0003	0.0006	0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.0005	-	<0.010	<0.1	<0.1	<0.1	<0.0020	<0.0020	0.005	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	0.0021
Magnesium (Mg)-Total	mg/L		1.12	0.865	1.44	1.8	1	1.8	1.42	2.09	1.32	3.58	2.45	1.01	1.48	1.3	1.82	8.72
Manganese (Mn)-Total	mg/L		0.00204	0.0018	0.0062	<0.0005	0.0021	0.0022	0.0111	0.00317	0.0037	0.0035	0.0028	0.00467	0.0042	0.00295	0.00265	0.00579
Molybdenum (Mo)-Total	mg/L	0.073	<0.001	<0.00006	<0.0050	<0.0005	<0.0005	<0.0005	0.0002	0.00033	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	0.00062
Nickel (Ni)-Total	mg/L	Equation	<0.001	<0.0003	<0.0020	<0.0005	0.0006	0.0014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		2	0.76	1.28	0.57	0.63	1.6	1.31	1.51	1.15	2.34	1.56	0.862	1.07	1.03	1.28	3.56
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00183	0.00199	0.00157	0.00228	0.00161	0.00115	0.00151	0.00143	-	0.00287
Selenium (Se)-Total	mg/L	0.001	<0.001	<0.0001	<0.00040	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	-	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.464	0.231	<0.30	0.92	0.48	0.216	0.248	0.197	0.268	0.427
Silver (Ag)-Total	mg/L	0.0001	<0.0002	<0.0001	<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		3.9	3.22	5.7	8.6	4.4	7.8	6.33	10.5	6.41	15.7	9.73	3.63	6.34	5.71	8.37	58.8
Strontium (Sr)-Total	mg/L		-	0.028	-	<0.05	<0.05	<0.05	0.0444	0.055	0.037	0.0942	0.0607	0.0316	0.0388	0.0378	0.0464	0.134
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.0002	<0.00003	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.0005	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	0.0002	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0010	-	<0.0010	<0.01	<0.01	<0.01	0.00559	0.00055	0.001	<0.0010	<0.0010	0.00067	0.00059	<0.00050	<0.00050	0.00083
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.0002	<0.00005	<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	0.00017
Vanadium (V)-Total	mg/L		<0.001	0.00011	<0.0010	<0.0005	0.0005	<0.0005	0.00037	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.005	0.0008	<0.0040	<0.001	0.006	0.004	<0.0050	<0.0050	<0.020	<0.020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03												-	0.47	0.38	0.65	2.83
Ortho-Phosphate (PO4-P)	mg/L		<0.001	<0.001	<0.010	<0.010	0.02	<0.01	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU		7.6	7.5	-	0.36	0.6	0.56	1.57	0.51	0.37	0.47	0.65	0.45	0.4	0.35	1.25	0.42
pH	pH units	6.5-9.0	9.47	8.57	7.67	6.77	7.62	7.14	7.6	7.83	7.75	7.81	7.73	-	7.63	7.49	7.51	7.65

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody	Units	CCME	2BB-MEL0914	MEL-3
Year				2010
Date Sampled				20/06/2010
GPS Coordinates				-
LAB				-
Field Measurments				
Water Temperature	oC		10	9.8
pH	pH units			7.1
Conductivity	(µS/cm)			-
Laboratory-Measured				
Fecal Coliforms	MPN/100mL		200	-
Total Coliforms	mg/L			-
E. Coli	mg/L			-
Total Oil and Grease	mg/L			<1.0
Ion balance	%			98.1
Biochemical Oxygen Demand	mg/L		15	-
Ammonia as N	mg/L	2.33		-
Mercury (Hg)-Total	mg/L	0.000026		<0.00010
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	-
Phosphorus (P)-Total Reactive	mg/L			-
Total Kjeldahl Nitrogen	mg/L			-
Total Suspended Solids	mg/L		15	-
Alkalinity, Total (as CaCO3)	mg/L			52
Bicarbonate (HCO3)	mg/L			63.5
Carbonate (CO3)	mg/L			<5.0
Hydroxide (OH)	mg/L			<5.0
Calcium (Ca)-Dissolved	mg/L			15.7
Magnesium (Mg)-Dissolved	mg/L			1.63
Potassium (K)-Dissolved	mg/L			2.69
Sodium (Na)-Dissolved	mg/L			21.5
Chloride	mg/L			21.4
Conductivity	umhos/cm			213
Fluoride	mg/L	0.12		-
Hardness (as CaCO3)	mg/L			45.9
Nitrate-N	mg/L	13		<0.050
Nitrate and Nitrite as N	mg/L			<0.071
Nitrite-N	mg/L	0.197		<0.050
Sulfate	mg/L			15.1
TDS (Calculated)	mg/L			109
Aluminum (Al)-Total	mg/L	0.1		0.034
Antimony (Sb)-Total	mg/L			0.00086
Arsenic (As)-Total	mg/L	0.005		0.00423
Barium (Ba)-Total	mg/L			0.0112
Beryllium (Be)-Total	mg/L			<0.0010
Bismuth (Bi)-Total	mg/L			-
Boron (B)-Total	mg/L	1.5		<0.050
Cadmium (Cd)-Total	mg/L	Equation		<0.000050
Calcium (Ca)-Total	mg/L			15.3
Cesium (Cs)-Total	mg/L			-
Chromium (Cr)-Total	mg/L			<0.0050
Cobalt (Co)-Total	mg/L			<0.0020
Copper (Cu)-Total	mg/L	Equation		0.0068
Iron (Fe)-Total	mg/L	0.3		0.179
Lead (Pb)-Total	mg/L	Equation		0.00288
Lithium (Li)-Total	mg/L			<0.010
Magnesium (Mg)-Total	mg/L			1.61
Manganese (Mn)-Total	mg/L			0.0762
Molybdenum (Mo)-Total	mg/L	0.073		<0.0050
Nickel (Ni)-Total	mg/L	Equation		0.0025
Phosphorus (P)-Total	mg/L			-
Potassium (K)-Total	mg/L			2.69
Rubidium (Rb)-Total	mg/L			-
Selenium (Se)-Total	mg/L	0.001		<0.00040
Silicon (Si)-Total	mg/L			-
Silver (Ag)-Total	mg/L	0.0001		<0.00010
Sodium (Na)-Total	mg/L			20.9
Strontium (Sr)-Total	mg/L			-
Tellurium (Te)-Total	mg/L			-
Thallium (Tl)-Total	mg/L	0.0008		<0.00010
Thorium (Th)-Total	mg/L			-
Tin (Sn)-Total	mg/L			<0.050
Titanium (Ti)-Total	mg/L			0.0026
Tungsten (W)-Total	mg/L			-
Uranium (U)-Total	mg/L	0.015		<0.00010
Vanadium (V)-Total	mg/L			<0.0010
Zinc (Zn)-Total	mg/L	0.03		0.0088
Zirconium (Zr)-Total	mg/L			-
Ortho-phosphate (PO4-P)	mg/L			0.414
Turbidity	NTU			-
pH	pH units	6.5-9.0		7.37

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody				MEL-4												
Year				2010				2011					2012			
Date Sampled	Units	CCME	2BB-MEL0914	20/06/2010	22/07/2010	27/08/2010	24/09/2010	28/06/2011	12/07/2011	29/08/2011	12/09/2011	11/10/2011	21/06/2012	25/07/2012	20/08/2012	18/09/2012	01/10/2012
GPS Coordinates				542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB				-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments																	
Water Temperature	oC		10	4	15	11.1	6.5	-	-	11.4	6.32	0.8	1.3	10.3	10.1	4.9	3.4
pH	pH units			6.8	7.79	6.9	7.45	-	-	9.32	7.58	7.2	8.2	8.24	7.9	8.7	7.17
Conductivity	(µS/cm)			-	-	-	-	-	-	0	65	66	14	63	69	108	50
Laboratory-Measured																	
Fecal Coliforms	MPN/100mL		200	-	35	-	-	-	<1	210	150	93	>200	>200	>200	>200	4
Total Coliforms	mg/L			-		-	-	-	-	-	-	-	>200	>200	>200	>200	9
E. Coli	mg/L			-		-	-	-	-	-	-	-	3	2	2	4	<3
Total Oil and Grease	mg/L			-		<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<2.0	<1.0
Ion balance	%			Low EC	-	-	-	-	-	-	-	-	Low EC	-	-	-	Low EC
Biochemical Oxygen Demand	mg/L		15	-	-	<1	5	2.7	1.3	1.9	7.2	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33		<0.050	<0.05	<0.05	<0.05	1.13	<0.050	<0.050	0.055	<0.050	0.136	0.032	0.103	0.066	<0.010
Mercury (Hg)-Total	mg/L	0.000026		<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	-	-	-	-	0.618	0.012	0.018	<0.010	0.034	0.082	0.021	0.208	0.046	0.0013
Phosphorus (P)-Total Reactive	mg/L			-	-	-	-	-	-	<0.010	<0.010	<0.010	0.060	0.013	0.103	0.039	<0.010
Total Kjeldahl Nitrogen	mg/L			<0.20	-	<1	1	-	-	0.31	0.23	0.33	0.25	0.23	0.9	0.21	0.21
Total Suspended Solids	mg/L		15	-	2	1	4	-	<5.0	-	-	12	<5.0	<5.0	58	31	<5.0
Phosphorus (P)-Total	mg/L												-	-	-	-	0.0013
Alkalinity, Total (as CaCO3)	mg/L			<5.0	38	21	23	35.7	17.7	23	19.7	19.5	4.9	18.3	22	24	18.2
Bicarbonate (HCO3)	mg/L			<5.0	38	21	23	43.6	21.6	27	24.1	23.8	6	22.3	27	29	22.2
Carbonate (CO3)	mg/L			<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2	<12	<12	<0.60
Hydroxide (OH)	mg/L			<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.34	<0.68	<6.8	<6.8	<0.34
Calcium (Ca)-Dissolved	mg/L			1.16	-	-	-	-	-	8.08	7.45	7.54	1.19	6.84	8.08	10.4	8.4
Magnesium (Mg)-Dissolved	mg/L			0.12	-	-	-	-	-	1.22	1.15	1.11	0.163	1.06	1.18	1.62	1.1
Potassium (K)-Dissolved	mg/L			<0.50	-	-	-	-	-	0.9	0.86	0.89	<0.10	0.824	1.27	1.27	1.04
Sodium (Na)-Dissolved	mg/L			<1.0	-	-	-	-	-	6.05	4.51	4.61	0.725	4.16	5.06	6.67	4.53
Chloride	mg/L			0.96	9.4	-	9.5	11.8	7.9	10.3	8.61	8.71	1.19	7.91	8.85	10.7	8.49
Conductivity	umhos/cm			9.09	97	142	74	124	67.5	84.8	75.9	75.4	<20	72	81	96	82
Fluoride	mg/L	0.12		-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L			3.4	26	17	20	25	19	33.9	24.7	22.3	3.6	22	26	28.1	25.4
Nitrate-N	mg/L	13		<0.050	0.02	0.03	0.02	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L			<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197		<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L			0.7	3	-	4	4.92	3.09	3.37	3.47	3.55	0.63	3.41	3.51	5.33	3.74
TDS (Calculated)	mg/L			2.9	64	95	49	55.6	33.1	43.7	39.7	37.2	<5.0	43	54	59	57
Aluminum (Al)-Total	mg/L	0.1		<0.010	<0.002	0.022	<0.002	0.0143	0.0059	0.024	<0.020	0.081	0.0114	0.0088	0.0975	0.106	<0.0050
Antimony (Sb)-Total	mg/L			<0.00040	<0.0001	<0.0001	0.0007	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005		<0.00040	<0.0005	<0.0005	<0.0005	0.00069	0.00035	<0.0010	0.0018	<0.0010	0.00065	0.00057	0.00146	<0.0010	0.00042
Barium (Ba)-Total	mg/L			<0.0030	0.0065	0.0064	0.0058	0.00874	0.00735	0.0103	0.0081	0.00758	0.00176	0.00883	0.0114	0.00822	0.00731
Beryllium (Be)-Total	mg/L			<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L			-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Boron (B)-Total	mg/L	1.5		<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	0.041	<0.030	<0.030	<0.010	<0.010	<0.010	<0.030	<0.010
Cadmium (Cd)-Total	mg/L	Equation		<0.000050	<0.00008	<0.00008	0.00017*	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010	<0.000010	<0.00020	<0.000010
Calcium (Ca)-Total	mg/L			1.33	7.6	5.4	6.4	7.92	5.97	11.2	7.81	7.02	1.61	6.99	8.31	9.02	7.96
Cesium (Cs)-Total	mg/L			-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Chromium (Cr)-Total	mg/L			<0.0050	<0.0006	<0.0006	0.0030*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010
Cobalt (Co)-Total	mg/L			<0.0020	-	-	-	0.00024	<0.00020	0.00055	<0.00050	<0.00050	0.00023	<0.00020	0.00034	<0.00050	<0.00020
Copper (Cu)-Total	mg/L	Equation		<0.0010	0.0007	0.0012	0.0005	0.00139	0.0008	<0.0020	<0.0020	<0.0020	0.00043	0.00097	0.00215	<0.0020	0.00117
Iron (Fe)-Total	mg/L	0.3		<0.010	<0.01	<0.01	0.03	<0.10	<0.10	<0.10	<0.10	0.15	<0.10	<0.10	0.24	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation		<0.00010	<0.0003	0.0388*	0.001	0.000147	<0.000090	<0.0010	<0.0010	<0.0010	0.000138	<0.000090	0.000315	<0.0010	<0.000090
Lithium (Li)-Total	mg/L			<0.010	<0.1	<0.1	<0.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024	<0.0020
Magnesium (Mg)-Total	mg/L			0.13	1.6	0.85	1.2	1.26	1.01	1.45	1.27	1.15	0.229	1.11	1.29	1.35	1.34
Manganese (Mn)-Total	mg/L			0.003	0.0021	0.0027	0.0028	0.0148	0.01	0.0319	0.0057	0.0092	0.0212	0.0122	0.0449	0.0215	0.00374
Molybdenum (Mo)-Total	mg/L	0.073		<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Nickel (Ni)-Total	mg/L	Equation		<0.0020	0.0012	0.003	0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L			<0.020	-	-	-	0.4	<0.20	<0.50	<0.50	<0.50	0.12	<0.10	0.19	<0.50	<0.10
Potassium (K)-Total	mg/L			<0.10	0.33	0.43	1	1.89	0.706	0.93	0.99	0.8	0.413	0.893	1.21	1.2	0.94
Rubidium (Rb)-Total	mg/L			-	-	-	-	0.00208	0.00117	0.00133	0.00123	0.00124	0.00037	0.0012	0.00156	0.00156	0.00136
Selenium (Se)-Total	mg/L	0.001		<0.00040	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010
Silicon (Si)-Total	mg/L			-	-	-	-	0.333	0.232	0.47	<0.30	0.33	0.093	0.318	0.382	0.37	0.231
Silver (Ag)-Total	mg/L	0.0001		<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Sodium (Na)-Total	mg/L			1.1	7.4	3.7	5	6.32	3.83	8.51	5.69	4.24	1.06	4.24	5.17	5.62	5.04
Strontium (Sr)-Total	mg/L			-	<0.05	<0.05	<0.05	0.0395	0.0289	0.0552	0.0463	0.0319	0.00717	0.0352	0.0408	0.0482	0.0343
Tellurium (Te)-Total	mg/L			-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008		<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.0050	<0.00010
Thorium (Th)-Total	mg/L			-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Tin (Sn)-Total	mg/L			<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020	<0.00020	<0.00060	<0.00020
Titanium (Ti)-Total	mg/L			<0.0010	<0.01	<0.01	<0.01	0.00031	0.00031	<0.0010	<0.0010	0.0056	<0.00020	<0.00050	0.00535	<0.0010	<0.00050
Tungsten (W)-Total	mg/L			-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010	<0.00010	<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015		<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Vanadium (V)-Total	mg/L			<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020	0.0004	<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03		<0.0040	<0.001	<0.001	<0.001	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0028	<0.0020	0.0026	<0.020	<0.0020
Zirconium (Zr)-Total	mg/L			-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.0010	<0.00040
Ortho-Phosphate (O-PO4)	mg/L			<0.010	0.02	0.05	<0.01	-	-	-	-	-	-	-	-	-	-
Oil & Grease	mg/L			-	0.02	-	-	-	-	-	-	-	<0.10	-	<1.0	-	-
Turbidity	NTU			-	0.3	0.31	0.31	1.05	0.55	0.53	0.36	3.04	-	0.56	1.82	0.44	0.39
pH	pH units	6.5-9.1		6.75	6.7	7.45	7.05	7.72	7.59	8.33	7.61	7.59	6.72	7.59	7.35	7.41	7.62

Waterbody	Units	2BB Limit	CCME	MEL-5
Date Sampled				28/05/2012
Localisation				Bladder Berm
LAB				ALS LAB
Laboratory-Measured				
Benzene	mg/L	0.37	0.0018	<0.00050
Toluene	mg/L	0.002	0.002	<0.0010
Ethyl benzene	mg/L	0.09	0.09	<0.00050
Xylenes	mg/L	-	-	<0.0015
Lead (Pb)-Total	mg/L	0.001	Equation*	0.000243
Oil and Grease, Total	mg/L	0.015	0.015	<2.0
Phenols (4AAP)	mg/L	0.02	Variable	0.004

MONTHLY ENVIRONMENTAL REPORT
OCTOBER 2012

Waterbody	Units	CCME	MEL-7												
Year			2010			2011				2012					
Date Sampled			22/07/2010	27/08/2010	24/09/2010	28/06/2011	12/07/2011	12/09/2011	11/10/2011	20/06/2012	24/07/2012	21/08/2012	18/09/2012	01/10/2012
GPS Coordinates			542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB			-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	Mutlilab	Multilab	Multilab	ALS	ALS
Field Measurments														
Water Temperature	oC		-	-	-	-	-	6.35	0.9				20.3	NA
pH	pH units		-	6.96	6.64	-	-	7.58	7.5				6.78	NA
Conductivity	(µS/cm)		-	-	-	-	-	70	69				na	NA
Laboratory-Measured														
Fecal Coliforms	MPN/100mL		440	-	-	>110000	-	430	230	230	500	900	>200	24000
Total Coliforms	mg/L		-	-	-	>110000	-	-	-			8000	>200	>110000
E. Coli	mg/L		-	-	-	-	-	-	-				1600	930
Total Oil and Grease	mg/L		<1	<1	2	-	5.5	<1.0	<1.0	<1.0	<1.0		<2.0	<1.0
Ion balance	%		-	-	-	-	-	-	-				-	114
Biochemical Oxygen Demand	mg/L		8.9	7	22	-	60	<6.0	<6.0	21.5	22		26.9	17.4
Ammonia as N	mg/L	2.33	-	-	-	-	-	<0.050	0.11				2.16	2.77
Mercury (Hg)-Total	mg/L	0.000026	-	-	-	-	-	<0.000050	<0.000050				<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	-	-	-	<0.010	0.028			13	9.3	15.1
Phosphorus (P)-Total Reactive	mg/L		-	-	-	-	-	<0.010	<0.010				10.8	15.2
Total Kjeldahl Nitrogen	mg/L		-	-	-	-	-	0.25	0.36			19	6.45	9.4
Total Suspended Solids	mg/L		8	9	-	-	90	-	29	36	21	51	65.5	30
Phosphorus (P)-Total	mg/L												-	-
Alkalinity, Total (as CaCO3)	mg/L		-	-	-	-	-	19	19.7				62	69
Bicarbonate (HCO3)	mg/L		-	-	-	-	-	23.2	24.1				75	84
Carbonate (CO3)	mg/L		-	-	-	-	-	<0.60	<0.60				<12	<12
Hydroxide (OH)	mg/L		-	-	-	-	-	<0.40	<0.40				<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	-	-	-	7.01	7.9				19.7	22.7
Magnesium (Mg)-Dissolved	mg/L		-	-	-	-	-	1.12	1.15				5.56	6.01
Potassium (K)-Dissolved	mg/L		-	-	-	-	-	0.82	1				34.2	40.8
Sodium (Na)-Dissolved	mg/L		-	-	-	-	-	4.35	4.94				66.2	75
Chloride	mg/L		-	-	-	-	-	9.42	8.8				81	77.7
Conductivity	umhos/cm		-	-	-	-	-	74.5	77				643	702
Fluoride	mg/L	0.12	-	-	-	-	-	<0.10	<0.10				-	<0.10
Hardness (as CaCO3)	mg/L		-	-	-	-	-	24.4	23.9				59.9	85
Nitrate-N	mg/L	13	-	-	-	-	-	<0.050	<0.050			20	15.2	14.6
Nitrate and Nitrite as N	mg/L		-	-	-	-	-	<0.071	<0.071			20	16.3	14.8
Nitrite-N	mg/L	0.197	-	-	-	-	-	<0.050	<0.050			0	1.11	0.205
Sulfate	mg/L		-	-	-	-	-	4.68	3.86				32.5	35.9
TDS (Calculated)	mg/L		-	-	-	-	-	40.4	38.7				400	444
Aluminum (Al)-Total	mg/L	0.1	-	-	-	-	-	<0.020	0.134				0.447	0.531
Antimony (Sb)-Total	mg/L		-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005	-	-	-	-	-	<0.0010	<0.0010				0.0013	0.00139
Barium (Ba)-Total	mg/L		-	-	-	-	-	0.00814	0.00873				0.00166	0.00479
Beryllium (Be)-Total	mg/L		-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	<0.00050	<0.00050				<0.00050	0.00022
Boron (B)-Total	mg/L	1.5	-	-	-	-	-	<0.030	<0.030				0.14	0.093
Cadmium (Cd)-Total	mg/L	Equation	-	-	-	-	-	<0.00020	<0.00020				<0.00020	0.000072
Calcium (Ca)-Total	mg/L		-	-	-	-	-	7.76	7.53				16.3	23.8
Cesium (Cs)-Total	mg/L		-	-	-	-	-	<0.00050	<0.00050				<0.00050	<0.00010
Chromium (Cr)-Total	mg/L		-	-	-	-	-	<0.0020	<0.0020				<0.0020	<0.0010
Cobalt (Co)-Total	mg/L		-	-	-	-	-	<0.00050	<0.00050				<0.00050	0.00039
Copper (Cu)-Total	mg/L	Equation	-	-	-	-	-	<0.0020	<0.0020				0.0097	0.016
Iron (Fe)-Total	mg/L	0.3	-	-	-	-	-	<0.10	0.28				0.15	0.11
Lead (Pb)-Total	mg/L	Equation	-	-	-	-	-	<0.0010	<0.0010				<0.0010	0.00165
Lithium (Li)-Total	mg/L		-	-	-	-	-	<0.0020	<0.0020				<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L		-	-	-	-	-	1.23	1.24				4.65	6.19
Manganese (Mn)-Total	mg/L		-	-	-	-	-	0.0039	0.021				0.0087	0.0234
Molybdenum (Mo)-Total	mg/L	0.073	-	-	-	-	-	<0.00050	<0.00050				<0.00050	0.00026
Nickel (Ni)-Total	mg/L	Equation	-	-	-	-	-	<0.0020	<0.0020				0.0033	0.0039
Phosphorus (P)-Total	mg/L		-	-	-	-	-	<0.50	<0.50				9.77	15.1
Potassium (K)-Total	mg/L		-	-	-	-	-	0.92	0.88				37	43.3
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	0.00137	0.00136				0.0301	0.0354
Selenium (Se)-Total	mg/L	0.001	-	-	-	-	-	<0.0050	<0.0050				<0.0050	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	-	<0.30	0.4				0.92	0.874
Silver (Ag)-Total	mg/L	0.0001	-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00010
Sodium (Na)-Total	mg/L		-	-	-	-	-	4.96	4.56				76.2	75.9
Strontium (Sr)-Total	mg/L		-	-	-	-	-	0.0379	0.0341				0.0423	0.0616
Tellurium (Te)-Total	mg/L		-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	-	-	-	-	-	<0.0050	<0.0050				<0.0050	<0.00010
Thorium (Th)-Total	mg/L		-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00010
Tin (Sn)-Total	mg/L		-	-	-	-	-	<0.00060	<0.00060				0.00193	0.00076
Titanium (Ti)-Total	mg/L		-	-	-	-	-	<0.0010	0.0074				0.0011	0.00229
Tungsten (W)-Total	mg/L		-	-	-	-	-	<0.0020	<0.0020				<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015	-	-	-	-	-	<0.00050	<0.00050				<0.00050	<0.00010
Vanadium (V)-Total	mg/L		-	-	-	-	-	<0.0020	<0.0020				<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	-	-	-	-	-	<0.020	<0.020				0.086	0.39
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	<0.0010	<0.0010				<0.0010	<0.00040
Oil & Grease	mg/L												-	-
Turbidity	NTU		-	-	-	-	-	0.49	3.01				7.06	12
pH	pH units	6.5-9.0	-	-	6.73	-	-	7.59	7.59	7.07	6.93	7	7.18	7.91