

MELIADINE GOLD PROJECT
MONTHLY ENVIRONMENTAL REPORT
SEPTEMBER 2012



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PRESENTED TO THE NUNAVUT WATER BOARD

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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)

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- 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 **117.8 m³/day** for the month of September 2012; 102.0 m³/day for the drills and 15.8 m³/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

Table 2: Drilling sources of water September 2012

X_coord	Y_coord
538585	6988244
539182	6988239
539435	6988386
540211	6987759

- 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 – BOD₅
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 September.

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 September.

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.

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8. Water quality monitoring

Station: STP-OUT		August				Septembre		
DATE	Limits	07/08/2012	14/08/2012	21/08/2012	28/08/2012	10/09/2012	17/09/2012	25/09/2012
Ammonia as N		25.8	16.5	8	16	21.5	10.6	5.8
Biochemical Oxygen Demand	80	31	14	24	25	35.9	25.5	11.4
Heterotrophic Plate Count (AAHB)			52000	>500000	96000	>3000	>3000	>3000
Nitrate-N		20.8	28	20	25	18.0	20.5	18.5
Nitrate and Nitrite as N		22.6	28	20	25	18.50	21.00	18.60
Nitrite-N		1.8	0	0	0	0.6	0.6	0.2
Oil & Grease-(IR)	5	<1	<3	14	5	<1.0	<2.0	<1.0
Phosphorus (P)-Total		1.7	19	13	19	25.5	14.6	13.0
TKN		35	21	19	27	33.3	13.9	12.4
Total Suspended Solids	100	27	22	51	29	73.0	39.0	24.0
Transmittance %		20	21	17	25	23.8	33.9	35.2
pH	6.5-9	7.26	6.7	6.9	6.4	7.2	6.9	6.9
Fecal Coliforms	1000	<100	200	900	<100	>200	>200	2,300.0
Total Coliforms		<10000	7000	8000	9000	OVERGROWN	OVERGROWN	24,000.0
Atypical		900000	17000	74000	53000	OVERGROWN		

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Waterbody	Units	CCME	A7-8																	
Year			2007		2008		2010				2011					2012				
Date Sampled			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	
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			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	
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	
Conductivity	(µS/cm)				74	109	-	-	-	-	-	-	0	165	188	177	201	215	220	
Laboratory-Measured																				
Ion balance	%		90.5	97.5	-	106	Low EC	-	-	-	-	-	101	-	-	102	-	-	104	
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	1	-	-	-	<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	
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	
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	
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	
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	
Total Suspended Solids	mg/L		-	3	3	3	-	6	2	2	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	9	
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	
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	
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	
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	
Calcium (Ca)-Dissolved	mg/L		-	-	15.1	15.4	9.78	-	-	-	-	-	24.6	23.5	26.3	24.2	27.1	29.9	30	
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	
Potassium (K)-Dissolved	mg/L		-	-	2	0.93	0.63	-	-	-	-	-	1.41	1.28	1.54	1.52	1.48	1.61	1.59	
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	
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	
Conductivity	umhos/cm		106	135	113	118	81.1	249	303	177	93.6	159	176	175	178	188	205	181	227	
Fluoride	mg/L	0.12	-	-	<0.02	-	-	-	-	-	<0.10	<0.10	0.1	<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	
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	
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	
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	
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	
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	
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	
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.0005	<0.0003	<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	
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	
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	
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	
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
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	
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	
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	
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	
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	
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	
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	
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	<0.0005	<0.0001	<0.00010	<0.0003	<0.0003	<0.0003	<0.000090	<								

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Waterbody	Units	CCME	A8											
Year			2007		2008	2009	2010		2011		2012			
Date Sampled			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
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
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
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
Conductivity	(µS/cm)		-	-	101	489	-	-	-	-	180	207	232	222
Laboratory-Measured														
Ion balance	%		91.2	96.7	107	102	-	-	-	-	99.6	-	-	93.9
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	1.5	-	<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
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
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
Phosphorus (P)-Total Reactive	mg/L		-	0.02	0.003	0.0065	-	-	-	-	0.0011	<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
Total Suspended Solids	mg/L		-	3	17	5	-	1	<5.0	5	<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
Bicarbonate (HCO3)	mg/L		37	40	34	153	11.7	43	39.8	42	-	42	56	49
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<0.60	-	-	<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
Calcium (Ca)-Dissolved	mg/L		-	-	14.8	71.8	6.66	-	-	-	24	28.3	33.7	27.1
Magnesium (Mg)-Dissolved	mg/L		-	-	1.75	8.95	0.93	-	-	-	3.07	3.25	3.75	3.87
Potassium (K)-Dissolved	mg/L		-	-	0.87	4.07	<0.50	-	-	-	1.56	1.44	1.72	1.49
Sodium (Na)-Dissolved	mg/L		-	-	2.42	13	1.5	-	-	-	4.72	5.53	5.5	5.36
Chloride	mg/L		12	17	16	78.4	9.26	33.8	29.3	30.6	34.2	38.8	41.5	40.8
Conductivity	umhos/cm		106	134	117	514	55.4	195	160	248	188	205	190	228
Fluoride	mg/L	0.12	-	-	-	-	-	-	<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
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
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
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
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
TDS (Calculated)	mg/L		51	64	57	261	25.3	130	81.5	165	91.3	158	134	148
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	0.001	-	-	<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
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
Calcium (Ca)-Total	mg/L		-	-	-	-	7.2	25.2	21.4	24.2	24.4	30.1	33.3	38.2
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<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
Cobalt (Co)-Total	mg/L		<0.002	-	0.00011	<0.0003	<0.0020	-	<0.00020	-	<0.00020	<0.00020	<0.00020	0.0002
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
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
Lead (Pb)-Total	mg/L	Equation	0.0007	-	<0.00006	0.005	<0.00010	0.0027	<0.000090	0.00197	0.000119	<0.000090	<0.000090	0.0551
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
Magnesium (Mg)-Total	mg/L		-	-	-	-	0.96	3.8	2.68	3.9	3.03	3.73	3.94	4.27
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
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
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
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	<0.20	-	<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
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.0013	-	0.00141	0.00172	0.00184	0.00113
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
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.358	-	0.564	0.419	0.655	0.339
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
Sodium (Na)-Total	mg/L		-	-	-	-	1.7	5.5	4.1	5.9	4.52	6.03	5.89	6.07
Strontium (Sr)-Total	mg/L		-	-	0.082	0.408	-	0.15	0.149	0.14	0.173	0.198	0.186	0.118
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<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
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<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
Titanium (Ti)-Total	mg/L		<0.001	-	-	-	<0.0010	<0.01	<0.00020	0.01	0.00056	0.0005	<0.00050	0.00068
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	<0.0010	-	0.00047	0.00018	<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
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
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
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	-	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03												
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
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	A9											
Year			2007		2010				2011		2012			
Date Sampled			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
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
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
pH	pH units		8.6	7.79	8	8.39	7.66	7.68	-	-	18.2	7.81	7.71	9.06
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	483	726	972	1046
Laboratory-Measured														
Ion balance	%		101	96.5	90.9	-	-	-	-	-	99.7	-	-	102
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.5	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.01	0.019	<0.010	<0.010	<0.010	0.0088
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<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
Total Suspended Solids	mg/L		-	3	-	4	12	3	-	<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
Bicarbonate (HCO3)	mg/L		64	74	42.2	58	<2	83	43.8	75.2	-	56	69	76
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<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
Calcium (Ca)-Dissolved	mg/L		-	-	59.8	-	-	-	-	-	63.8	101	134	140
Magnesium (Mg)-Dissolved	mg/L		-	-	6.2	-	-	-	-	-	7.95	11	13.2	17.8
Potassium (K)-Dissolved	mg/L		-	-	2.64	-	-	-	-	-	2.7	3.51	4.83	5.69
Sodium (Na)-Dissolved	mg/L		-	-	7.9	-	-	-	-	-	10.5	18.3	19.7	25.8
Chloride	mg/L		182	282	123	193	-	175	52.3	113	111	180	234	268
Conductivity	umhos/cm		759	1100	502	852	857	600	251	501	508	721	762	1060
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.10	-	-	-
Hardness (as CaCO3)	mg/L		300	422	175	299	212	303	109	213	192	304	381	430
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
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
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
Sulfate	mg/L		13.3	21.6	6.6	14	5.89	10	5.89	15.8	25.1	30.2	31.2	33
TDS (Calculated)	mg/L		353	518	227	568	-	400	128	259	243	558	555	686
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<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
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
Calcium (Ca)-Total	mg/L		-	-	66.9	97.6	72.6	99.3	36.8	71.8	69.3	101	129	146
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.0050	<0.0006	<0.0006	0.0071	<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
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
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
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
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
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
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
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
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
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<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
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00167	0.00291	0.00258	0.00363	0.00449	0.00477
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
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	1.14	0.541	0.176	1.11	1.39	1.81
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
Sodium (Na)-Total	mg/L		-	-	9.1	20.6	-	16	5.12	9.79	9.34	20.4	21.3	22.3
Strontium (Sr)-Total	mg/L		-	-	-	0.64	-	0.82	0.267	0.542	0.488	0.758	1.06	-
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	-	<0.00010	-	-	-	<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	-	<0.00010	<0.001	<0.001	<0.001	<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
Tungsten (W)-Total	mg/L		<0.001	-	-	-	-	-	<0.0010	<0.0010	0.0002	0.00011	0.00012	<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
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
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
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03												
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
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	B2-1										
Year			2010		2011					2012			
Date Sampled			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
GPS Coordinates			-	-	-	-	-	-	-	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
Field Measurments													
Water Temperature	oC		18.9	6.3	-	-	14.2	4.88	1	7.8	10.9	12.5	1.8
pH	pH units		7.69	7.8	-	-	7.31	7.15	7.35	7.4	8.6	8.02	9.46
Conductivity	(µS/cm)		-	-	-	-	0	94	107	83	91	114	126
Laboratory-Measured													
Ion balance	%		-	-	-	-	103	-	-	Low EC	-	-	97.5
Biochemical Oxygen Demand	mg/L		-	-	-	1.3	-	-	-	<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
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
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
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		-	3	-	-	0.21	0.4	0.37	<0.20	0.3	0.36	0.26
Total Suspended Solids	mg/L		3	2	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	6
Alkalinity, Total (as CaCO3)	mg/L		41	53	25.5	25.1	33.3	32.7	33.3	-	28	32	34
Bicarbonate (HCO3)	mg/L		41	53	31.1	30.7	40.7	39.9	40.7	-	35	40	42
Carbonate (CO3)	mg/L		-	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<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
Calcium (Ca)-Dissolved	mg/L		-	-	-	-	14.2	13.2	15.2	9.7	13.2	12.9	15.3
Magnesium (Mg)-Dissolved	mg/L		-	-	-	-	1.54	1.53	1.61	1.12	1.4	1.34	1.52
Potassium (K)-Dissolved	mg/L		-	-	-	-	1.11	0.91	1.1	0.93	0.837	0.877	0.994
Sodium (Na)-Dissolved	mg/L		-	-	-	-	4.14	3.82	4.51	2.48	3.75	3.28	4.38
Chloride	mg/L		8.5	11.2	11.7	7.9	9.92	10.8	11	7.57	9.73	11.3	12.3
Conductivity	umhos/cm		144	123	97.8	79	105	105	110	75	98	102	119
Fluoride	mg/L	0.12	-	-	<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
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
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
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
Sulfate	mg/L		7	11	3.93	2.39	3.18	3.73	5	2.53	3.82	4.26	4.7
TDS (Calculated)	mg/L		96	82	49.6	39.9	54	55	57.7	39	76	54	78
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
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
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
Cesium (Cs)-Total	mg/L		-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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
Cobalt (Co)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
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
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
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
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
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
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
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
Phosphorus (P)-Total	mg/L		-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<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
Rubidium (Rb)-Total	mg/L		-	-	0.00183	0.00078	0.00126	0.00114	0.00102	0.00082	0.001	0.00103	0.00109
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
Silicon (Si)-Total	mg/L		-	-	0.464	0.157	0.4	0.41	0.31	0.239	0.303	0.297	0.449
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
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
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
Tellurium (Te)-Total	mg/L		-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Thorium (Th)-Total	mg/L		-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<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
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
Tungsten (W)-Total	mg/L		-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<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
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
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
Zirconium (Zr)-Total	mg/L		-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03								-	0.26	0.23	0.3
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
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody			A13															
Year	Units	CCME	2007		2010				2011					2012				
Date Sampled			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	
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
Field Measurements																		
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	
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	
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	-	1576	1489	432	1583	2007	1878	
Laboratory-Measured																		
Ion balance	%		103	94.1	91.2	-	-	-	-	-	92.6	-	-	94.4	-	-	96.8	
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	-	-	-	<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	
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	
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	
Phosphorus (P)-Total Reactive	mg/L		-	<0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.013	<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	
Total Suspended Solids	mg/L		4	3	-	4	3	<1	-	<5.0	-	-	<5.0	<5.0	<5.0	<5.0	18	
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	
Bicarbonate (HCO3)	mg/L		37	62	27.6	60	55	55	37.1	51.7	117	30.6	38.7	44	50	67	56	
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		-	-	103	-	-	-	-	-	390	226	179	57.9	228	281	249	
Magnesium (Mg)-Dissolved	mg/L		-	-	6.57	-	-	-	-	-	46.5	21.8	21.6	6.94	22.7	27	32.4	
Potassium (K)-Dissolved	mg/L		-	-	4.97	-	-	-	-	-	11.1	7.78	4.9	2.88	8.04	9.9	9.95	
Sodium (Na)-Dissolved	mg/L		-	-	12.9	-	-	-	-	-	36.7	24.6	23.5	12.3	46.6	54.1	51.8	
Chloride	mg/L		716	372	228	197	-	230	42.2	85	877	511	364	109	440	558	549	
Conductivity	umhos/cm		2370	1460	835	947	953	676	212	369	2450	1560	1220	482	1450	1230	1900	
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.50	<0.50	<0.10	-	-	-	-	
Hardness (as CaCO3)	mg/L		1020	487	284	321	245	343	76.7	159	1070	712	571	160	653	790	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	
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	
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	
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	
TDS (Calculated)	mg/L		1170	719	374	-	635	450	101	186	1440	896	681	386	1140	943	1240	
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	
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	
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	
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	
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	
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<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	
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	
Calcium (Ca)-Total	mg/L		-	-	107	105	82.8	110	25	53.9	359	240	198	54	222	267	270	
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<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	
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	
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	
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	
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	
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	
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	
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	
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	
Nickel (Ni)-Total</																		

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	A15														
Year			2007		2010				2011					2012			
Date Sampled			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
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
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurements																	
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
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
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	0	1302	1354	432	1771	2312	1038
Laboratory-Measured																	
Ion balance	%		100	92.9	103	-	-	-	-	-	97.2	-	-	94.9	-	-	95.1
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	1.8	-	-	-	<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
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
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
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.023	<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	0.32
Total Suspended Solids	mg/L		-	4	-	10	10	3	-	<5.0	-	<5.0	7	5	6	<5.0	<5.0
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
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
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		-	-	71.7	-	-	-	-	-	577	196	188	253	258	329	240
Magnesium (Mg)-Dissolved	mg/L		-	-	8.73	-	-	-	-	-	48.3	21.1	21.1	20.7	25.1	28.1	30.9
Potassium (K)-Dissolved	mg/L		-	-	3.19	-	-	-	-	-	20.9	6.45	5.25	13.1	8.69	9.82	9.25
Sodium (Na)-Dissolved	mg/L		-	-	9.9	-	-	-	-	-	77.3	22.5	20.2	40.2	56.2	62.8	47.4
Chloride	mg/L		210	267	141	313	-	223	22.9	100	1250	409	362	149	511	635	527
Conductivity	umhos/cm		807	1020	547	1372	961	702	128	416	3230	1310	1220	676	1610	1340	767
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.50	<0.50	<0.10	-	-	-	-
Hardness (as CaCO3)	mg/L		317	384	215	489	248	350	52.7	182	1400	613	487	711	737	912	95.1
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
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
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
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
TDS (Calculated)	mg/L		368	471	259	-	641	468	61.4	208	2090	753	640	1390	1230	793	1200
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
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
Arsenic (As)-Total	mg/L	0.005	0.0032	-	0.00299	0.0015	0.0068*	0.0068*	0.00101	0.00305	0.0036	0.0019	0.0029	0.00437	0.0028	0.00437	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
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	<0.00008	<0.00010	<0.00010	<0.00020	<0.00020	<0.00020	0.000049	<0.00010	0.000015	0.000027
Calcium (Ca)-Total	mg/L		-	-	74.4	165	84.4	110	17.4	62.5	494	203	166	251	250	313	259
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<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
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
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
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
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	0.000011	<0.0003	0.0036	0.0008	<0.00090	0.000096	<0.0010	<0.0010	<0.0010	0.00179	<0.00090	<0.00090	0.000101
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
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
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
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
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
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
Potassium (K)-Total	mg/L		-	-	3.26	4.3	2.1	5.1	0.801	1.9.							

MELIADINE GOLD PROJECT
MONTHLY ENVIRONMENTAL REPORT
SEPTEMBER 2012

Waterbody	Units	CCME	A38											
Year			2007		2010				2011		2012			
Date Sampled			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
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
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
pH	pH units		8.49	7.68	7.9	8.69	7.69	7.58	-	-	15	7.73	7.38	9.66
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	715	793	905	1022
Laboratory-Measured														
Ion balance	%		95.7	97.2	104	-	-	-	-	-	104	-	-	103
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.011	0.013	0.0029	<0.010	0.013	0.0116
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.0010	<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
Total Suspended Solids	mg/L		-	6	-	5	1	2	-	<5.0	<5.0	5	<5.0	7
Alkalinity, Total (as CaCO3)	mg/L		76	76	50.7	60	79	97	54.9	71.8	-	62	69	85
Bicarbonate (HCO3)	mg/L		93	92	61.8	60	79	97	67	87.6	-	76	84	104
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<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
Calcium (Ca)-Dissolved	mg/L		-	-	53.5	-	-	-	-	-	78.1	90.9	87.7	118
Magnesium (Mg)-Dissolved	mg/L		-	-	8.19	-	-	-	-	-	13.4	14.8	13.6	20.4
Potassium (K)-Dissolved	mg/L		-	-	4.11	-	-	-	-	-	6.25	6.88	6.66	9
Sodium (Na)-Dissolved	mg/L		-	-	18.3	-	-	-	-	-	40.4	40.4	44	48.6
Chloride	mg/L		86	118	89.6	175	-	185	68.5	158	162	185	208	250
Conductivity	umhos/cm		456	609	461	996	932	629	372	671	744	784	736	1040
Fluoride	mg/L	0.12	-	-	-	-	-	-	<0.10	<0.10	<0.10	-	-	-
Hardness (as CaCO3)	mg/L		179	224	167	278	210	286	133	252	257	291	311	366
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
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
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
Sulfate	mg/L		11.4	28.2	25.3	48	-	35	18.3	33.9	38.9	42.2	39.1	39.9
TDS (Calculated)	mg/L		221	294	232	-	621	419	190	370	378	552	537	678
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
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
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
Barium (Ba)-Total	mg/L		0.042	-	0.0394	0.0535	0.0572	0.0342	0.0342	0.0618	0.059	0.0765	0.0723	0.0791
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<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
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
Calcium (Ca)-Total	mg/L		-	-	49.7	83.4	65.6	85.5	42.5	79.9	81	88	97	116
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.005	-	<0.0050	<0.0006	<0.0006	0.006	<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
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
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
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
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
Magnesium (Mg)-Total	mg/L		-	-	7.35	17	11.1	17.8	6.59	12.8	12.4	16.9	16.6	18.5
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
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
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
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<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
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00257	0.00434	0.00425	0.00542	0.00561	0.00498
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
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.222	0.154	0.126	0.336	0.734	1.28
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
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
Strontium (Sr)-Total	mg/L		-	-	-	0.72	0.63	0.73	0.32	0.666	0.707	0.757	0.881	-
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	-	<0.00010	-	-	-	<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	-	<0.050	<0.001	<0.001	<0.001	<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
Tungsten (W)-Total	mg/L		<0.0010	-	-	-	-	-	<0.0010	<0.0010	<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
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
Zinc (Zn)-Total	mg/L	0.03	0.012	-	<0.0040	0.005	<0.001	0.005	<0.0050	<0.0050	<0.0020	0.0023	<0.0020	0.0021
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03												
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.01	0.07	<0.01	-	-	-	1.04	1.16	1.1
Turbidity	NTU		-	1.9	-	1.1	0.92	0.69	1.15	1.3	0.68	0.98	1.87	3.93
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody			A54															
Year	Units	CCME	2007		2008	2010				2011					2012			
Date Sampled			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
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
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB
Field Measurements																		
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
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
Conductivity	(µS/cm)		-	-	895	-	-	-	-	-	-	0	1202	1187	670	866	930	1766
Laboratory-Measured																		
Ion balance	%		107	96.1	103	92.9	-	-	-	-	-	99.7	-	-	97.8	-	-	101
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	-	1.9	-	-	-	<6.0	<0.6	<0.6	<0.6
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
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
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
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
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
Total Suspended Solids	mg/L		4	3	5	-	8	1	2	-	-	-	-	<5.0	<5.0	5	<5.0	6
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
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
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
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
Calcium (Ca)-Dissolved	mg/L		-	-	-	49.9	-	-	-	-	-	105	121	141	72.7	98.2	86	245
Magnesium (Mg)-Dissolved	mg/L		-	-	-	7.64	-	-	-	-	-	24.7	23	27.2	11.4	16.6	14.1	29.5
Potassium (K)-Dissolved	mg/L		-	-	-	3.8	-	-	-	-	-	11.2	11.2	11.9	5.33	8.25	7.69	9.51
Sodium (Na)-Dissolved	mg/L		-	-	-	17.9	-	-	-	-	-	70.6	70.6	82.6	30.8	46.8	47.1	47
Chloride	mg/L		134	151	214	94.6	174	-	235	75.9	209	305	335	394	149	203	220	513
Conductivity	umhos/cm		618	720	944	498	1005	1079	727	403	815	1070	1150	1380	676	849	762	1780
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.50	-	-	-	-
Hardness (as CaCO3)	mg/L		236	258	337	156	271	248	329	126	296	307	429	432	228	341	308	754
Nitrate-N	mg/L	13	<0.1	<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
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
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
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
TDS (Calculated)	mg/L		291	348	469	239	670	719	485	200	456	599	691	778	532	672	582	1160
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020	<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
Cadmium (Cd)-Total	mg/L	Equation	-	-	<0.00005	<0.000050	<0.00008	<0.00008	0.00012	<0.00010	<0.00010	<0.00020	<0.00020	<0.00020	0.000031	<0.00010	<0.00010	0.000023
Calcium (Ca)-Total	mg/L		-	-	-	50.7	79.3	77.4	95.8	39.9	91.5	106	126	133	72	105	95	256
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	<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
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
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
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
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
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
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
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
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
Nickel (Ni)-Total	mg/L	Equation	-	-	0.001	0.0033												

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	P-1												
Year			2010				2011					2012			
Date Sampled			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
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
Source			-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB
Field Measurements															
Water Temperature	oC		11.6	18.2	9	4.2			8.3	3.43	0.3	8.0	14.4	14.8	1.6
pH	pH units		8	7.5	7.63	7.68			8.75	7.13	7.25	8.3	7.88	8.2	8.2
Conductivity	(µS/cm)		-	-	-				0	560	620	95	282	824	1005
Laboratory-Measured															
Ion balance	%		93.1	-	-	-	-	-	101	-	-	101	-	-	104
Biochemical Oxygen Demand	mg/L		-				-	3.5	-	-	-	<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
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
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
Phosphorus (P)-Total Reactive	mg/L		-	-		-	-		<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
Total Suspended Solids	mg/L		-	4	1	1		<5.0	-	-	<5.0	<5.0	5	<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
Alkalinity Bicarbonate (HCO3)	mg/L		62.5	142	136	168	33.5	155	156	162	146	37	119	142	68
Alkalinity Carbonate (CO3)	mg/L		<5.0		<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<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
Calcium (Ca)-Dissolved	mg/L		33.3	-	-	-	-	-	72.6	83.5	78.2	14.5	45.5	45.8	108
Magnesium (Mg)-Dissolved	mg/L		4.17	-		-	-	-	11.1	11.2	11.7	2.00	5.32	5.35	18.3
Potassium (K)-Dissolved	mg/L		2.46	-		-	-	-	4.95	4.54	3.51	1.30	2.64	2.89	9.74
Sodium (Na)-Dissolved	mg/L		6.5	-	-	-	-	-	17.9	17.6	19.4	2.97	7.86	7.08	59.2
Chloride	mg/L		39.2	92.1		255	6.28	33.1	96.3	107	97.3	9.08	25.5	31.1	250
Conductivity	umhos/cm		290	737	1177	898	85.2	313	525	587	604	108	274	232	1030
Fluoride	mg/L	0.12	-		-		<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
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
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
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
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
TDS (Calculated)	mg/L		141	-	784	599	42.8	184	284	318	319	76.0	214	181	667
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-		-		<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.000050	<0.00008	<0.00008	0.00028	<0.00010	<0.00010	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010
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
Cesium (Cs)-Total	mg/L		-		-		<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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
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
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
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
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
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
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
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
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
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
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
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
Rubidium (Rb)-Total	mg/L		-		-		0.00125	0.00312	0.00394	0.0035	0.00245	0.00122	0.00248	0.00297	0.00621
Selenium (Se)-Total															

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	B7-6											
Year			2010			2011					2012			
Date Sampled			20/06/2010	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
GPS Coordinates			-	-	-	-	-	-	-	-	-	-	-	-
LAB			-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments														
Water Temperature	oC		5.4	18.7	6.2			13.3	2.86	0.6	7.56	11.5	18.2	2.7
pH	pH units		7.5	7.69	7.77			7.43	7.05	7	11.3	8.11	8.16	9.08
Conductivity	(µS/cm)		-	-	-			0	165	191	141	175	184	175
Laboratory-Measured														
Ion balance	%		99.8	-	-	-	-	92.2	-		101	-	-	98.4
Biochemical Oxygen Demand	mg/L		-	-	-	-	1.5	-	-		<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.050	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.015	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.00010	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	-	0.012	0.013	0.013	0.014	<0.010	<0.010	<0.010	<0.010	0.0036
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		0.38	-	<1	-	-	0.57	0.51	0.41	0.29	0.36	0.34	<0.20
Total Suspended Solids	mg/L		-	5	1	-	<5.0	-	-	<5.0	<5.0	6	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		16.1	39	38	12.7	29.7	37.3	33.3	32.1	-	30	32	33
Bicarbonate (HCO3)	mg/L		19.6	39	38	15.5	36.2	45.5	40.6	39.2	-	37	40	40
Carbonate (CO3)	mg/L		<5.0	-	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<12	<12	<12
Hydroxide (OH)	mg/L		<5.0	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	-	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		13.2	-	-	-	-	27.1	25.4	26.3	20.4	26	23.9	24.9
Magnesium (Mg)-Dissolved	mg/L		1.22	-	-	-	-	2.39	2.4	2.35	2.04	2.22	1.95	2.24
Potassium (K)-Dissolved	mg/L		0.71	-	-	-	-	1.48	1.53	1.4	1.31	1.27	1.23	1.31
Sodium (Na)-Dissolved	mg/L		1.8	-	-	-	-	3.84	3.41	3.78	3.03	3.47	2.69	3.68
Chloride	mg/L		18	32.9	44.7	8.23	30.9	38.3	34	35.6	26.5	32.4	34	32.5
Conductivity	umhos/cm		103	247	211	55.6	160	196	176	182	152	176	161	184
Fluoride	mg/L	0.12	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	-
Hardness (as CaCO3)	mg/L		38	78	86	19.8	64.9	83.5	81.2	74.7	59.3	79	76.2	68.9
Nitrate-N	mg/L	13	<0.050	0.03	0.18	<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	<0.050	<0.01	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		1.36	8	4	0.81	2.62	2.93	3.26	4.48	3.33	3.93	3.65	3.59
TDS (Calculated)	mg/L		46	-	141	26	80.2	98.4	93.8	92.6	72.5	106	126	119
Aluminum (Al)-Total	mg/L	0.1	<0.010	<0.002	0.061	0.0248	<0.0050	0.045	<0.020	<0.020	0.0054	<0.0050	<0.0050	<0.0050
Antimony (Sb)-Total	mg/L		<0.00040	<0.0001	0.0022	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00072	0.0019	0.0074*	0.00099	0.00156	0.0021	0.0018	<0.0010	0.00083	0.00138	0.0013	0.00104
Barium (Ba)-Total	mg/L		0.0154	0.0227	0.022	0.0116	0.0244	0.024	0.0268	0.0194	0.0229	0.0247	0.0223	0.0193
Beryllium (Be)-Total	mg/L		<0.0010	<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Boron (B)-Total	mg/L	1.5	<0.050	<0.01	<0.01	<0.010	<0.010	<0.030	<0.030	<0.030	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000050	<0.00008	0.00017	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000019	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		14.4	26.6	29.7	6.64	22.6	29	27.9	26	21.3	27.4	26.8	23.6
Cesium (Cs)-Total	mg/L		-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0050	<0.0006	0.0047	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.0020	-	-	0.00031	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	<0.0010	0.0007	0.001	0.0008	0.00068	<0.0020	<0.0020	<0.0020	0.00059	0.00094	0.00098	0.00075
Iron (Fe)-Total	mg/L	0.3	0.09	<0.01	0.26	0.26	0.13	0.26	0.29	<0.10	0.11	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.00010	0.0363	<0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.010	<0.1	<0.1	0.002	0.0078	0.0187	0.0164	0.0095	0.0077	0.01	0.0099	0.0091
Magnesium (Mg)-Total	mg/L		1.34	2.9	3.1	0.794	2.08	2.69	2.38	2.39	2	2.59	2.22	2.39
Manganese (Mn)-Total	mg/L		0.024	0.0277	0.0048	0.101	0.0143	0.0178	0.0152	0.0038	0.0164	0.00908	0.0054	0.00671
Molybdenum (Mo)-Total	mg/L	0.073	<0.0050	<0.0005	<0.0005	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	0.00023	<0.00020
Nickel (Ni)-Total	mg/L	Equation	<0.0020	0.0014	0.0042	<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
Potassium (K)-Total	mg/L		0.85	0.91	2.2	0.582	1.14	1.71	1.71	1.28	1.1	1.38	1.31	1.28
Rubidium (Rb)-Total	mg/L		-	-	-	0.00058	0.00132	0.00178	0.00182	0.00127	0.00115	0.00151	0.00145	0.00142
Selenium (Se)-Total	mg/L	0.001	<0.00040	<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		-	-	-	0.343	0.371	<0.30	0.38	0.38	0.394	0.449	0.234	0.242
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		2.2	4.5	4.4	1.32	3.02	4.13	4.14	3.58	2.84	3.84	3.38	4.02
Strontium (Sr)-Total	mg/L		-	0.18	0.22	0.0463	0.183	0.205	0.195	0.172	0.162	0.203	0.188	0.159
Tellurium (Te)-Total	mg/L		-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Thorium (Th)-Total	mg/L		-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.001	<0.001	<0.00020	<0.00020	<0.0.						

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 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
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
LAB			-	-	-	-	-	-	-	-	ALS LAB	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurements																				
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
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
Conductivity	(µS/cm)		-	-	64	175	-	-	-	-	-	80	-	0	74	79	62	165	70	68
Laboratory-Measured																				
Ion balance	%		Low EC	Low EC	Low EC	103	Low EC	-	-	-	-	-	-	-	-	-	Low EC	-	-	Low EC
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L		-	<0.05	<0.05	0.075	<0.050	0.005	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<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
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
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
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
Total Suspended Solids	mg/L		-	5	3	3	-	3	2	1	-	<3.0	<5.0	-	-	<5.0	<5.0	9	<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
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
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
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
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
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
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
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
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
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
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	-	<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
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
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
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
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
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
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
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
Arsenic (As)-Total	mg/L	0.005	<0.0004	-	0.00039	0.00116	<0.00040	<0.0005	<0.0005	0.0005*	0.00158	0.00059	0.00046	<0.0010	<0.0010	<0.0010	0.00041	0.00048	0.00051	0.00051
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
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
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
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
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.00005	<0.00001	<0.000050	<0.00008	<0.00008	0.00017*	<0.000010	0.00001	<0.00010	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010
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
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
Chromium (Cr)-Total	mg/L		<0.005	-	<0.00006	0.0022	<><													

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	MEL-1																	
			2008	2009			2010				2011					2012				
Date Sampled			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	
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		
LAB			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Field Measurements																				
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	
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	
Conductivity	(µS/cm)		49	90.6	62	-	-	-	-	-	-	66	0	104	66	40	61	57	69	
Laboratory-Measured																				
Fecal Coliforms	MPN/100mL		-	-	-	-	-	-	-	-	-	-	<3	15	<3	<1	<1	<1	>200	
Total Coliforms	mg/L		-	-	-	-	-	-	-	2	-	-	-	-	-	<1	<1	3	>200	
E. Coli	mg/L		-	-	-	-	-	-	-	<1	-	-	-	-	-	<1	<1	<1	1	
Total Oil and Grease	mg/L		<0.5	-	-	-	-	-	-	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<2.0	
Ion balance	%		Low EC	98.5	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	
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	
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	
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	
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	
Total Suspended Solids	mg/L		3	4	3	<3	3	1	3	-	<5.0	<3.0	-	-	<5.0	9.0	<5.0	<5.0	<5.0	
Phosphorus (P)-Total	mg/L															-	-	0.0036	0.003	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
Fluoride	mg/L	0.12	-	-	-	-	-	-	-	<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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.000010	<0.000020	
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	
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010										

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody				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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	MELIADINE RIVER														
Year			2008		2010				2011					2012			
Date Sampled			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
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
LAB			-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurements																	
Water Temperature	oC		5.63	12.7	-	-	11.4	5.4	-	-	14.2	3.53	0.8	687	10.3	8.6	1.4
pH	pH units		-	6.78	-	-	6.9	7.94	-	-	7.77	7.56	7.17	17.68	8016	7.77	8.84
Conductivity	(µS/cm)		42	63	-	-	-	-	-	-	0	69	149	62	77	78	102
Laboratory-Measured																	
Ion balance	%		-	Low EC	Low EC	-	-	-	-	-	-	-	-	Low EC	-	-	98.2
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	<1.0	-	-	-	<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
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
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
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
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
Total Suspended Solids	mg/L		<5.0	<5.0	-	3	<1	3	-	<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
Bicarbonate (HCO3)	mg/L		17.8	19	31	39	22	28	31.1	33	27.7	46.2	35.6	-	25	28	30
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
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
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
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
Potassium (K)-Dissolved	mg/L		2	0.75	1.13	-	-	-	-	-	1.32	2.02	1.62	0.77	0.971	0.928	1.3
Sodium (Na)-Dissolved	mg/L		3.9	3.2	5	-	-	-	-	-	7.26	13.7	11.1	4.09	5.5	4.22	7.41
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
Conductivity	umhos/cm		68.8	64.2	88.5	89	152	101	97.8	120	94.3	195	144	68	84	83	113
Fluoride	mg/L	0.12	0.021	-	-	-	-	-	<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
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
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
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
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
TDS (Calculated)	mg/L		-	30	44.6	-	101	67	49.6	64	48.3	108	75.1	37.5	60	47	73
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
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
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
Barium (Ba)-Total	mg/L		0.02	0.00689	0.0133	0.0087	0.0133	0.009	0.0135	0.0145	0.00885	0.0152	0.0113	0.00955	0.0101	0.00962	0.0102
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
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
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
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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
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
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
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
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	<0.00

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	2BB-MEL0914	MEL-4												
Year				2010				2011					2012			
Date Sampled				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
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
LAB				-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS	ALS LAB	ALS LAB
Field Measurements																
Water Temperature	oC		10	4	15	11.1	6.5	-	-	11.4	6.32	0.8	1.3	10.3	10.1	4.9
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
Conductivity	(µS/cm)			-	-	-	-	-	-	0	65	66	14	63	69	108
Laboratory-Measured																
Fecal Coliforms	MPN/100mL		200	-	35	-	-	-	<1	210	150	93	>200	>200	>200	>200
Total Coliforms	mg/L			-	-	-	-	-	-	-	-	-	>200	>200	>200	>200
E. Coli	mg/L			-	-	-	-	-	-	-	-	-	3	2	2	4
Total Oil and Grease	mg/L			-	-	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<2.0
Ion balance	%			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
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
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
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
Phosphorus (P)-Total Reactive	mg/L			-	-	-	-	-	-	<0.010	<0.010	<0.010	0.060	0.013	0.103	0.039
Total Kjeldahl Nitrogen	mg/L			<0.20	-	<1	1	-	-	0.31	0.23	0.33	0.25	0.23	0.9	0.21
Total Suspended Solids	mg/L		15	-	2	1	4	-	<5.0	-	-	12	<5.0	<5.0	58	31
Phosphorus (P)-Total	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	-
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
Bicarbonate (HCO3)	mg/L			<5.0	38	21	23	43.6	21.6	27	24.1	23.8	6	22.3	27	29
Carbonate (CO3)	mg/L			<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2	<12	<12
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
Calcium (Ca)-Dissolved	mg/L			1.16	-	-	-	-	-	8.08	7.45	7.54	1.19	6.84	8.08	10.4
Magnesium (Mg)-Dissolved	mg/L			0.12	-	-	-	-	-	1.22	1.15	1.11	0.163	1.06	1.18	1.62
Potassium (K)-Dissolved	mg/L			<0.50	-	-	-	-	-	0.9	0.86	0.89	<0.10	0.824	1.27	1.27
Sodium (Na)-Dissolved	mg/L			<1.0	-	-	-	-	-	6.05	4.51	4.61	0.725	4.16	5.06	6.67
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
Conductivity	umhos/cm			9.09	97	142	74	124	67.5	84.8	75.9	75.4	<20	72	81	96
Fluoride	mg/L	0.12		-	-	-	-	<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
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
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		<0.050	<0.01	-	<0.01	<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
TDS (Calculated)	mg/L			2.9	64	95	49	55.6	33.1	43.7	39.7	37.2	<5.0	43	54	59
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
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
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
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
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
Bismuth (Bi)-Total	mg/L			-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00050
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
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
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
Cesium (Cs)-Total	mg/L			-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00050
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
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
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
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
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
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
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT

SEPTEMBER 2012

Waterbody	Units	CCME	2BB-MEL0914	MEL-7										
Year				2011										
Date Sampled				2012										
GPS Coordinates														
LAB				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
				542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	541934.2-6989173	541934.2-6989173
Field Measuremnts				-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	Mutlilab	Mutlilab	Mutlilab	ALS
Water Temperature	oC		10	-	-	-	-	-	6.35	0.9				20.3
pH	pH units			-	6.96	6.64	-	-	7.58	7.5				6.78
Conductivity	(µS/cm)			-	-	-	-	-	70	69				na
Laboratory-Measured														
Fecal Coliforms	MPN/100mL		200	440	-	-	>110000	-	430	230	230	500	900	>200
Total Coliforms	mg/L			-	-	-	>110000	-	-	-				>200
E. Coli	mg/L			-	-	-	-	-	-	-				1600
Total Oil and Grease	mg/L			<1	<1	2	-	5.5	<1.0	<1.0	<1.0	<1.0		<2.0
Ion balance	%			-	-	-	-	-	-	-				-
Biochemical Oxygen Demand	mg/L		15	8.9	7	22	-	60	<6.0	<6.0	21.5	22		26.9
Ammonia as N	mg/L	2.33		-	-	-	-	-	<0.050	0.11				2.16
Mercury (Hg)-Total	mg/L	0.000026		-	-	-	-	-	<0.000050	<0.000050				<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	-	-	-	-	-	<0.010	0.028				9.3
Phosphorus (P)-Total Reactive	mg/L			-	-	-	-	-	<0.010	<0.010				10.8
Total Kjeldahl Nitrogen	mg/L			-	-	-	-	-	0.25	0.36				6.45
Total Suspended Solids	mg/L		15	8	9	-	-	90	-	29	36	21		65.5
Phosphorus (P)-Total	mg/L			-	-	-	-	-						-
Alkalinity, Total (as CaCO3)	mg/L			-	-	-	-	-	19	19.7				62
Bicarbonate (HCO3)	mg/L			-	-	-	-	-	23.2	24.1				75
Carbonate (CO3)	mg/L			-	-	-	-	-	<0.60	<0.60				<12
Hydroxide (OH)	mg/L			-	-	-	-	-	<0.40	<0.40				<6.8
Calcium (Ca)-Dissolved	mg/L			-	-	-	-	-	7.01	7.9				19.7
Magnesium (Mg)-Dissolved	mg/L			-	-	-	-	-	1.12	1.15				5.56
Potassium (K)-Dissolved	mg/L			-	-	-	-	-	0.82	1				34.2
Sodium (Na)-Dissolved	mg/L			-	-	-	-	-	4.35	4.94				66.2
Chloride	mg/L			-	-	-	-	-	9.42	8.8				81
Conductivity	umhos/cm			-	-	-	-	-	74.5	77				643
Fluoride	mg/L	0.12		-	-	-	-	-	<0.10	<0.10				-
Hardness (as CaCO3)	mg/L			-	-	-	-	-	24.4	23.9				59.9
Nitrate-N	mg/L	13		-	-	-	-	-	<0.050	<0.050				15.2
Nitrate and Nitrite as N	mg/L			-	-	-	-	-	<0.071	<0.071				16.3
Nitrite-N	mg/L	0.197		-	-	-	-	-	<0.050	<0.050				1.11
Sulfate	mg/L			-	-	-	-	-	4.68	3.86				32.5
TDS (Calculated)	mg/L			-	-	-	-	-	40.4	38.7				400
Aluminum (Al)-Total	mg/L	0.1		-	-	-	-	-	<0.020	0.134				0.447
Antimony (Sb)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010				<0.0010
Arsenic (As)-Total	mg/L	0.005		-	-	-	-	-	<0.0010	<0.0010				0.0013
Barium (Ba)-Total	mg/L			-	-	-	-	-	0.00814	0.00873				0.00166
Beryllium (Be)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010				<0.0010
Bismuth (Bi)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050				<0.00050
Boron (B)-Total	mg/L	1.5		-	-	-	-	-	<0.030	<0.030				0.14
Cadmium (Cd)-Total	mg/L	Equation		-	-	-	-	-	<0.00020	<0.00020				<0.00020
Calcium (Ca)-Total	mg/L			-	-	-	-	-	7.76	7.53				16.3
Cesium (Cs)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050				<0.00050
Chromium (Cr)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020				<0.0020
Cobalt (Co)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050				<0.00050
Copper (Cu)-Total	mg/L	Equation		-	-	-	-	-	<0.0020	<0.0020				0.0097
Iron (Fe)-Total	mg/L	0.3		-	-	-	-	-	<0.10	0.28				0.15
Lead (Pb)-Total	mg/L	Equation		-	-	-	-	-	<0.0010	<0.0010				<0.0010
Lithium (Li)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020				<0.0020
Magnesium (Mg)-Total	mg/L			-	-	-	-	-	1.23	1.24				4.65
Manganese (Mn)-Total	mg/L			-	-	-	-	-	0.0039	0.021				0.0087
Molybdenum (Mo)-Total	mg/L	0.073		-	-	-	-	-	<0.00050	<0.00050				<0.00050
Nickel (Ni)-Total	mg/L	Equation		-	-	-	-	-	<0.0020	<0.0020				0.0033
Phosphorus (P)-Total	mg/L			-	-	-	-	-	<0.50	<0.50				9.77
Potassium (K)-Total	mg/L			-	-	-	-	-	0.92	0.88				37
Rubidium (Rb)-Total	mg/L			-	-	-	-	-	0.00137	0.00136				0.0301
Selenium (Se)-Total	mg/L	0.001		-	-	-	-	-	<0.0050	<0.0050				<0.0050
Silicon (Si)-Total	mg/L			-	-	-	-	-	<0.30	0.4				0.92
Silver (Ag)-Total	mg/L	0.0001		-	-	-	-	-	<0.0010	<0.0010				<0.0010
Sodium (Na)-Total	mg/L			-	-	-	-	-	4.96	4.56				76.2
Strontium (Sr)-Total	mg/L			-	-	-	-	-	0.0379	0.0341				0.0423
Tellurium (Te)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010				<0.0010
Thallium (Tl)-Total	mg/L	0.0008		-	-	-	-	-	<0.0050	<0.0050				<0.0050
Thorium (Th)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010				<0.0010
Tin (Sn)-Total	mg/L			-	-	-	-	-	<0.00060	<0.00060				0.00193
Titanium (Ti)-Total	mg/L			-	-	-	-	-	<0.0010	0.0074				0.0011
Tungsten (W)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020				<0.0020
Uranium (U)-Total	mg/L	0.015		-	-	-	-	-	<0.00050	<0.00050				<0.00050
Vanadium (V)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020				<0.0020
Zinc (Zn)-Total	mg/L	0.03		-	-	-	-	-	<0.020	<0.020				0.086
Zirconium (Zr)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010				<0.0010
Oil & Grease	mg/L			-	-	-	-	-						-
Turbidity	NTU			-	-	-	-	-	0.49	3.01				7.06
pH	pH units	6.5-9.0		-	-	6.73	-	-	7.59	7.59	7.07	6.93		7.18