

MELIADINE GOLD PROJECT
MONTHLY ENVIRONMENTAL REPORT JULY
2012



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MONTHLY ENVIRONMENTAL REPORT: JULY 2012

PRESENTED TO THE NUNAVUT WATER BOARD

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Contact:

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

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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

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 214,2m³ /day for the month of July 2012; 193,6 m³/day for the drills and 20,6 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 July 2012

X_coord	Y_coord
537996	6989761
538480	6990628
538649	6989197
538603	6988176
542225	6986291
543876	6985973
540712	6986730

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

Here are the MEL-7 results for July.

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Table 3 MEL-7 results

Station: STP-OUT		June				July				
DATE	Limits	06/06/2012	13/06/2012	20/06/2012	27/06/2012	04/07/2012	10/07/2012	17/10/2012	24/07/2012	31/07/2012
Ammonia as N		57.1	42.4	14.4	27.8	28.5	31.2	25.3	30.3	28.2
Biochemical Oxygen Demand	80	18.7	16.8	21.5	19.8	10.8	10.8	31.0	22.0	29.0
Heterotrophic Plate Count (AAHB)		>3000	>3000	>3000	>3000	>3000	>3000	-	>5000	>300000
Nitrate-N		24.9	23.5	21.2	42.3	45.8	37.4	14.3	32.3	23.5
Nitrate and Nitrite as N		27.40	-	23.4	42.30	45.9	-	14.5	33.00	24.60
Nitrite-N		2.6	-	2.16	<0.050	0.126	1.5	0.18	0.62	1.1
Oil & Grease-(IR)	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1
Phosphorus (P)-Total		12.6	17.9	18.7	-	19.2	20.7	21.0	16.9	17.0
TKN			52.8	-	31.3	34.5	36.4	31.0	39.0	42.0
Total Suspended Solids	100	46.7	82	36.0	32.0	21.0	29.0	22.0	21.0	28.0
Transmittance		29.4	23.9	24.0	-	-	18.8	22.0	23.0	19.0
pH	6.5-9	7.5	7.45	7.07	6.4	6.66	6.85	6.88	6.93	7.1
Fecal Coliforms	1000	63.0	2070	230	500.0	OVERGROWN	290.0	220.0	500.0	900.0
Total Coliforms		OVERGROWN	OVERGROWN	430	9,300.0	OVERGROWN	OVERGROWN	< 10 000	50,000.0	14,000.0

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 new discharge for the month of July.

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 July.

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7. Water quality monitoring

Waterbody			A7-8															
Year	Units	CCME	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	
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
LAB			-	-	-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurements																		
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	
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	
Conductivity	(µS/cm)				74	109	-	-	-	-	-	-	0	165	188	177	201	
Laboratory-Measured																		
Ion balance	%		90.5	97.5	-	106	Low EC	-	-	-	-	-	101	-	-	102	-	
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	1	-	-	-	<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	
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	
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	
Phosphorus (P)-Total Reactive	mg/L		-	<0.02	<0.002	<0.004	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.001	<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	
Total Suspended Solids	mg/L		-	3	3	3	-	6	2	2	-	<5.0	-	-	<5.0	<5.0	<5.0	
Alkalinity, Total (as CaCO3)	mg/L		30	33	24.8	27	14.9	42	42	46	30.3	32.7	36.6	37.6	37.5	-	35	
Bicarbonate (HCO3)	mg/L		37	40	24.8	33	18.1	42	42	46	37	39.8	44.7	45.9	45.8	-	43	
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	
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	
Calcium (Ca)-Dissolved	mg/L		-	-	15.1	15.4	9.78	-	-	-	-	-	24.6	23.5	26.3	24.2	27.1	
Magnesium (Mg)-Dissolved	mg/L		-	-	2.03	1.79	1.31	-	-	-	-	-	3.02	3.01	3.34	3.01	3.26	
Potassium (K)-Dissolved	mg/L		-	-	2	0.93	0.63	-	-	-	-	-	1.41	1.28	1.54	1.52	1.48	
Sodium (Na)-Dissolved	mg/L		-	-	2.5	2.61	1.9	-	-	-	-	-	4.95	4.35	5.37	4.75	5.44	
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	
Conductivity	umhos/cm		106	135	113	118	81.1	249	303	177	93.6	159	176	175	178	188	205	
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	
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	
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	-	<0.1	<0.071	-	-	-	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	
Nitrite-N	mg/L	0.197	<0.05	<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	
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	
TDS (Calculated)	mg/L		51	64	-	-	37.1	166	202	118	46.5	81	91.6	94.3	93.6	90.2	152	
Aluminum (Al)-Total	mg/L	0.1	0.01	-	0.005	0.0023	<0.010	0.529*	0.021	0.04	0.0066	<0.0050	0.021	<0.020	<0.020	0.0077	0.0065	
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	
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	
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	
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	
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
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	
Calcium (Ca)-Total	mg/L		-	-	-	-	10.8	25.3	21.3	-	10.3	21.7	22.8	26.1	25.1	24.4	31.3	
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	0.0068	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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	
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	
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	
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	
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	<0.0005	<0.0001	<0.00010	<0.0003	<0.0003	<0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	0.000119	<0.000090	
Lithium (Li)-Total	mg/L		0.01	-	0.005	-	<0.010	<0.1	<0.1	<0.1	<0.0020	0.0051	0.012	0.0125	0.0077	0.0083	0.0092	
Magnesium (Mg)-Total	mg/L		-	-	2.03	1.8	1.42	3.9	2.7	4	1.2	2.63	2.87	3.53	3.2	3.03	3.9	
Manganese (Mn)-Total	mg/L		0.014	-	0.00646	0.0241	0.0292	0.0199	0.0056	0.0098	0.0145	0.0191	0.0164	0.0223	0.0089	0.013	0.0139	
Molybdenum (Mo)-Total	mg/L	0.073	<0.005	-	<0.001	<0.00016	<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	0.0002	0.00025	
Nickel (Ni)-Total	mg/L	Equation	0.002	-	0.001	0.00051	<0.0020	0.0012	0.0015	0.0038	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	
Potassium (K)-Total	mg/L		-	-	2	0.95	0.71	0.89	0.84	2.1	1.08	1.14	1.25	1.52	1.31	1.31	1.61	
Rubidium (Rb)-Total	mg/L																	

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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
GPS Coordinates			0540681, 6986702	0540681, 6986702	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
Field Measurments												
Water Temperature	oC		17.6	0.5	14.14	0.10	2.8	6.7	-	20.4	7.55	12.8
pH	pH units		8.06	7.81	7.8	6.41	7.7	7.67	-	8.24	13.8	7.87
Conductivity	(µS/cm)		-	-	101	489	-	-	-	-	180	207
Laboratory-Measured												
Ion balance	%		91.2	96.7	107	102	-	-	-	-	99.6	
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	1.5	-	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	0.005	0.0073	-	-	0.01	-	0.0017	<0.010
Phosphorus (P)-Total Reactive	mg/L		-	0.02	0.003	0.0065	-	-	-	-	0.0011	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.2	0.2	1.01	0.41	2	-	-	0.25	0.36
Total Suspended Solids	mg/L		-	3	17	5	-	1	<5.0	5	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	33	28	125	9.6	43	32.6	42	-	35
Bicarbonate (HCO3)	mg/L		37	40	34	153	11.7	43	39.8	42	-	42
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<0.60	-	-	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<2	<0.40	<2	-	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	14.8	71.8	6.66	-	-	-	24	28.3
Magnesium (Mg)-Dissolved	mg/L		-	-	1.75	8.95	0.93	-	-	-	3.07	3.25
Potassium (K)-Dissolved	mg/L		-	-	0.87	4.07	<0.50	-	-	-	1.56	1.44
Sodium (Na)-Dissolved	mg/L		-	-	2.42	13	1.5	-	-	-	4.72	5.53
Chloride	mg/L		12	17	16	78.4	9.26	33.8	29.3	30.6	34.2	38.8
Conductivity	umhos/cm		106	134	117	514	55.4	195	160	248	188	205
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
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
Nitrate and Nitrite as N	mg/L		<0.1	<0.1	<0.1	<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
Sulfate	mg/L		3.2	4.1	2.1	9.82	1.14	3	3.3	8	4.71	5.24
TDS (Calculated)	mg/L		51	64	57	261	25.3	130	81.5	165	91.3	158
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
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00003	<0.0002	<0.0040	<0.0001	<0.00020	<0.0001	<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
Barium (Ba)-Total	mg/L		0.014	-	0.0128	0.077	0.0086	0.016	0.0203	0.0184	0.0234	0.0253
Beryllium (Be)-Total	mg/L		0.001	-	0.0002	0.001	<0.0010	0.0006	<0.00020	<0.0005	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	0.001	-	-	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.00005	<0.00001	<0.000050	0.00014	<0.000010	<0.00008	0.000015	<0.000010
Calcium (Ca)-Total	mg/L		-	-	-	-	7.2	25.2	21.4	24.2	24.4	30.1
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<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
Cobalt (Co)-Total	mg/L		<0.002	-	0.00011	<0.0003	<0.0020	-	<0.00020	-	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.002	-	0.0017	0.0013	<0.0010	0.0008	0.0006	0.0006	0.00062	0.00101
Iron (Fe)-Total	mg/L	0.3	0.16	-	0.072	-	0.052	0.18	0.11	<0.01	<0.10	0.17
Lead (Pb)-Total	mg/L	Equation	0.0007	-	<0.00006	0.005	<0.00010	0.0027	<0.000090	0.0197	0.000119	<0.000090
Lithium (Li)-Total	mg/L		<0.01	-	-	0.0136	<0.010	<0.1	0.006	<0.1	0.0083	0.0091
Magnesium (Mg)-Total	mg/L		-	-	-	-	0.96	3.8	2.68	3.9	3.03	3.73
Manganese (Mn)-Total	mg/L		0.012	-	0.0069	0.0855	0.0469	0.0106	0.0151	0.0157	0.013	0.0371
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
Nickel (Ni)-Total	mg/L	Equation	<0.002	-	0.00042	0.0025	<0.0020	0.0035	<0.0020	0.0012	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		-	-	-	-	<0.020	-	<0.20	-	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	-	-	0.46	2.2	1.16	0.89	1.31	1.56
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.0013	-	0.00141	0.00172
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
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.358	-	0.564	0.419
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
Sodium (Na)-Total	mg/L		-	-	-	-	1.7	5.5	4.1	5.9	4.52	6.03
Strontium (Sr)-Total	mg/L		-	-	0.082	0.408	-	0.15	0.149	0.14	0.173	0.198
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<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
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<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
Titanium (Ti)-Total	mg/L		<0.001	-	-	-	<0.0010	<0.01	<0.00020	0.01	0.00056	0.0005
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	<0.0010	-	0.00047	0.00018
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
Vanadium (V)-Total	mg/L		<0.001	-	0.00016	<0.001	<0.0010	<0.0005	<0.00020	<0.0005	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.009	-	0.0008	0.0104	<0.0040	0.006	<0.0050	<0.001	0.0031	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	-	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03										0.26
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
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

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY
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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
GPS Coordinates			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
Field Measurments												
Water Temperature	oC		21.7	0.7	12.1	19.5	-	4.2	-	-	7.48	10.9
pH	pH units		8.6	7.79	8	8.39	7.66	7.68	-	-	18.2	7.81
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	483	726
Laboratory-Measured												
Ion balance	%		101	96.5	90.9	-	-	-	-	-	99.7	-
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.5	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.01	0.019	<0.010	<0.010
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.3	0.84	-	1	<1	-	-	0.53	0.69
Total Suspended Solids	mg/L		-	3	-	4	12	3	-	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		52	60	34.6	58	65	83	35.9	61.7	-	46
Bicarbonate (HCO3)	mg/L		64	74	42.2	58	<2	83	43.8	75.2	-	56
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	-	<2	<0.40	<0.40	-	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	59.8	-	-	-	-	-	63.8	101
Magnesium (Mg)-Dissolved	mg/L		-	-	6.2	-	-	-	-	-	7.95	11
Potassium (K)-Dissolved	mg/L		-	-	2.64	-	-	-	-	-	2.7	3.51
Sodium (Na)-Dissolved	mg/L		-	-	7.9	-	-	-	-	-	10.5	18.3
Chloride	mg/L		182	282	123	193	-	175	52.3	113	111	180
Conductivity	umhos/cm		759	1100	502	852	857	600	251	501	508	721
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
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
Nitrate and Nitrite as N	mg/L		0.1	0.1	<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
Sulfate	mg/L		13.3	21.6	6.6	14	-	10	5.89	15.8	25.1	30.2
TDS (Calculated)	mg/L		353	518	227	568	-	400	128	259	243	558
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
Antimony (Sb)-Total	mg/L		0.0004	-	0.00058	<0.0001	<0.0001	<0.0001	<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
Barium (Ba)-Total	mg/L		0.099	-	0.0709	0.0785	0.0776	0.0783	0.0431	0.0706	0.0624	0.105
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	0.00033	<0.000010	<0.000010	0.00002	0.000013
Calcium (Ca)-Total	mg/L		-	-	66.9	97.6	72.6	99.3	36.8	71.8	69.3	101
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<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
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.004	-	0.0012	0.0023	0.0025	0.002	0.00127	0.00234	0.00168	0.00224
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
Lead (Pb)-Total	mg/L	Equation	0.0004	-	<0.00010	0.016	-	<0.0003	0.000103	<0.000090	0.000104	0.00235
Lithium (Li)-Total	mg/L		0.04	-	0.03	<0.1	<0.1	<0.1	0.0111	0.0203	0.0248	0.042
Magnesium (Mg)-Total	mg/L		-	-	6.75	13.4	7.5	13.5	4.28	8.28	7.54	12.5
Manganese (Mn)-Total	mg/L		0.013	-	0.0039	0.0069	0.0219	0.0076	0.0219	0.0153	0.00752	0.0143
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
Nickel (Ni)-Total	mg/L	Equation	<0.005	-	0.0029	0.0075	0.0069	0.0129	0.0026	0.0028	0.0025	0.0037
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.10	<0.10
Potassium (K)-Total	mg/L		-	-	2.94	2.8	-	5.1	1.67	2.7	2.73	3.8
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00167	0.00291	0.00258	0.00363
Selenium (Se)-Total	mg/L	0.001	0.0022	-	<0.00040	0.001	-	0.006	<0.0010	0.0014	<0.0010	0.0017
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	1.14	0.541	0.176	1.11
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
Sodium (Na)-Total	mg/L		-	-	9.1	20.6	-	16	5.12	9.79	9.34	20.4
Strontium (Sr)-Total	mg/L		-	-	-	0.64	-	0.82	0.267	0.542	0.488	0.758
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<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
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<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
Titanium (Ti)-Total	mg/L		<0.001	-	<0.0010	0.06	0.03	0.04	0.00116	0.00045	0.00087	0.00125
Tungsten (W)-Total	mg/L		<0.001	-	-	-	-	-	<0.0010	<0.0010	0.0002	0.00011
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
Vanadium (V)-Total	mg/L		<0.001	-	<0.0010	<0.0005	0.002	<0.0005	<0.00020	0.00022	<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
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	0.46
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.003	-	<0.01	-	-	-	-
Turbidity	NTU		-	0.5	-	0.92	2.1	0.73	0.71	1.53	0.84	0.88
pH	pH units	6.5-9.0	7.9	7.8	7.79	7.73	-	7.9	7.63	8.1	-	7.93

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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	
GPS Coordinates			-	-	-	-	-	-	-	544790-6971714	544790-6971714	
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	
pH	pH units		7.69	7.8	-	-	7.31	7.15	7.35	7.4	8.6	
Conductivity	(µS/cm)		-	-	-	-	0	94	107	83	91	
Laboratory-Measured												
Ion balance	%		-	-	-	-	103	-	-	Low EC		
Biochemical Oxygen Demand	mg/L		-	-	-	1.3	-	-	-	<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	
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	
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	0.012	0.012	0.017	0.012	<0.010	<0.010	<0.010	
Phosphorus (P)-Total Reactive	mg/L		-	-	<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	
Total Suspended Solids	mg/L		3	2	-	<5.0	-	-	<5.0	<5.0	<5.0	
Alkalinity, Total (as CaCO3)	mg/L		41	53	25.5	25.1	33.3	32.7	33.3		28	
Bicarbonate (HCO3)	mg/L		41	53	31.1	30.7	40.7	39.9	40.7		35	
Carbonate (CO3)	mg/L		-	<2	<0.60	<0.60	<0.60	<0.60	<0.60		<12	
Hydroxide (OH)	mg/L		<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40		<6.8	
Calcium (Ca)-Dissolved	mg/L		-	-	-	-	14.2	13.2	15.2	9.7	13.2	
Magnesium (Mg)-Dissolved	mg/L		-	-	-	-	1.54	1.53	1.61	1.12	1.4	
Potassium (K)-Dissolved	mg/L		-	-	-	-	1.11	0.91	1.1	0.93	0.837	
Sodium (Na)-Dissolved	mg/L		-	-	-	-	4.14	3.82	4.51	2.48	3.75	
Chloride	mg/L		8.5	11.2	11.7	7.9	9.92	10.8	11	7.57	9.73	
Conductivity	umhos/cm		144	123	97.8	79	105	105	110	75	98	
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	
Nitrate-N	mg/L	13	0.02	0.45	<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	
Nitrite-N	mg/L	0.197	<0.01	<0.01	<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	
TDS (Calculated)	mg/L		96	82	49.6	39.9	54	55	57.7	39	76	
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	
Antimony (Sb)-Total	mg/L		<0.0001	<0.0001	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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	
Barium (Ba)-Total	mg/L		0.0122	0.0104	0.0135	0.0108	0.0136	0.0137	0.0114	0.0107	0.0128	
Beryllium (Be)-Total	mg/L		<0.0005	<0.0005	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	
Bismuth (Bi)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
Cadmium (Cd)-Total	mg/L	Equation	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000161	<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	
Cesium (Cs)-Total	mg/L		-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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	
Cobalt (Co)-Total	mg/L		-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
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	
Lead (Pb)-Total	mg/L	Equation	<0.0003	<0.0003	<0.000090	<0.000090	<0.0010	<0.0010	<0.0010	0.000185	<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	
Magnesium (Mg)-Total	mg/L		2.1	2.3	1.42	1.12	1.52	1.65	1.68	1.06	1.59	
Manganese (Mn)-Total	mg/L		0.0201	0.0118	0.0111	0.0153	0.0604	0.0219	0.0116	0.0146	0.0117	
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	
Nickel (Ni)-Total	mg/L	Equation	0.0014	0.0024	<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	
Potassium (K)-Total	mg/L		0.59	1.7	1.31	0.67	1.1	1.05	0.99	0.841	0.893	
Rubidium (Rb)-Total	mg/L		-	-	0.00183	0.00078	0.00126	0.00114	0.00102	0.00082	0.001	
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	
Silicon (Si)-Total	mg/L		-	-	0.464	0.157	0.4	0.41	0.31	0.239	0.303	
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	
Sodium (Na)-Total	mg/L		5.6	6.2	6.33	2.49	4.12	4.35	4.4	2.37	4.13	
Strontium (Sr)-Total	mg/L		0.06	0.07	0.0444	0.0472	0.0627	0.0614	0.0589	0.0465	0.0616	
Tellurium (Te)-Total	mg/L		-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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	
Thorium (Th)-Total	mg/L		-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<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	
Titanium (Ti)-Total	mg/L		0.01	<0.01	0.00559	0.00033	0.0013	0.0029	<0.0010	0.00043	<0.00050	
Tungsten (W)-Total	mg/L		-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<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	
Vanadium (V)-Total	mg/L		<0.0005	<0.0005	0.00037	<0.00020	<0.0020	<0.0020	<0.0020	<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	
Zirconium (Zr)-Total	mg/L		-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	
Sodium Adsorption Ratio		0.03									0.26	
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	
pH	pH units	6.5-9.0	6.97	7.46	7.6	7.79	7.7	7.72	7.74		7.77	

MONTHLY ENVIRONMENTAL REPORT JULY 2012

Waterbody	Units	CCME	A13												
Year			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
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
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
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
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	-	1576	1489	432	1583
Laboratory-Measured															
Ion balance	%		103	94.1	91.2	-	-	-	-	-	92.6	-	-	94.4	
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	-	-	-	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.06	0.31	<0.050	0.005	0.08	<0.005	<0.050	<0.050	<0.050	0.123	<0.050	0.042	<0.010
Mercury (Hg)-Total	mg/L	0.000026		-	<0.00010	<0.00001	<0.00001	<0.00001	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020
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
Phosphorus (P)-Total Reactive	mg/L		-	<0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.013	<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
Total Suspended Solids	mg/L		4	3	-	4	3	<1	-	<5.0	-	-	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	51	22.6	60	55	55	30.4	42.4	96	25.1	31.7	36	41
Bicarbonate (HCO3)	mg/L		37	62	27.6	60	55	55	37.1	51.7	117	30.6	38.7	44	50
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<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
Calcium (Ca)-Dissolved	mg/L		-	-	103	-	-	-	-	-	390	226	179	57.9	228
Magnesium (Mg)-Dissolved	mg/L		-	-	6.57	-	-	-	-	-	46.5	21.8	21.6	6.94	22.7
Potassium (K)-Dissolved	mg/L		-	-	4.97	-	-	-	-	-	11.1	7.78	4.9	2.88	8.04
Sodium (Na)-Dissolved	mg/L		-	-	12.9	-	-	-	-	-	36.7	24.6	23.5	12.3	46.6
Chloride	mg/L		716	372	228	197	-	230	42.2	85	877	511	364	109	440
Conductivity	umhos/cm		2370	1460	835	947	953	676	212	369	2450	1560	1220	482	1450
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
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
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
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
Sulfate	mg/L		14.3	77.2	4.73	14	-	20	5.96	6.13	25.4	63.4	56	24.8	73
TDS (Calculated)	mg/L		1170	719	374	-	635	450	101	186	1440	896	681	386	1140
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
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
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
Barium (Ba)-Total	mg/L		-	-	0.0751	0.0838	0.0873	0.0882	0.0527	0.0527	0.321	0.209	0.149	0.0523	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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020
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
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
Calcium (Ca)-Total	mg/L		-	-	107	105	82.8	110	25	53.9	359	240	198	54	222
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010
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
Cobalt (Co)-Total	mg/L		-	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00050	0.00086	<0.00050	0.00028	<0.0020
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
Iron (Fe)-Total	mg/L	0.3	-	-	0.507	<0.1	0.57*	1.5*	0.42	0.34	<0.10	0.82	0.48	0.45	<1.0
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
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
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
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
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
Nickel (Ni)-Total	mg/L	Equation	-	-	0.0051	0.0072	0.008	0.0139	0.0024	<0.0020	0.0082	<0.0020	<0.0020	0.0042	<0.020
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0
Potassium (K)-Total	mg/L		-	-	5.12	3.7	2.8	5	1.23	1.97	10.4	8.04	5.29	3.8	8
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00128	0.00188	0.00938	0.00644	0.00379	0.00278	0.0067
Selenium (Se)-Total	mg/L	0.001	-	-	0.0052	0.0002	0.003	0.006	<0.0010	0.0011	<0.0050	0.0168	<0.0050	<0.0010	<0.010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.793	0.509	2.94	3.12	2.32	0.7	1.56
Silver (Ag)-Total	mg/L	0.0001	-	-	<0.0020	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010
Sodium (Na)-Total	mg/L		-	-	13.2	21.4	10.3	15.6	5.11	7.6	33.3	31	19.6	16.6	45.9
Strontium (Sr)-Total	mg/L		-	-	-	0.88	-	0.83	0.16	0.353	2.32	1.91	1.12	0.428	1.86
Tellurium (Te)-Total	mg/L		-	-	-	-	0.71	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020
Thallium (Tl)-Total	mg/L	0.0008	-	-	<0.00040	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.0010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010
Tin (Sn)-Total	mg/L		-	-	<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020
Titanium (Ti)-Total	mg/L		-	-	<0.0024	0.08	0.04	0.05	0.00064	0.00052	0.0017	0.0016	0.0014	0.00334	<0.0050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00047	<0.0010
Uranium (U)-Total	mg/L	0.015	-	-	<0.00040	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010
Vanadium (V)-Total	mg/L		-	-	<0.0020	<0.0005	0.0006	<0.0005	<0.00020	0.0002	<0.0020	<0.0020	<0.0020	<0.00020	<0.0020
Zinc (Zn)-Total	mg/L	0.03	-	-	<0.016	<0.001	0.005	0.022	<0.0050	<0.0050	<0.020	<0.020	<0.020	<0.0020	<0.020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.0040
Turbidity	NTU		1.9	3.6	-	1.2	0.4	5	1.56	1.26	1.45	3.64	3.05	3.19	2.17
pH	pH units	6.5-9.0	7.5	7.7	7.51	7.52	7.68	7.61	7.82	7.97	7.8	7.54	7.71	7.50	7.91
Ortho-Phosphate (PO4-P)	mg/L		<0.01	<0.01	<0.010	0.01	0.08	<0.01	-	-	-	-	-	-	
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	-	-	0.79

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY 2012

Waterbody	Units	CCME	A15													
Year			2007		2010				2011							
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	
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	
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	
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	
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	0	1302	1354	432	1771	
Laboratory-Measured																
Ion balance	%		100	92.9	103	-	-	-	-	-	97.2	-	-	94.9		
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	1.8	-	-	-	<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	
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	
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	
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.010	<0.010	<0.010	0.023	<0.010	
Total Kjeldahl Nitrogen	mg/L		-	0.6	0.91	-	<1	<1	-	-	1.06	0.42	0.45	0.43	0.55	
Total Suspended Solids	mg/L		-	4	-	10	10	3	-	<5.0	-	-	<5.0	7	5	
Alkalinity, Total (as CaCO3)	mg/L		36	51	27.6	65	56	54	23.7	41.5	12.6	26.6	30.8	27	35	
Bicarbonate (HCO3)	mg/L		44	62	33.7	65	56	54	28.9	50.6	15.4	32.4	37.6	33	43	
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<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	
Calcium (Ca)-Dissolved	mg/L		-	-	71.7	-	-	-	-	-	577	196	188	253	258	
Magnesium (Mg)-Dissolved	mg/L		-	-	8.73	-	-	-	-	-	48.3	21.1	21.1	20.7	25.1	
Potassium (K)-Dissolved	mg/L		-	-	3.19	-	-	-	-	-	20.9	6.45	5.25	13.1	8.69	
Sodium (Na)-Dissolved	mg/L		-	-	9.9	-	-	-	-	-	77.3	22.5	20.2	40.2	56.2	
Chloride	mg/L		210	267	141	313	-	223	22.9	100	1250	409	362	149	511	
Conductivity	umhos/cm		807	1020	547	1372	961	702	128	416	3230	1310	1220	676	1610	
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	
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	
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	
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	
Sulfate	mg/L		6.8	16.8	7.7	9	-	25	1.56	5.84	106	66.2	54.2	24.3	96.8	
TDS (Calculated)	mg/L		368	471	259	-	641	468	61.4	208	2090	753	640	1390	1230	
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	
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	<0.00020	
Arsenic (As)-Total	mg/L	0.005	0.0032	-	0.00299	0.0054	0.0015	0.0068*	0.00101	0.00305	0.0036	0.0019	0.0029	0.0134	0.0028	
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	
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	<0.00020	
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	<0.00008	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000049	<0.00010	
Calcium (Ca)-Total	mg/L		-	-	74.4	165	84.4	110	17.4	62.5	494	203	166	251	250	
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010	
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	
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	0.00027	<0.00020	<0.00050	0.00061	<0.00050	0.00096	<0.00020	
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	
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	
Lead (Pb)-Total	mg/L	Equation	<0.0001	-	0.00011	<0.0003	0.0036	0.0008	<0.000090	0.000096	<0.0010	<0.0010	<0.0010	0.00179	<0.00090	
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	
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	
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	
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	
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	
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0	
Potassium (K)-Total	mg/L		-	-	3.26	4.3	2.1	5.1	0.801	1.96	17.4	6.68	4.55	12.4	8.73	
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00101	0.00251	0.0167	0.00473	0.00343	0.0142	0.0075	
Selenium (Se)-Total	mg/L	0.001	0.0012	-	0.00157	0.005	0.002	0.01	<0.0010	0.0017	<0.0050	0.013	<0.0050	<0.0010	<0.010	
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.945	0.826	0.73	2.87	2.77	0.903	1.67	
Silver (Ag)-Total	mg/L	0.0001	<0.0004	-	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010	
Sodium (Na)-Total	mg/L		-	-	9.8	22.1	9.6	13.6	2.26	6.48	63.8	26.6	17.1	38.8	56.2	
Strontium (Sr)-Total	mg/L		-	-	-	1.2	0.69	0.78	0.102	0.444	4.18	1.54	1.16	2.59	2.18	
Tellurium (Te)-Total	mg/L		-	-												

MELIADINE GOLD PROJECT

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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
GPS Coordinates			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
Field Measurments												
Water Temperature	oC		20.4	0.9	9.1	19.2	9.4	4.4	-	-	7.53	11.5
pH	pH units		8.49	7.68	7.9	8.69	7.69	7.58	-	-	15	7.73
Conductivity	(µS/cm)		-	-	-	-	-	-	-	-	715	793
Laboratory-Measured												
Ion balance	%		95.7	97.2	104	-	-	-	-	-	104	-
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	2.3	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	0.02	-	-	-	-	0.011	0.013	0.0029	<0.010
Phosphorus (P)-Total Reactive	mg/L		-	0.02	-	-	-	-	<0.010	-	<0.0010	<0.010
Total Kjeldahl Nitrogen	mg/L		-	0.6	1.32	-	<1	<1	-	-	0.59	0.82
Total Suspended Solids	mg/L		-	6	-	5	1	2	-	<5.0	<5.0	5
Alkalinity, Total (as CaCO3)	mg/L		76	76	50.7	60	79	97	54.9	71.8	-	62
Bicarbonate (HCO3)	mg/L		93	92	61.8	60	79	97	67	87.6	-	76
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	-	<12
Hydroxide (OH)	mg/L		<5.0	<5.0	<5.0	<2	<2	<2	<0.40	<0.40	-	<6.8
Calcium (Ca)-Dissolved	mg/L		-	-	53.5	-	-	-	-	-	78.1	90.9
Magnesium (Mg)-Dissolved	mg/L		-	-	8.19	-	-	-	-	-	13.4	14.8
Potassium (K)-Dissolved	mg/L		-	-	4.11	-	-	-	-	-	6.25	6.88
Sodium (Na)-Dissolved	mg/L		-	-	18.3	-	-	-	-	-	40.4	40.4
Chloride	mg/L		86	118	89.6	175	-	185	68.5	158	162	185
Conductivity	umhos/cm		456	609	461	996	932	629	372	671	744	784
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
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
Nitrate and Nitrite as N	mg/L		0.1	0.1	0.655	-	-	-	0.102	<0.071	1.1	0.225
Nitrite-N	mg/L	0.197	<0.05	<0.05	<0.050	0.02	-	<0.01	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		11.4	28.2	25.3	48	35	18.3	33.9	33.9	38.9	42.2
TDS (Calculated)	mg/L		221	294	232	-	621	419	190	370	378	552
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
Antimony (Sb)-Total	mg/L		<0.0004	-	<0.00040	<0.0001	<0.0001	<0.0001	<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
Barium (Ba)-Total	mg/L		0.042	-	0.0394	0.0611	0.0535	0.0342	0.0342	0.0618	0.059	0.0765
Beryllium (Be)-Total	mg/L		<0.001	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.000050	<0.00008	<0.00008	0.00021*	<0.000010	<0.000010	0.000013	<0.000010
Calcium (Ca)-Total	mg/L		-	-	49.7	83.4	65.6	85.5	42.5	79.9	81	88
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<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
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0020	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.003	-	0.0013	0.0031	0.0021	0.0024	0.0011	0.00204	0.0012	0.00182
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
Lead (Pb)-Total	mg/L	Equation	0.0003	-	<0.00010	0.0632	0.0098*	0.0014	0.00018	0.000148	0.000153	<0.000090
Lithium (Li)-Total	mg/L		<0.02	-	<0.010	<0.1	<0.1	<0.1	0.0085	0.0173	0.0224	0.0264
Magnesium (Mg)-Total	mg/L		-	-	7.35	17	11.1	17.8	6.59	12.8	12.4	16.9
Manganese (Mn)-Total	mg/L		0.009	-	0.0058	0.0072	0.0082	0.0102	0.0123	0.00991	0.00328	0.00692
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
Nickel (Ni)-Total	mg/L	Equation	0.004	-	0.0027	0.0068	0.0062	0.0129	0.0024	0.0029	<0.0020	0.0027
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<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
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00257	0.00434	0.00425	0.00542
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
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	0.222	0.154	0.126	0.336
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
Sodium (Na)-Total	mg/L		-	-	16.7	45.5	25.5	39.6	17.7	36.3	36.4	40.3
Strontium (Sr)-Total	mg/L		-	-	-	0.72	0.63	0.73	0.32	0.666	0.707	0.757
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	<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
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	<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
Titanium (Ti)-Total	mg/L		<0.0010	-	<0.0010	0.06	0.03	0.04	0.00079	0.00052	0.00098	0.00109
Tungsten (W)-Total	mg/L		<0.0010	-	-	-	-	-	<0.0010	<0.0010	<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
Vanadium (V)-Total	mg/L		<0.0010	-	<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	0.00025	<0.00020	0.0002
Zinc (Zn)-Total	mg/L	0.03	0.012	-	<0.0040	<0.001	0.005	0.005	<0.0050	<0.0050	<0.0020	0.0023
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	1.04
Ortho-Phosphate (PO4-P)	mg/L		-	<0.01	<0.010	0.01	0.07	<0.01	-	-	-	-
Turbidity	NTU		-	1.9	-	1.1	0.92	0.69	1.15	1.3	0.68	0.98
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

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Waterbody	Units	CCME	A54													
Year			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
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
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS
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
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
Conductivity	(µS/cm)		-	-	895	-	-	-	-	-	-	0	1202	1187	670	866
Laboratory-Measured																
Ion balance	%		107	96.1	103	92.9	-	-	-	-	-	99.7	-	-	97.8	-
Biochemical Oxygen Demand	mg/L		-	2	-	-	-	-	-	-	1.9	-	-	-	<6.0	<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
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
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
Phosphorus (P)-Total Reactive	mg/L		-	0.02	<0.004	-	-	-	-	<0.010	<5.0	<0.010	<0.010	<0.010	0.011	<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
Total Suspended Solids	mg/L		4	3	5	-	8	1	2	-	-	-	-	<5.0	<5.0	5
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
Bicarbonate (HCO3)	mg/L		60	83	57	60.2	36	56	60	62.8	65.7	59.5	83	78.1	70	66
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
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
Calcium (Ca)-Dissolved	mg/L		-	-	-	49.9	-	-	-	-	-	105	121	141	72.7	98.2
Magnesium (Mg)-Dissolved	mg/L		-	-	-	7.64	-	-	-	-	-	24.7	23	27.2	11.4	16.6
Potassium (K)-Dissolved	mg/L		-	-	-	3.8	-	-	-	-	-	11.2	11.2	11.9	5.33	8.25
Sodium (Na)-Dissolved	mg/L		-	-	-	17.9	-	-	-	-	-	70.6	70.6	82.6	30.8	46.8
Chloride	mg/L		134	151	214	94.6	174	-	235	75.9	209	305	335	394	149	203
Conductivity	umhos/cm		618	720	944	498	1005	1079	727	403	815	1070	1150	1380	676	849
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
Nitrate-N	mg/L	13	<.01	<0.1	4.9	1.25	1.4	0.82	0.84	0.68	1.18	<0.050	0.809	2.92	1.27	1.52
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
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
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
TDS (Calculated)	mg/L		291	348	469	239	670	719	485	200	456	599	691	778	532	672
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020
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
Cadmium (Cd)-Total	mg/L	Equation	-	-	<0.00005	<0.000050	<0.00008	<0.00008	0.00012	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	0.000031	<0.00010
Calcium (Ca)-Total	mg/L		-	-	-	50.7	79.3	77.4	95.8	39.9	91.5	106	126	133	72	105
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.0010
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
Cobalt (Co)-Total	mg/L		-	-	<0.0001	<0.0020	-	-	-	0.00027	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.0020
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
Iron (Fe)-Total	mg/L	0.3	0.22	0.22	0.022	0.107	<0.01	<0.01	0.71*	0.32	0.2	<0.10	0.32	0.12	0.19	<1.0
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
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
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
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
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
Nickel (Ni)-Total	mg/L	Equation	-	-	0.001	0.0033	0.0048	0.0064	0.0134	0.0033	0.003	<0.0020	0.0054	<0.0020	0.0031	<0.020
Phosphorus (P)-Total	mg/L		-	-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<1.0
Potassium (K)-Total	mg/L		-	-	-	3.97	6.2	6.8	11.6	3.16	7.01	9.28	11.8	11	5.22	8.98
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	-	0.00291	0.00569	0.00616	0.0078	0.00745	0.00426	0.0065
Selenium (Se)-Total	mg/L	0.001	-	-	<0.0001	0.00102	<0.001	<0.001	<0.001	<0.0010	0.0023	<0.0050	<0.0050	<0.0050	<0.0010	<0.010
Silicon (Si)-Total	mg/L		-	-	-	-	-	-	-	0.414	0.249	0.4	0.64	0.48	0.292	<0.50
Silver (Ag)-Total	mg/L	0.0001	-	-	<0.0001	<0.00050	<0.0005	<0.005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010
Sodium (Na)-Total	mg/L		-	-	-	18.2	51.3	34.6	52.5	21.6	54	57.9	83.1	80.7	32.1	48.9
Strontium (Sr)-Total	mg/L		-	-	0.83	-	0.73	0.78	0.85	0.295	0.789	0.876	1.19	1.14	0.622	0.957
Tellurium (Te)-Total	mg/L		-	-	-	-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<0.00020	<0.0020
Thallium (Tl)-Total	mg/L	0.0008	-	-	<0.00003	<0.00010	-	-	-	<0.00010	<0.00010	<0.0050	<0.0050	<0.0050	<0.00010	<0.0010
Thorium (Th)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.0010
Tin (Sn)-Total	mg/L		-	-	-	<0.050	<0.001	<0.001	<0.001	0.00753	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.0020
Titanium (Ti)-Total	mg/L		-	-	-	<0.0010	0.05	0.03	0.05	0.00402	0.00055	<0.0010	<0.0010	0.0014	0.00158	<0.0050
Tungsten (W)-Total	mg/L		-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00017	<0.0010
Uranium (U)-Total	mg/L	0.015	-	-	0.00026	0.00041	<0.001	<0.001	<0.001	0.00027	0.00043	<0.00050	<0.00050	0.00072	0.00045	<0.0010
Vanadium (V)-Total	mg/L		-	-	<0.00005	<0.0010	<0.0005	<0.0005	<0.0005	0.00025	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.0020
Zinc (Zn)-Total	mg/L	0.03	-	-	<0.0008	<0.0040	<0.001	0.001	0.011	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0034	<0.020
Zirconium (Zr)-Total	mg/L		-	-	-	-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.0040
Turbidity	NTU		<0.1	0.65	-	-	0.94	0.96	0.39	3.34	1.13	0.83	0.94	0.74	1.52	0.89
Ortho-Phosphate (PO4-P)	mg/L		<0.01	<0.01	<0.001	<0.010	0.01	0.09	<0.01	-	-	-	-	-	-	-
pH	pH units	6.5-9.0	7.8	7.9	8	7.97	8.24	7.72	7.72	8.06	8.11	7.99	7.97	8.04	7.90	8.04
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	-	-	-	1.15
Total Oil and Grease	mg/L		-	<1.0	0.6	-	-	-	-	<1.0	-	-	-	-	-	-

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY
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
GPS Coordinates			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
Field Measurments													
Water Temperature	oC		11.6	18.2	9	4.2			8.3	3.43	0.3	8.0	14.4
pH	pH units		8	7.5	7.63	7.68			8.75	7.13	7.25	8.3	7.88
Conductivity	(µS/cm)		-	-	-	-			0	560	620	95	282
Laboratory-Measured													
Ion balance	%		93.1	-	-	-	-	-	101	-	-	101	-
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	3.5	-	-	-	<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	-	-	0.023	0.037	<0.010	<0.010	<0.010	0.021	0.014
Phosphorus (P)-Total Reactive	mg/L		-	-	-	-	-	-	<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
Total Suspended Solids	mg/L		-	4	1	1	-	<5.0	-	-	<5.0	<5.0	5
Alkalinity, Total (as CaCO3)	mg/L		51.2	142	136	168	27.5	127	128	133	120	30	98
Alkalinity Bicarbonate (HCO3)	mg/L		62.5	142	136	168	33.5	155	156	162	146	37	119
Alkalinity Carbonate (CO3)	mg/L		<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<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
Calcium (Ca)-Dissolved	mg/L		33.3	-	-	-	-	-	72.6	83.5	78.2	14.5	45.5
Magnesium (Mg)-Dissolved	mg/L		4.17	-	-	-	-	-	11.1	11.2	11.7	2.00	5.32
Potassium (K)-Dissolved	mg/L		2.46	-	-	-	-	-	4.95	4.54	3.51	1.30	2.64
Sodium (Na)-Dissolved	mg/L		6.5	-	-	-	-	-	17.9	17.6	19.4	2.97	7.86
Chloride	mg/L		39.2	92.1	-	255	6.28	33.1	96.3	107	97.3	9.08	25.5
Conductivity	umhos/cm		290	737	1177	898	85.2	313	525	587	604	108	274
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
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
Nitrate and Nitrite as N	mg/L		1.54	-	-	-	0.073	<0.071	<0.071	<0.071	0.072	0.218	<0.071
Nitrite-N	mg/L	0.197	<0.050	0.03	-	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		17.6	21	-	68	3.72	4.09	4.86	12.8	41.8	7.70	11.4
TDS (Calculated)	mg/L		141	-	784	599	42.8	184	284	318	319	76.0	214
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
Cadmium (Cd)-Total	mg/L	Equation	<0.000050	<0.00008	<0.00008	0.00028	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010
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
Cesium (Cs)-Total	mg/L		-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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
Cobalt (Co)-Total	mg/L		<0.0020	-	-	-	0.00042	0.00119	<0.00050	<0.00050	<0.00050	<0.00020	0.00022
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
Iron (Fe)-Total	mg/L	0.3	0.064	<0.01	<0.01	0.3	0.3	0.73	0.3	0.64	0.25	0.17	0.4
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
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
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
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
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
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
Phosphorus (P)-Total	mg/L		<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<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
Rubidium (Rb)-Total	mg/L		-	-	-	-	0.00125	0.00312	0.00394	0.0035	0.00245	0.00122	0.00248
Selenium (Se)-Total	mg/L	0.001	0.00061	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		-	-	-	-	1.1	0.202	<0.30	0.81	1.24	0.286	0.156
Silver (Ag)-Total	mg/L	0.0001	<0.00050	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		6.8	22.1	18.9	32.7	2.12	7.78	17.5	19	17.2	3.00	7.95
Strontium (Sr)-Total	mg/L		-	0.44	0.8	0.95	0.0635	0.311	0.49	0.555	0.418	0.0704	0.248
Tellurium (Te)-Total	mg/L		-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Thorium (Th)-Total	mg/L		-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0010	0.05	0.02	0.1	0.00371	0.00055	<0.0010	<0.0010	<0.0010	0.00163	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	0.0003	<0.001	<0.001	0.001	<0.00010	0.00018	0.00054	0.00062	0.00059	0.00010	0.00016
Vanadium (V)-Total	mg/L		<0.0010	<0.0005	<0.0005	<0.0005	0.00036	0.00022	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.001	0.004	0.015	<0.0050	0.0118	<0.020	<0.020	<0.020	0.0022	<0.0020
Zirconium (Zr)-Total	mg/L		-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040
Turbidity	NTU		-	1.4	0.51	0.24	2.86	2.84	1.92	3.13	1.26	2.4	2.04
Ortho-Phosphate (O-PO4)	mg/L		<0.010	0.01	0.08	<0.01	-	-	-	-	-	-	-
Sodium Adsorption Ratio			-	-	-	-	-	-	-	-	-	-	0.29
Total Oil and Grease	mg/L		-	-	-	-	<1.0	-	-	-	-	-	-
pH	pH units	6.5-9.0	7.98	7.54	7.59	7.3	7.73	8.21	8.28	8.28	8.11		

MELIADINE GOLD PROJECT
MONTHLY ENVIRONMENTAL REPORT JULY
2012

Waterbody			B7-6									
Year			2010			2011					2012	
Date Sampled	Units	CCME	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
GPS Coordinates			-	-	-	-	-	-	-	-	-	-
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
pH	pH units		7.5	7.69	7.77			7.43	7.05	7	11.3	8.11
Conductivity	(µS/cm)		-	-	-			0	165	191	141	175
Laboratory-Measured												
Ion balance	%		99.8	-	-	-	-	92.2	-		101	-
Biochemical Oxygen Demand	mg/L		-	-	-		1.5	-	-		<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
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
Phosphorus (P)-Total	mg/L	0.004 - 0.01	-	-	-	0.012	0.013	0.013	0.014	<0.010	<0.010	<0.010
Phosphorus (P)-Total Reactive	mg/L		-	-	-	<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
Total Suspended Solids	mg/L		-	5	1	-	<5.0	-	-	<5.0	<5.0	6
Alkalinity, Total (as CaCO3)	mg/L		16.1	39	38	12.7	29.7	37.3	33.3	32.1	-	30
Bicarbonate (HCO3)	mg/L		19.6	39	38	15.5	36.2	45.5	40.6	39.2	-	37
Carbonate (CO3)	mg/L		<5.0	-	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<12
Hydroxide (OH)	mg/L		<5.0	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	-	<6.8
Calcium (Ca)-Dissolved	mg/L		13.2	-	-	-	-	27.1	25.4	26.3	20.4	26
Magnesium (Mg)-Dissolved	mg/L		1.22	-	-	-	-	2.39	2.4	2.35	2.04	2.22
Potassium (K)-Dissolved	mg/L		0.71	-	-	-	-	1.48	1.53	1.4	1.31	1.27
Sodium (Na)-Dissolved	mg/L		1.8	-	-	-	-	3.84	3.41	3.78	3.03	3.47
Chloride	mg/L		18	32.9	44.7	8.23	30.9	38.3	34	35.6	26.5	32.4
Conductivity	umhos/cm		103	247	211	55.6	160	196	176	182	152	176
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
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
Nitrate and Nitrite as N	mg/L		<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
Sulfate	mg/L		1.36	8	4	0.81	2.62	2.93	3.26	4.48	3.33	3.93
TDS (Calculated)	mg/L		46	-	141	26	80.2	98.4	93.8	92.6	72.5	106
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
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
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
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
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
Bismuth (Bi)-Total	mg/L		-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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
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
Calcium (Ca)-Total	mg/L		14.4	26.6	29.7	6.64	22.6	29	27.9	26	21.3	27.4
Cesium (Cs)-Total	mg/L		-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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
Cobalt (Co)-Total	mg/L		<0.0020	-	-	0.00031	<0.00020	<0.00050	<0.00050	<0.00050	<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
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
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
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
Magnesium (Mg)-Total	mg/L		1.34	2.9	3.1	0.794	2.08	2.69	2.8	2.39	2	2.59
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
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
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
Phosphorus (P)-Total	mg/L		<0.020	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<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
Rubidium (Rb)-Total	mg/L		-	-	-	0.00058	0.00132	0.00178	0.00182	0.00127	0.00115	0.00151
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
Silicon (Si)-Total	mg/L		-	-	-	0.343	0.371	<0.30	0.38	0.38	0.394	0.449
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
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
Strontium (Sr)-Total	mg/L		-	0.18	0.22	0.0463	0.183	0.205	0.195	0.172	0.162	0.203
Tellurium (Te)-Total	mg/L		-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Thorium (Th)-Total	mg/L		-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.050	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		<0.0010	0.01	0.01	0.00062	<0.00020	0.0016	<0.0010	<0.0010	0.00036	<0.00050
Tungsten (W)-Total	mg/L		-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	0.00011	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.0010	<0.0005	<0.0005	<0.00020	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.0040	<0.001	0.01	<0.0050	<0.0050	<0.020	<0.020	<0.020	<0.0020	0.0021
Zirconium (Zr)-Total	mg/L		-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03									-	0.18
Ortho-Phosphate (O-PO4)	mg/L		<0.010	0.02	<0.01	-	-	-	-	-	-	-
Turbidity	NTU		-	0.61	0.42	0.94	0.81	0.72	1.44	0.58	0.42	0.72
pH	pH units	6.5-9.0	7.4	6.49	7.39	7.2	7.85	7.91	7.72	7.75	-	7.79

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY 2012

Waterbody	Units	CCME	CONTROLE LAKE																	
Year			2007		2008	2009	2010				2011								2012	
Date Sampled			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		
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	535000.8-6986333	0534324, 6986637	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	
LAB			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Field Measurments																				
Water Temperature	oC		16.4	0.2	14.12	1.05	4.1	18.5	11	6.5	-	16.7	-	14.7	6.06	1.9	7.84	11.7		
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		
Conductivity	(µS/cm)		-	-	64	175	-	-	-	-	-	80	-	0	74	79	62	165		
Laboratory-Measured																				
Ion balance	%		Low EC	Low EC	Low EC	103	Low EC	-	-	-	-	-	-	-	-	-	Low EC			
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	<6.0	<6.0		
Ammonia as N	mg/L	2.33	-	<0.05	<0.05	0.075	<0.050	0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010		
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		
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		
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		
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		
Total Suspended Solids	mg/L		-	5	3	3	1	3	2	1	-	<3.0	<5.0	-	-	<5.0	<5.0	9		
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	23		
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	28		
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		
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		
Calcium (Ca)-Dissolved	mg/L		-	-	7.02	23.6	7.01	-	-	-	-	8.51	-	10	10.1	9.76	8.85	8.78		
Magnesium (Mg)-Dissolved	mg/L		-	-	0.765	2.46	0.89	-	-	-	-	1.13	-	1.12	1.11	1.03	1.12	0.996		
Potassium (K)-Dissolved	mg/L		-	-	0.79	2.47	0.91	-	-	-	-	1.11	-	1.25	1.05	1.07	0.87	0.885		
Sodium (Na)-Dissolved	mg/L		-	-	3.25	10.5	3	-	-	-	-	4.72	-	4.97	4.67	4.72	4.61	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		
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		
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		
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		
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	<0.05	<0.05	<0.050	<0.01	-	<0.01	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		
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		
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		
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		
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		
Arsenic (As)-Total	mg/L	0.005	<0.0004	-	0.00039	0.00116	<0.00040	<0.0005	<0.0005	0.0055*	0.00158	0.00059	0.00046	<0.0010	<0.0010	<0.0010	0.00041	0.00048		
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		
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		
Bismuth (Bi)-Total	mg/L		-	-	-	0.0001	-	-	-	-	<0.00020	0.00005	<0.00020	<0.00050	<0.00050	<0.00050	<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		
Cadmium (Cd)-Total	mg/L	Equation	<0.0002	-	<0.00005	<0.00001	<0.000050	<0.00008	<0.00008	0.00017*	<0.000010	0.00001	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010		
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		
Cesium (Cs)-Total	mg/L		-	-	-	0.0216	-	-	-	-	<0.00010	-	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010		
Chromium (Cr)-Total	mg/L		<0.005	-	<0.00006	0.0022	<0.0050	<0.0006	<0.0006	0.0056*	<0.0010	<0.0001	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L		<0.002	-	<0.0001	<0.0003	<0.0020	-	-	-	<0.00020	<0.0001	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020		
Copper (Cu)-Total	mg/L	Equation	0.002	-	0.0008	0.0017	<0.0010	0.0007	0.0013	0.0011	0.0007	0.00094	0.00082	<0.0020	<0.0020	<0.0020	0.00077	0.00106		
Iron (Fe)-Total	mg/L	0.3	0.049	-	0.024	-	0.099	<0.01	<0.01	0.11	0.11	0.052	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Lead (Pb)-Total	mg/L	Equation	<0.0004	-	<0.00005	<0.0005	<0.00010	0.0049	0.0052	<0.0003	<0.000090	<0.00005	<0.000090	<0.0010	<0.0010	<0.0010	0.000118	<0.000090		
Lithium (Li)-Total	mg/L		<0.01	-	-	<0.005	<0.010	<0.01	<0.01	<0.1	0.0076	<0.005	<0.0020	0.006	0.0022	<0.0020	<0.0020	<0.0020		
Magn																				

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY
2012

Waterbody			MELIADINE RIVER													
Year	Units	CCME	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	
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
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments																
Water Temperature	oC		5.63	12.7	-	-	11.4	5.4	-	-	14.2	3.53	0.8	687	10.3	
pH	pH units		-	6.78	-	-	6.9	7.94	-	-	7.77	7.56	7.17	17.68	8016	
Conductivity	(µS/cm)		42	63	-	-	-	-	-	-	0	69	149	62	77	
Laboratory-Measured																
Ion balance	%		-	Low EC	Low EC	-	-	-	-	-	-	-	-	Low EC	-	
Biochemical Oxygen Demand	mg/L		-	-	-	-	-	-	-	<1.0	-	-	-	<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	
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	
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	
Phosphorus (P)-Total Reactive	mg/L		<0.002	<0.002	-	-	-	-	<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	
Total Suspended Solids	mg/L		<5.0	<5.0	-	3	<1	3	-	<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	
Bicarbonate (HCO3)	mg/L		17.8	19	31	39	22	28	31.1	33	27.7	46.2	35.6	-	25	
Carbonate (CO3)	mg/L		<5.0	<5.0	<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	-	<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	
Calcium (Ca)-Dissolved	mg/L		7.76	5.96	8.96	-	-	-	-	-	9.2	17.3	12.8	7.22	8.17	
Magnesium (Mg)-Dissolved	mg/L		1.13	0.853	1.33	-	-	-	-	-	1.46	3.24	2.35	1.05	1.23	
Potassium (K)-Dissolved	mg/L		2	0.75	1.13	-	-	-	-	-	1.32	2.02	1.62	0.77	0.971	
Sodium (Na)-Dissolved	mg/L		3.9	3.2	5	-	-	-	-	-	7.26	13.7	11.1	4.09	5.5	
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	
Conductivity	umhos/cm		68.8	64.2	88.5	89	152	101	97.8	120	94.3	195	144	68	84	
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	
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	
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	
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	
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	
TDS (Calculated)	mg/L		-	30	44.6	-	101	67	49.6	64	48.3	108	75.1	37.5	60	
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	
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	
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	
Barium (Ba)-Total	mg/L		0.02	0.00689	0.0133	0.0087	0.0095	0.009	0.0135	0.0145	0.00885	0.0152	0.0113	0.00955	0.0101	
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	
Bismuth (Bi)-Total	mg/L		-	-	-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<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	
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	
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	
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<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	
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	
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	
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	
Lead (Pb)-Total	mg/L	Equation	<0.0005	<0.00005	<0.00010	<0.0003	0.0006	0.0003	<0.00090	<0.00090	<0.0010	<0.0010	<0.0010	<0.00090	<0.00090	
Lithium (Li)-Total	mg/L		<0.0005	-	<0.010	<0.1	<0.1	<0.1	<0.0020	<0.0020	0.005	<0.0020	0.0024	<0.0020	<0.0020	
Magnesium (Mg)-Total	mg/L		1.12	0.865	1.44	1.8	1	1.8	1.42	2.09	1.32	3.58	2.45	1.01	1.48	
Manganese (Mn)-Total	mg/L		0.00204	0.0018	0.0062	<0.0005	0.0021	0.0022	0.0111	0.00317	0.0037	0.0035	0.0028	0.00467	0.0042	
Molybdenum (Mo)-Total	mg/L	0.073	<0.001	<0.00006	<0.0050	<0.0005	<0.0005	<0.0005	0.0002	0.00033	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	
Nickel (Ni)-Total	mg/L	Equation	<0.001	<0.0003	<0.0020	<0.0005	0.0006	0.0014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Phosphorus (P)-Total	mg/L		-	-	<0.020	-	-	-	<0.20	<0.20	<0.50	<0.50	<0.50	<0.10	<0.10	
Potassium (K)-Total	mg/L		2	0.76	1.28	0.57	0.63	1.6	1.31	1.51	1.15	2.34	1.56	0.862	1.07	
Rubidium (Rb)-Total	mg/L		-	-	-	-	-	-	0.00183	0.00199	0.00157	0.00228	0.00161	0.00115	0.00151	
Selenium (Se)-Total	mg/L	0.001	<0.001	<0.0001	<0.00040	<0.001	<0.001	<0.0								

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY
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		
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		
LAB			-	-	-	-	-	-	-	ALS LAB	ALS LAB	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS 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		
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		
Conductivity	(µS/cm)		49	90.6	62	-	-	-	-	-	-	66	0	104	66	40	61		
Laboratory-Measured																			
Fecal Coliforms	MPN/100mL		-	-	-	-	-	-	-	-	-	-	<3	15	<3	<1	<1		
Total Coliforms	mg/L		-	-	-	-	-	-	-	2	-	-	-	-	-	<1	<1		
E. Coli	mg/L		-	-	-	-	-	-	-	<1	-	-	-	-	-	<1	<1		
Total Oil and Grease	mg/L		<0.5	-	-	-	-	-	-	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0		
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		
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		
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		
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		
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		
Total Suspended Solids	mg/L		3	4	3	-	3	1	3	-	<5.0	<3.0	-	-	<5.0	9.0	<5.0		
Phosphorus (P)-Total	mg/L																		
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		
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		
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		
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		
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		
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		
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		
Sodium (Na)-Dissolved	mg/L		3.34	7	3.5	<1.0	-	-	-	-	-	4.28	4.75	5.06	4.93	2.3	4.02		
Chloride	mg/L		6	12.6	7.55	1.51	7.5	9	9	7.45	7.87	7.74	8.41	11.7	8.6	5.25	7.79		
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		
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		
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		
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		
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		
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		
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		
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		
Antimony (Sb)-Total	mg/L		0.0003	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		
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		
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		
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		
Bismuth (Bi)-Total	mg/L		-	<0.001	-	-	-	-	-	<0.00020	<0.00020	<0.00005	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020		
Boron (B)-Total	mg/L	1.5	0.003	0.05	<0.0001	<0.05	<0.01	<0.01	<0.01	<0.010	<0.010	0.0031	<0.030	<0.030	<0.030	0.012	<0.010		
Cadmium (Cd)-Total	mg/L	Equation	0.00005	<0.00001	<0.00001	<0.000050	<0.00008	<0.00008	0.00016	<0.000010	<0.000010	<0.00001	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010		
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		
Cesium (Cs)-Total	mg/L		-	-	-	-	-	-	-	<0.00010	<0.00010	-	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010		
Chromium (Cr)-Total	mg/L		0.00006	<0.0001	<0.0001	<0.0050	<0.0006	<0.0006	<0.0006	<0.0010	<0.0010	<0.0001	<0.0020	<0.00050	<0.0020	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L		<0.001	0.003	0.003	<0.0020	-	-	-	<0.00020	<0.00020	<0.0001	<0.00050	<0.0020	<0.00050	<0.00020	<0.00020		
Copper (Cu)-Total	mg/L	Equation	0.0007	0.0017	0.001	<0.0010	0.0017	0.0009	0.0005	0.00094	0.00086	0.0008	0.0026	<0.00050	<0.0020	0.00081	0.00087		
Iron (Fe)-Total	mg/L	0.3	0.017	-	0.03	0.027	<0.01	<0.01	0.05	<0.10	<0.10	0.024	0.28	0.11	<0.10	<0.10	<0.10		
Lead (Pb)-Total	mg/L	Equation	0.00005	0.0005	0.0005	<0.00010	<0.0003	<0.0003	0.0226	<0.000090	<0.000090	<0.00005	<0.0010	<0.0010	<0.0010	<0.000090	<0.000090		
Lithium (Li)-Total	mg/L		-	<0.005	<0														

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY 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 JULY
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
GPS Coordinates				542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989012
LAB				-	-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS	ALS
Field Measurments														
Water Temperature	oC		10	4	15	11.1	6.5	-	-	11.4	6.32	0.8	1.3	10.3
pH	pH units			6.8	7.79	6.9	7.45	-	-	9.32	7.58	7.2	8.2	8.24
Conductivity	(µS/cm)			-	-	-	-	-	-	0	65	66	14	63
Laboratory-Measured														
Fecal Coliforms	MPN/100mL		200	-	35	-	-	-	<1	210	150	93	>200	>200
Total Coliforms	mg/L			-	-	-	-	-	-	-	-	-	>200	>200
E. Coli	mg/L			-	-	-	-	-	-	-	-	-	3	2
Total Oil and Grease	mg/L			-	-	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
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
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
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
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
Phosphorus (P)-Total Reactive	mg/L			-	-	-	-	-	-	<0.010	<0.010	<0.010	0.060	0.013
Total Kjeldahl Nitrogen	mg/L			<0.20	-	<1	1	-	-	0.31	0.23	0.33	0.25	0.23
Total Suspended Solids	mg/L		15	-	2	1	4	-	<5.0	-	-	12	<5.0	<5.0
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
Bicarbonate (HCO3)	mg/L			<5.0	38	21	23	43.6	21.6	27	24.1	23.8	6	22.3
Carbonate (CO3)	mg/L			<5.0	-	<2	<2	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<1.2
Hydroxide (OH)	mg/L			<5.0	<2	<2	<2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.34	<0.68
Calcium (Ca)-Dissolved	mg/L			1.16	-	-	-	-	-	8.08	7.45	1.19	1.19	6.84
Magnesium (Mg)-Dissolved	mg/L			0.12	-	-	-	-	-	1.22	1.15	1.11	0.163	1.06
Potassium (K)-Dissolved	mg/L			<0.50	-	-	-	-	-	0.9	0.86	0.89	<0.10	0.824
Sodium (Na)-Dissolved	mg/L			<1.0	-	-	-	-	-	6.05	4.51	4.61	0.725	4.16
Chloride	mg/L			0.96	9.4	-	9.5	11.8	7.9	10.3	8.61	8.71	1.19	7.91
Conductivity	umhos/cm			9.09	97	142	74	124	67.5	84.8	75.9	75.4	<20	72
Fluoride	mg/L	0.12		-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L			3.4	26	17	20	25	33.9	24.7	23.9	22.3	3.6	22
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
Nitrate and Nitrite as N	mg/L			<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
Sulfate	mg/L			0.7	3	-	4	4.92	3.09	3.37	3.47	3.55	0.63	3.41
TDS (Calculated)	mg/L			2.9	64	95	49	55.6	33.1	43.7	39.7	37.2	<5.0	43
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
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
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
Barium (Ba)-Total	mg/L			<0.0030	0.0065	0.00874	0.0058	0.00874	0.00735	0.0103	0.0081	0.00758	0.00176	0.00883
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
Bismuth (Bi)-Total	mg/L			-	-	-	-	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5		<0.050	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.030	<0.030	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation		<0.000050	<0.00008	<0.00008	0.00017*	<0.000010	<0.000010	<0.00020	<0.00020	<0.00020	<0.000010	<0.000010
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
Cesium (Cs)-Total	mg/L			-	-	-	-	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L			<0.0050	<0.0006	<0.0006	0.0030*	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L			<0.0020	-	-	-	0.00024	<0.00020	0.00055	<0.00050	<0.00050	0.00023	<0.00020
Copper (Cu)-Total	mg/L	Equation		<0.0010	0.0007	0.0012	0.0005	0.00139	0.0008	<0.0020	<0.0020	<0.0020	0.00043	0.00097
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
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
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
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
Manganese (Mn)-Total	mg/L			0.003	0.0021	0.0027	0.0028	0.0148	0.01	0.0319	0.0057	0.0092	0.0212	0.0122
Molybdenum (Mo)-Total	mg/L	0.073		<0.0050	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	Equation		<0.0020	0.0012	0.003	0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L			<0.020	-	-	-	0.4	<0.20	<0.50	<0.50	<0.50	0.12	<0.10
Potassium (K)-Total	mg/L			<0.10	0.33	0.43	1	1.89	0.706	0.93	0.99	0.8	0.413	0.893
Rubidium (Rb)-Total	mg/L			-	-	-	-	0.00208	0.00117	0.00133	0.00123	0.00124	0.00037	0.0012
Selenium (Se)-Total	mg/L	0.001		<0.00040	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010
Silicon (Si)-Total	mg/L			-	-	-	-	0.333	0.232	0.47	<0.30	0.33	0.093	0.318
Silver (Ag)-Total	mg/L	0.0001		<0.00010	<0.0005	<0.0005	<0.0005	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L			1.1	7.4	3.7	5	6.32	3.83	8.51	5.69	4.24	1.06	4.24
Strontium (Sr)-Total	mg/L			-	<0.05	<0.05	<0.05	0.0395	0.0289	0.0552	0.0463	0.0319	0.00717	0.0352
Tellurium (Te)-Total	mg/L			-	-	-	-	<0.00020	<0.00020	<0.0010	<0.0010	<0.0010	<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
Thorium (Th)-Total	mg/L			-	-	-	-	<0.00010	<0.00010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L			<0.050	<0.001	<0.001	<0.001	<0.00020	<0.00020	<0.00060	<0.00060	<0.00060	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L			<0.0010	<0.01	<0.01	<0.01	0.00031	0.00031	<0.0010	<0.0010	<0.0010	<0.00020	<0.00050
Tungsten (W)-Total	mg/L			-	-	-	-	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015		<0.00010	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010
Vanadium (V)-Total	mg/L			<0.0010	<0.0005	<0.0005	<0.0005	<0.00020	<0.00020	<0.0020	<0.0020	<0.0020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03		<0.0040	<0.001	<0.001	<0.001	<0.0050	<0.0050	<0.020	<0.020	<0.020	0.0028	<0.0020
Zirconium (Zr)-Total	mg/L			-	-	-	-	<0.00040	<0.00040	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040
Ortho-Phosphate (O-PO4)	mg/L			<0.010	0.02	0.05	<0.01	-	-	-	-	-	-	-
Oil & Grease	mg/L			-	0.02	-	-	-	-	-	-	-	<0.10	-
Turbidity	NTU			-	0.3	0.31	0.31	1.05	0.55	0.53	0.36	3.04	-	0.56
pH	pH units	6.5-9.1		6.75	6.7	7.45	7.05	7.72	7.59	8.33	7.61	7.59	6.72	7.59

MELIADINE GOLD PROJECT

MONTHLY ENVIRONMENTAL REPORT JULY
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 JULY
2012

Waterbody	Units	CCME	2BB-MEL0914	MEL-7									
Year				2010			2011				2012		
Date Sampled				22/07/2010	27/08/2010	24/09/2010	28/06/2011	12/07/2011	12/09/2011	11/10/2011	20/06/2012	24/07/2012	
GPS Coordinates				542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	542001-6989066	
LAB				-	-	-	ALS LAB	ALS LAB	ALS LAB	ALS LAB	Mutlilab	Mutlilab	
Field Measurments													
Water Temperature	oC		10	-	-	-	-	-	6.35	0.9			
pH	pH units			-	6.96	6.64	-	-	7.58	7.5			
Conductivity	(µS/cm)			-	-	-	-	-	70	69			
Laboratory-Measured													
Fecal Coliforms	MPN/100mL		200	440	-	-	>110000	-	430	230	230	500	
Total Coliforms	mg/L			-	-	-	>110000	-	-	-			
E. Coli	mg/L			-	-	-	-	-	-	-			
Total Oil and Grease	mg/L			<1	<1	2	-	5.5	<1.0	<1.0	<1.0	<1.0	
Ion balance	%			-	-	-	-	-	-	-			
Biochemical Oxygen Demand	mg/L		15	8.9	7	22	-	60	<6.0	<6.0	21.5	22	
Ammonia as N	mg/L	2.33		-	-	-	-	-	<0.050	0.11			
Mercury (Hg)-Total	mg/L	0.000026		-	-	-	-	-	<0.000050	<0.000050			
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	-	-	-	-	-	<0.010	0.028			
Phosphorus (P)-Total Reactive	mg/L			-	-	-	-	-	<0.010	<0.010			
Total Kjeldahl Nitrogen	mg/L			-	-	-	-	-	0.25	0.36			
Total Suspended Solids	mg/L		15	8	9	-	-	90	-	29	36	21	
Phosphorus (P)-Total	mg/L			-	-	-	-	-	-	-			
Alkalinity, Total (as CaCO3)	mg/L			-	-	-	-	-	19	19.7			
Bicarbonate (HCO3)	mg/L			-	-	-	-	-	23.2	24.1			
Carbonate (CO3)	mg/L			-	-	-	-	-	<0.60	<0.60			
Hydroxide (OH)	mg/L			-	-	-	-	-	<0.40	<0.40			
Calcium (Ca)-Dissolved	mg/L			-	-	-	-	-	7.01	7.9			
Magnesium (Mg)-Dissolved	mg/L			-	-	-	-	-	1.12	1.15			
Potassium (K)-Dissolved	mg/L			-	-	-	-	-	0.82	1			
Sodium (Na)-Dissolved	mg/L			-	-	-	-	-	4.35	4.94			
Chloride	mg/L			-	-	-	-	-	9.42	8.8			
Conductivity	umhos/cm			-	-	-	-	-	74.5	77			
Fluoride	mg/L	0.12		-	-	-	-	-	<0.10	<0.10			
Hardness (as CaCO3)	mg/L			-	-	-	-	-	24.4	23.9			
Nitrate-N	mg/L	13		-	-	-	-	-	<0.050	<0.050			
Nitrate and Nitrite as N	mg/L			-	-	-	-	-	<0.071	<0.071			
Nitrite-N	mg/L	0.197		-	-	-	-	-	<0.050	<0.050			
Sulfate	mg/L			-	-	-	-	-	4.68	3.86			
TDS (Calculated)	mg/L			-	-	-	-	-	40.4	38.7			
Aluminum (Al)-Total	mg/L	0.1		-	-	-	-	-	<0.020	0.134			
Antimony (Sb)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010			
Arsenic (As)-Total	mg/L	0.005		-	-	-	-	-	<0.0010	<0.0010			
Barium (Ba)-Total	mg/L			-	-	-	-	-	0.00814	0.00873			
Beryllium (Be)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010			
Bismuth (Bi)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050			
Boron (B)-Total	mg/L	1.5		-	-	-	-	-	<0.030	<0.030			
Cadmium (Cd)-Total	mg/L	Equation		-	-	-	-	-	<0.00020	<0.00020			
Calcium (Ca)-Total	mg/L			-	-	-	-	-	7.76	7.53			
Cesium (Cs)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050			
Chromium (Cr)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020			
Cobalt (Co)-Total	mg/L			-	-	-	-	-	<0.00050	<0.00050			
Copper (Cu)-Total	mg/L	Equation		-	-	-	-	-	<0.0020	<0.0020			
Iron (Fe)-Total	mg/L	0.3		-	-	-	-	-	<0.10	0.28			
Lead (Pb)-Total	mg/L	Equation		-	-	-	-	-	<0.0010	<0.0010			
Lithium (Li)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020			
Magnesium (Mg)-Total	mg/L			-	-	-	-	-	1.23	1.24			
Manganese (Mn)-Total	mg/L			-	-	-	-	-	0.0039	0.021			
Molybdenum (Mo)-Total	mg/L	0.073		-	-	-	-	-	<0.00050	<0.00050			
Nickel (Ni)-Total	mg/L	Equation		-	-	-	-	-	<0.0020	<0.0020			
Phosphorus (P)-Total	mg/L			-	-	-	-	-	<0.50	<0.50			
Potassium (K)-Total	mg/L			-	-	-	-	-	0.92	0.88			
Rubidium (Rb)-Total	mg/L			-	-	-	-	-	0.00137	0.00136			
Selenium (Se)-Total	mg/L	0.001		-	-	-	-	-	<0.0050	<0.0050			
Silicon (Si)-Total	mg/L			-	-	-	-	-	<0.30	0.4			
Silver (Ag)-Total	mg/L	0.0001		-	-	-	-	-	<0.0010	<0.0010			
Sodium (Na)-Total	mg/L			-	-	-	-	-	4.96	4.56			
Strontium (Sr)-Total	mg/L			-	-	-	-	-	0.0379	0.0341			
Tellurium (Te)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010			
Thallium (Tl)-Total	mg/L	0.0008		-	-	-	-	-	<0.0050	<0.0050			
Thorium (Th)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010			
Tin (Sn)-Total	mg/L			-	-	-	-	-	<0.00060	<0.00060			
Titanium (Ti)-Total	mg/L			-	-	-	-	-	<0.0010	0.0074			
Tungsten (W)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020			
Uranium (U)-Total	mg/L	0.015		-	-	-	-	-	<0.00050	<0.00050			
Vanadium (V)-Total	mg/L			-	-	-	-	-	<0.0020	<0.0020			
Zinc (Zn)-Total	mg/L	0.03		-	-	-	-	-	<0.020	<0.020			
Zirconium (Zr)-Total	mg/L			-	-	-	-	-	<0.0010	<0.0010			
Oil & Grease	mg/L			-	-	-	-	-	-	-			
Turbidity	NTU			-	-	-	-	-	0.49	3.01			
pH	pH units	6.5-9.0		-	-	6.73	-	-	7.59	7.59	7.07	6.93	