



MELIADINE WEST GOLD PROJECT

WATER MANAGEMENT PLAN

COMAPLEX MINERALS CORP.
CALGARY, AB

June 2008

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Introduction

This Water Management Plan pertains to Nunavut Water Board License No. 2BB-MEL0709 issued to Comaplex Minerals Corp. for the Meliadine West Gold Project. The plan covers general exploration activities on the property including its ongoing surface diamond drilling and underground exploration/bulk sample program.

Plan Objectives

The objectives of this plan include the following:

- to monitor specified water quality parameters at the camp domestic water intake and grey water outlet;
- to document the drainage and runoff pattern in the area of the underground project and the rock storage pads and describe related water management strategies;
- to monitor the chemical attributes of runoff water from the surface works and rock pads at the underground exploration site to assess the risk of potential contamination to the downstream freshwater environment;
- if required, to contain runoff water from the ore and waste pads that may contain compounds of potential contamination to the downstream freshwater environment;
- to contain site runoff with as little terrain disturbance to the overall exploration site as possible (minimal footprint and impact logic);
- to document the long term storage and ore disposal of materials in response to their geochemical characteristics; in particular, their ARD properties (see also the Waste Rock and Ore Storage Management Plan).
- to document and monitor water use for routine exploration activities conducted outside the scope of the camp and underground exploration area such as the surface diamond drilling program.
- report results of water quality monitoring activities.

Project Overview

The exploration camp has been supporting exploration activities since 1997. It is currently being used to support the underground exploration program, located approximately 2 kilometers to the southwest of camp, and ongoing surface exploration activities as has been the case since 1997. Camp water is drawn from Meliadine Lake from a location that has not changed since 1997. Ablution products from camp toilets are incinerated on site. Grey water from the shower, laundry and kitchen is discharged to a sump which drains into Meliadine Lake through a wetland on the opposite side of the peninsula from the water intake (see Figure 1, 2).

Comaplex maintains the right to explore, including diamond drilling, on all of its existing leases, claims and NTI concessions through a series of land use permits and licenses (Table 1). Access to these land parcels is typically by helicopter in summer months, but also via overland routes that are licensed for winter access (Table 1). The scope of the project was changed in 2007 with the initiation of the underground exploration program which commenced in August of 2007. Water license 2BB-MEL0709 was granted in response to this change in scope. This **Water Management Plan** addresses water use for the entire project.

TABLE 1: PERMITTING – MAY 2008

Lic. Number	Explanation	Issued By	NIRB File	Expiry
KVL100B195	Meliadine Prospecting	KIA		Oct 31 2008
KVL302C268	NTI Parcel Drilling incl Tiriganiaq	KIA		July 1 2009
KVCL102J168	Commercial Lease	KIA	07EN44	June 30, 2011
KVRW98F149	Meliadine Lake Right of Way	KIA		April 30 2009
KVRW07F02	Overland Right of Way	KIA	07AN063	October 26 2009
KVCA07Q08	Mainland Esker Quarry Permit	KIA		Sept 15, 2010
N2007C0041	CWM Claims Drilling	INAC	05EN006	April 13 2010
N2006X0012	CWM Claims Winter Road	INAC	06RN050	June 27 2009
2008QP0038	QUARRYING MEL LAKE	INAC	08EN005	April 13 2009
N2007Q0040	Land Use Permit - Quarrying	INAC	05EN006	April 13 2009
	WCB Program Authorization	WCB		December 31 2008
	Hamlet Disposal Authorization	Hamlet		issued May 07
2BB-MEL0709	Water License	NWB		February 23 2009

The underground exploration project is designed to provide information that will help establish the feasibility of mine development at Meliadine Lake. The program will continue until at least the fall of 2008 and possibly into 2009. Overall, the underground exploration program will produce approximately 44,000 m³ of waste rock and 6500 m³ of 'ore' (all volumes expressed for broken rock on surface). A concurrent surface drilling program will be conducted during the spring, summer and fall of 2008.

The underground exploration site is described more specifically in the following companion documents;

1. the **Waste Rock and Ore Management Plan** (August 2007)
2. the **Fuel Management and Spill Contingency Plan** (October 2007)

Details of the restoration bond and planning for possible abandonment should the program results not justify an expansion to development are included in:

3. the **Abandonment and Restoration Plan** (April 2008)

These documents are on file with the Nunavut Water Board.

4. the **Site Liability Security Deposit Review** (September 2007).

General Water Management

General guidelines for exploration activities with respect to water management have been in place since before Comaplex Minerals Corp. took over management of the Meliadine West Gold Project. They are detailed in the annually updated **Environmental Management System** (EMS, August, 2007) that is on file with regulatory agencies. This document provides a general code of conduct that covers the range of exploration activities and focuses on diamond drilling. The main points emphasized by the EMS are:

- no diamond drilling within 30 m of a natural water body or water course
- no fuel storage or handling vessels within 30 m of a natural water body or water course
- fuel spill prevention and preparedness
- drill cutting control and containment
- drill-site rehabilitation

Control measures mandated by the EMS include the deployment, if required, of instalberms (water – filled berms) for drill cutting control. The EMS also calls for the collection of water samples in new areas of drilling and the collection of before and after water samples in situations where drilling through lake ice is contemplated.

The EMS provides a framework that emphasizes best practices advocated by the regulatory agencies. The document is comprehensive and provides for the protection of natural water sources in a general exploration framework. An updated EMS will be forwarded to the NWB in the future that will be edited to reduce the level of redundancy among the group of documents active for the Meliadine West Gold Project.

Water Consumption Records and Estimates

Comaplex keeps records of water consumption in the camp by recording each time the water tanks are filled. This is the water use for the camp. Water consumption figures for the drills are provided by Boart Longyear, who know how often the mud tanks are filled. Likewise, Redpath Mining knows from experience how often its recirculation system is re-filled. These are the numbers Comaplex provided to the NWB for its water license requirements. Updated numbers are presented below.

All of these systems work on a flow through system in order to keep the water lines from freezing. Flow through systems work on the principle that moving water will not freeze. Consequently, water is pumped on a continuous basis and diverted to the tanks for consumption as required. When not used, the water just passes out the other end of the pipe back to the same or nearest lake - it is not consumed. Installing water meters on the intakes of these systems will not record water consumption. Flow through systems are common for all exploration projects in the north.

A summary of actual and estimated water consumption from October 2007 through to the end of 2008 is given in Table 2 below:

TABLE 2: ACTUAL AND ESTIMATED WATER CONSUMPTION

		Water Use Totals (m3)				Notes
	Month	Camp	Portal	Drilling	Daily Avg	
ACTUAL	Oct-07	84	11		5.4	initiate bulk sample program (17 days)
	Nov-07	130	102		7.7	
	Dec-07	119	53		5.4	
	Jan-08	145	37		5.9	
	Feb-08	146	102		8.5	
	Mar-08	172	108		9.0	1 drill Apr 6-27, 2 drills thereafter
	Apr-08	191	149	700	34.7	
	May-08	201	157	1550	61.5	
ESTIMATE	Jun-08	200	160	2000	78.7	3 drills for 25 days
	Jul-08	200	160	2000	76.1	3 drills for 25 days
	Aug-08	200	160	2000	76.1	3 drills for 25 days
	Sep-08	200	160	2000	78.7	3 drills for 25 days
	Oct-08	200	100	1550	59.7	end surface drill program
	Nov-08	120	100		7.3	
	Dec-08	120			3.9	
		2428	1559	11800	m3	Totals
				15787	m3	Estimated Grand Total (Oct 2007 - Dec 2008)

Daily water consumption varies, but the average daily consumption will not exceed the permitted maximum 90 cubic meters per day.

Camp Water Management

The camp domestic water system has been in use since 1997. Water is drawn from the west side of the camp peninsula via a pumping station labeled MEL 1 on Figure 2. Four 220 gallon plastic tanks located within the dry/wash facility (Figure 2) are filled regularly. The water is used for kitchen cooking and cleaning, bathroom sinks and showers and laundry. Kitchen, shower and laundry effluent, and ablution products from the dry area are piped to a sump immediately east of the kitchen / dry facility and allowed to seep through a natural wetland environment (Figure 3, MEL 3) before draining into Meliadine Lake (Figure 2, MEL 4). There are no flush toilets at the site. Fresh water consumption records show that the camp is averaging about 6 cubic meters per day.

Comaplex recognizes that the grey water treatment system employed for the camp is approaching its natural capacity. We are evaluating the next generation of water treatment systems for use on the Meliadine West project. This will include a grey and blackwater facility designed to meet industry standard discharge limits and would probably be implemented with a complete facility reconstruction. This major commitment is contingent on the ongoing program.

Diamond Drilling Water Management

Comaplex will not drill within 30 meters of an open body of water. Comaplex restricts the flow of drill sludge (ground rock) into any body of water (Aquadams). Quite commonly, the process of drilling creates a depression around the borehole and the

sludge is concentrated in and adjacent to that depression. It is our experience that the drilling sludge, if kept to a thin layer around the hole, will re-vegetate completely within a couple of years, while the deposition of thick concentrations of drill sludge into depressions actually hinders re-vegetation in those areas. We have a library of drill hole photos on the property where this is evidenced. The existing process for drill site rehabilitation that we have had in place, with KIA approval, has worked very well for the last 15 years.

Comaplex attempts to pull all casing on all holes. Where this is not possible, the casing is cut off at, or below, surface. Capping of the holes is not required in permafrost due to the hole freezing solid within hours of the casing being pulled. Artesian flows are not possible.

We will do all reasonably possible to stabilize and re-contour the ground upon completion of work, but restoration of the drill holes and disturbed areas to natural conditions immediately upon completion of drilling is not practical nor possible. It is our experience that removal of sludge from the ground will cause more damage to the tundra than leaving it in the confined area after drilling. Restoration will occur slowly over time, with wet areas re-vegetating much more quickly than dry sites. Details regarding diamond drilling procedures are presented in the EMS already submitted with all of the regulatory agencies.

Underground Exploration Site Water Containment Plan

The underground exploration site configuration has been engineered such that all runoff from the workings, the waste rock pads, and ore piles on the waste rock pads (developed surfaces) will be initially contained in one of two primary containment areas. These are labeled the SUMP and PRIMARY on Figure 3. All developed surfaces at the underground exploration site have been graded to drain into the two primary containment areas. The north side of the road and the access trail to the services pad and the south side of the sump have been lined with a woven polypropylene / polyvinyl liner to completely contain site runoff (see Figure 3). Figure 4 shows installation details for the liner. A product information sheet is provided in Appendix C.

The capacity of the containment areas are:

SUMP – adjacent to services pad	2,500 m ³
PRIMARY – adjacent to rock storage pad	20,000 m ³

The preliminary water management plan, submitted in October 2007, introduced contingencies for secondary containment by constructing a berm around the south end of Peanut Lake (Figure 1). Comaplex submitted a letter in December of 2007 (Appendix B) introducing the results of detailed surface surveying that indicated the primary containment area was sufficient to contain anticipated spring runoff. The NWB letter

dated April 2, 2007, acknowledges this new site evaluation and concurs with the suggested approach that avoids berming Peanut Lake.

The data shows that water can be contained to the 67 meter elevation level in the Primary Containment Area without any additional infrastructure. This corresponds to a capacity of about 20,000 cubic meters of water (previously 13,000 cubic meters to 66.75 meter elevation). Experience to date (May 30, 2008) confirms these calculations.

Appended is Chapter 4 from the 2000 Water Balance Study completed for the project by AMEC Earth and Environmental Ltd (AMEC 2000, Appendix B). The chapter details the water balance for sub-basin A37 (Peanut Lake). Included in this study are comprehensive snowpack surveys (snow depth and density) and an assessment of the snowmelt runoff. The study indicates that snowpack (snow water equivalent) plus spring precipitation over the sub-basin yields 97 mm. Discharge to Pump Lake, if required, generally takes place in a narrow window in June and encompasses all of the snow melt plus spring precipitation. Discharge after this period is effectively nil. Additional snow transects near the portal were completed in May of 2008 by SRK Consulting personnel for Comaplex. When received, this will provide additional water balance information for the project.

Figure 1 indicates the sub-area of the Peanut Lake watershed that will contribute meltwater to the containment areas. This sub-area is 133,600 square meters. Rounding the expected 97 mm yield to 0.1 meters suggests a yield of 13,360 cubic meters of water in the spring. The existing pad and road configuration is capable of holding about 20,000 cubic meters of water to 67 m elevation. Consequently the Primary Containment Area is capable of containing the spring runoff from the sub-area of the Peanut Lake basin.

The road and edge of the waste pad have been lined with a geotextile (Figure 3, see geotextile specifications, Appendix C). The liner will limit the interaction of runoff waters with waste rock used for construction. Comaplex anticipates collecting water samples during the spring runoff. These samples will be analyzed for constituents as per correspondence with the NWB (see Appendix A, Constituents Table).

Comaplex has initiated a number of Adaptive Management Principles regarding containment of water in the Primary Containment Area on an ongoing and contingency basis. These include:

- 1) Comaplex does not plow snow into the Primary Containment or Sump basins during winter snow removal (it mostly goes into the Peanut Lake Basin to the south).
- 2) A culvert with a water control gate has been installed in the road that forms the southern barrier of the primary containment area (Figure 3, 4). If required, the culvert will be used to discharge waters contained within the primary containment area to Peanut Lake on receipt of water quality results that confirm parameters are in compliance with NWB requirements (MMER Discharge Limits – Table 3).

- 3) In the unlikely event that discharge from the Primary Containment is necessary, Comaplex can deploy Aqua-Dams at the south end of Peanut Lake. This would provide a very large area of extra containment.
- 4). If warranted, the secondary containment dike could be built on the south end of Peanut Lake to contain the waters.
- 5) Should the water contained in the Primary, be not suitable for release, Comaplex would undertake spray irrigation within the Primary Containment area (or whatever other process (e.g. flocculent addition) is required) until the waters were acceptable for release to the basins downstream.

Underground Water Management

The underground workings are in permafrost. No ice lenses have been observed in the rock. There is no natural ground or surface water inflow to the underground workings.

Some water is needed for dust suppression during drilling and mucking. Because of the permafrost environment, this is in the form of brine at a CaCl concentration varying between 15% to 30% by weight, dependent on air temperatures. The brine is mixed in 2000 liter batches. The mixing takes place in the contractor's shop area. Each batch is piped from the mixing plant to a sump underground.

From the underground sumps, brine is piped to the working face, where it is used for dust suppression. As brine gathers on the floor at the working face, it is pumped back to the underground sump.

A gradual loss of brine occurs in damp, broken rock removed to surface. The underground brine system is therefore recharged with fresh batches mixed on surface. The typical rate of supply of brine to the underground drills is approximately 4000 liters per day. The typical production of broken rock from underground is 200 loose cubic meters per day. The maximum amount of water contained in broken rock is therefore 20 liters per loose cubic meter, likely much less considering system loss underground. This water adheres to dust and the faces of rock fragments, the back, and the side walls underground, as well as the broken rock that comes to surface. An unknown amount of drilling water is also lost as it is converted to water vapor during drilling operations which is carried away in the mine air. Using the high figure of 20 liters per loose cubic meter brought to surface: total of 50,420 m³ of rock to surface at 20 liters per m³ at 0.001 m³ per liter is a maximum additional load of only 1000 m³ of water to the Primary Containment Area, which it can easily sustain. There is no drainage from rock piles on the surface during cold months.

In the early stages of the decline advance, a sump for surface water was constructed at the base of the portal. As the underground workings were extended, two new sumps were build deeper underground, one sump for each branch of the ramp. The original sump just inside the portal is used to intercept surface runoff so that it does not enter the

underground workings. The intercepted surface run-off water is pumped from the sump back to the surface sump adjacent to the portal ramp (Figure 3).

Site Water Quality Monitoring Results

Water quality sampling was initiated in 1996 by WMC International Ltd. Between 1997 and 2000, water sampling was conducted by RL & L under contract to WMC International Ltd. The KIA has collected water samples since 2004. Comaplex Minerals Corp. initiated its water sampling program in 2007. Figures 5 and 6 show water sampling locations. Sample numbers are shown on Map 1 (pocket) and on Figure 6. Appendix A summarizes all the collected data to date.

The original laboratory sheets for all but the 1996 data are on the CD included with the initial Water Management Plan (October 2007). Laboratory sheets for samples taken in 2007 are included in the **2007 Report to the Nunavut Water Board for the Meliadine West Gold Project (March 2008)**. A table of locations for sample sites currently being monitored is given in Appendix A, including the details of the monitoring stations (frequency of sampling, parameters sampled, etc.).

In Appendix A, the **Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for the protection of Aquatic Life (1999, updated December 2006)** are presented and are compared to the results received from the property to date. The historical data (WMC 1996, RL&L 1997-2000) show that analytical results exceeding CCME Protection of Aquatic Life criteria are common, but inconsistent, for turbidity, ammonia, arsenic, cadmium, chromium, copper, iron, lead, manganese, zinc and phenol. Results for individual lakes are also inconsistent.

Discharge criteria are established by the **"Metal Mining Effluent Regulations" SOR/202-222, June 6, 2002 (Amendment, Oct 18, 2006)**. A table of discharge criteria is presented below:

Table 3: MMER Discharge Criteria

Substance	Units	MAXIMUM VALUE		
		Mean	Composite	Grab
Arsenic (As)	mg/L	0.5	0.75	1
Copper (Cu)	mg/L	0.3	0.45	0.6
Cyanide (CN)	mg/L	1	1.5	2
Lead (Pb)	mg/L	0.2	0.3	0.4
Nickel (Ni)	mg/L	0.5	0.75	1
Zinc (Zn)	mg/L	0.5	0.75	1
Total suspended solids (TSS)	mg/L	15	22.5	30
pH range	6.0 - 9.5			

Analytical values exceeding discharge criteria are rare in the data presented in Appendix A. For samples collected during 2007, only suspended solids results (TSS in above table)

approach discharge limits in some cases. Two historical natural baseline TSS values exceeding discharge criteria are present in the accumulated data. Lake D1 (Map 1) recorded a TSS value of 139 in April of 1998. Lake D1 is well outside the development area. In the KIA dataset, the Camp – Raw (MEL1) site recorded a TSS value of 16 in 2004.

The KIA dataset records several occurrences of lead that exceed the discharge criteria. The high results are anomalous with respect to other sample results and all are from the July 2006 sample set. Some of the sample sites are more than 15 kilometers from the camp. The degree of error in the one element, in only one series of tests, over such a large area, is highly irregular and may indicate laboratory or sampling issues.

Based on sampling to date, it is very apparent that the background levels for arsenic, mercury, dissolved iron, and selenium are elevated to highly elevated in the area of the gold deposits on the Meliadine West property. It is also well known from water and soil geochemical samples that the sediments of the Sam Formation are regionally anomalous in elevated arsenic. (data collected during early exploration of Meliadine West). A direct correlation to the gold deposits and the down-ice dispersion (glacial) of material from the deposits is apparent, especially in the contoured till geochemistry (presented in Figure 4 in the October 2007 water plan).

A summary of CCME Protection of Aquatic Life exceedences in 2007 data is given in Appendix A (Summary of Historic Water Quality Data) with sample locations shown on Map 1. Previous baseline water samples taken as early as 1996 (Appendix A) clearly show the background levels in the area of the gold deposits exceeded CCME guidelines for aquatic life for some parameters prior to any significant exploration work. Comaplex is attempting to determine exactly what the natural background values are in the project area, but this is hampered somewhat by inconsistent sample values between lakes and between samples on the same lakes.

Discharge of spring runoff

Water samples will be collected from the containment areas during the accumulation of spring melt water. The results will be forwarded to the NWB as received.

Several mitigation measures are being considered in the event that one or more discharge criteria are exceeded. First, the water will be immediately resampled to confirm the result. Existing water quality data (Appendix A) suggest that the TSS value may approach the maximum value allowed for discharge. In the case of a TSS value that exceeds discharge criteria, our first response will be to increase residence time within the containment area and resample. Other measures such as the addition of flocculants will be considered if increased residence time fails to rectify the problem. Other contingency plans (Adaptive Management Principles) for containment of these waters are outlined in the Underground Site Water Containment Plan in this report.

Potential Risks, Related Mitigation Measures, and Monitoring

Human Health Risk

Notwithstanding the long standing use of the camp and operation of its domestic water systems, vigilance is required for ensuring clean water for domestic use.

Monitoring

- Ongoing water quality monitoring will include sample collection at the Mel 1 and Mel 2 locations. Grey water and related issues will be monitored with samples collected at the Mel 3 and Mel 4 sites. Parameters for which the samples will be tested include:

BOD

TSS

Oil and Grease

Fecal Coli form

pH

as required by Section J 1 in Nunavut Water Board License No. 2BB-MEL0709.

Ammonia Risk

Explosive residues (ammonium nitrate) could be present on broken rock brought to surface and laid down in pads (waste rock) and in ore piles (surface storage). Natural precipitation may dissolve and mobilize these residues and carry them into the downstream environment. Ammonium nitrate will normally behave like a fertilizer in the natural environment, but at significantly elevated concentrations may be toxic to aquatic organisms.

Mitigation Measures

- Diligent use and storage of explosives underground to keep the amount of ammonium nitrate residue to a minimum.

Monitoring

- Water quality of the contained runoff will be monitored with samples collected as set out in this document, including collection at the toe of the waste rock and ore storage pads. Samples will be collected before pad construction begins (July 2007), before freeze-up in 2007, and in June 2008 during the spring melt (after project completion). Samples will be analyzed for ammonia and components as prescribed by License No. 2BB-MEL0709, clause J3.
- Water quality will be reported as prescribed by License No. 2BB-MEL0709, clause J16.

Waste and Ore Storage Risk

The waste rock storage pad has been constructed of rock that has a strong neutralizing potential. The buffering capacity of the waste rock is available to any runoff that will originate with the 'ore' sitting on the waste pads. The pads will be configured and constructed as shown in Figure 3 attached.

Mitigation Measures

- Placement of the stored 'ore' on the waste rock storage pad will allow ample exposure of all runoff to the buffering capacity of the waste rock pad as shown in Figure 3. A minimum border of 5 meters will be maintained all around the stored 'ore' piles to ensure no runoff occurs from the ore piles directly to the toe of the pad. This border will also allow ample space for equipment to work on the waste pads around the edges of the ore piles, if required.

Monitoring

- Water quality in the area of the waste rock and ore storage pads will be monitored with samples collected at locations shown on Figure 1 before pad construction began (July 2007), before freeze-up in 2007, and in June 2008 during the spring melt (after project completion). Samples will be analyzed for ammonia and components as prescribed by License No. 2BB-MEL0709.

Till Storage Risk

There are two areas where the till is stored adjacent to the portal (one to the east and one to the west). See Figure 3. The risk of metal and acid contamination from the till is considered to be negligible, due to the fact that the till has been present at surface for at least 8000 years or so. The risk is more likely in the possible movement of fines from the till into the waters downstream.

Mitigation Measures

- The east till storage area has had a waste rock berm placed around its base to prevent any creep of the till or of fines in the till, past the present confines shown in Figure 3. At present, no berm is present around the west till storage location as it has not shown indications of any movement of fines to date.

Monitoring

- Visual inspection of the two till piles will continue as the summer progresses. Experience has shown that the till piles achieve a natural equilibrium with time. Additional waste rock berms or Aquadams will be installed around the base of the piles, should they be needed. ARD samples could also be taken from each till piles.

Contaminated Water Risk

The risk of metal and acid contamination in runoff arises from natural precipitation dissolving and mobilizing compounds 'ore' as discussed in the Waste Rock Management Plan.

Mitigation measures

- Keep the potential runoff from the pads to a minimum by pushing as much accumulated snow from the pads as possible before spring snow melt.
- Keep water use for surface drilling and mining underground to a minimum (a re-circulation system will be used).

Monitoring

- Water quality in the area of the underground exploration site will continue to be monitored with samples collected at sites indicated on Figure 7. Water quality will be analyzed for compounds as prescribed by License No. 2BB-MEL0709 clause J3 including:

Field data:

Date Sampled; Time Sampled; Air Temp. °C; Constituent Water Temp. °C; Conductivity µS/cm; pH

Laboratory tests:

pH ; Conductivity µS/cm; Tot-Alkalinity mg/L; Carbonate (CO₃) mgCO₃/L; Calcium (Ca) mg/L; Bicarbonate (HCO₃) mgCO₃/L; Magnesium (Mg) mg/L; Potassium (K) mg/L; Sodium (Na) mg/L; Chloride (Cl) mg/L; Sulphate (SO₄) mg/L; Reac-Silica (as SiO₂) mg/L; Turbidity NTU; Tot-Susp-Solids mg/L; Tot-Diss-Solids mg/L; Tot-Hardness mg/L; Hydroxide mg/L; Tot-Kjeldahl-N mg/L; Nitrate+Nitrite-N mg/L; Nitrate-N mg/L; Ammonia-N mg/L; Tot-Phosphorus mg/L; Diss-Phosphorus mg/L; Orthophosphate (PO₄-P) mg/L; Tot-Carbon mg/L; Tot-Org-Carbon mg/L; Tot-Inorg-Carbon mg/L; Cat/Anion-Balance %; Aluminum (Al) µg/L; Antimony (Sb) µg/L; Arsenic (As) µg/L; Barium (Ba) µg/L; Beryllium (Be) µg/L; Boron (B) µg/L; Cadmium (Cd) µg/L; Chromium (Cr) µg/L; Cobalt (Co) µg/L; Copper (Cu) µg/L; Iron (Fe) µg/L; Lead (Pb) µg/L; Manganese (Mn) µg/L; Mercury (Hg) µg/L; Molybdenum (Mo) µg/L; Nickel (Ni) µg/L; Selenium (Se) µg/L; Silver (Ag) µg/L; Strontium (Sr) µg/L; Uranium (U) µg/L; Vanadium (V) µg/L; Zinc (Zn) µg/L; Cyanide µg/L; Phenols µg/L; Chlorophyll a mg/m³; Secchi Transparency m.

Plus: ICP Lithium, Tin (Sn), Tellurium (Tl), Titanium (Ti) in addition to above.

Appendix A: WATER QUALITY TABLES

QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES

Historic Water Quality Data and Control Lake

The overall historical water quality studies have identified and sampled a “control lake” that is outside the proposed development area (Figure 1). The analytical results of all water quality sample testing are reported and filed in yearly data reports. Water quality results were assessed against values published by Health Canada (1993) for drinking water, and the Canadian Council of Ministers for the Environment (CCME, 1999) for the protection of aquatic life. Values that did not meet the standard of the published guidelines are indicated in the data sets submitted by R.L. & L. in 1998, 1999, 2000 and 2001.

QA/QC Protocol

All sampling procedures, sample preservation and storage, and analyses shall be completed in accordance with procedures as prescribed in the July 1996 version of the Quality Assurance (QA) and Quality Control (QC) Guidelines for use by Class “B” Licensees in Collecting Representative Water Samples in the Field and for Submission of a QA/QC Plan.

The Site Water Management Plan water quality monitoring program will institute a QA/QC protocol that will include the following procedures:

1. Each field sampling campaign will henceforth include at least one “blind” field duplicate sample from the camp area and also from the exploration area collected by the person(s) taking the field samples.
2. The laboratory implements a comprehensive program of procedures based on the requirements of ISO/IEC 17025:2005, EPA FIFRA and OECD Good Laboratory Practices (GLPs). These protocols are further described in the following description provided by the laboratory

Appendix B:

AMEC 2000

Appendix C:

GEOTEXTILE LINER PRODUCT INFORMATION