



# **MELIADINE WEST GOLD PROJECT**

## **SITE WATER MANAGEMENT PLAN ADDENDUM**

- 1. AS BUILT TOPOGRAPHY**
- 2. PRIMARY CONTAINMENT LINER INSTALLATION**
- 3. REVISIONS TO SITE WATER MANAGEMENT PLAN – JUNE 2008**

COMAPLEX MINERALS CORP.  
CALGARY, AB

**September 2009**

## **Introduction**

The Site Water Management Plan for the Meliadine West Gold Project was submitted in September of 2007 and is on file with the Water Board. A major revision was submitted in June of 2008. As part of the terms and conditions of Water License 2BB-MEL0914 (succeeding Nunavut Water Board License No. 2BB-MEL0709), details pertaining to the installation of liners in the primary containment area of the underground development were requested. This addendum provides those details along with updated site plan details and updated detailed topographic information.

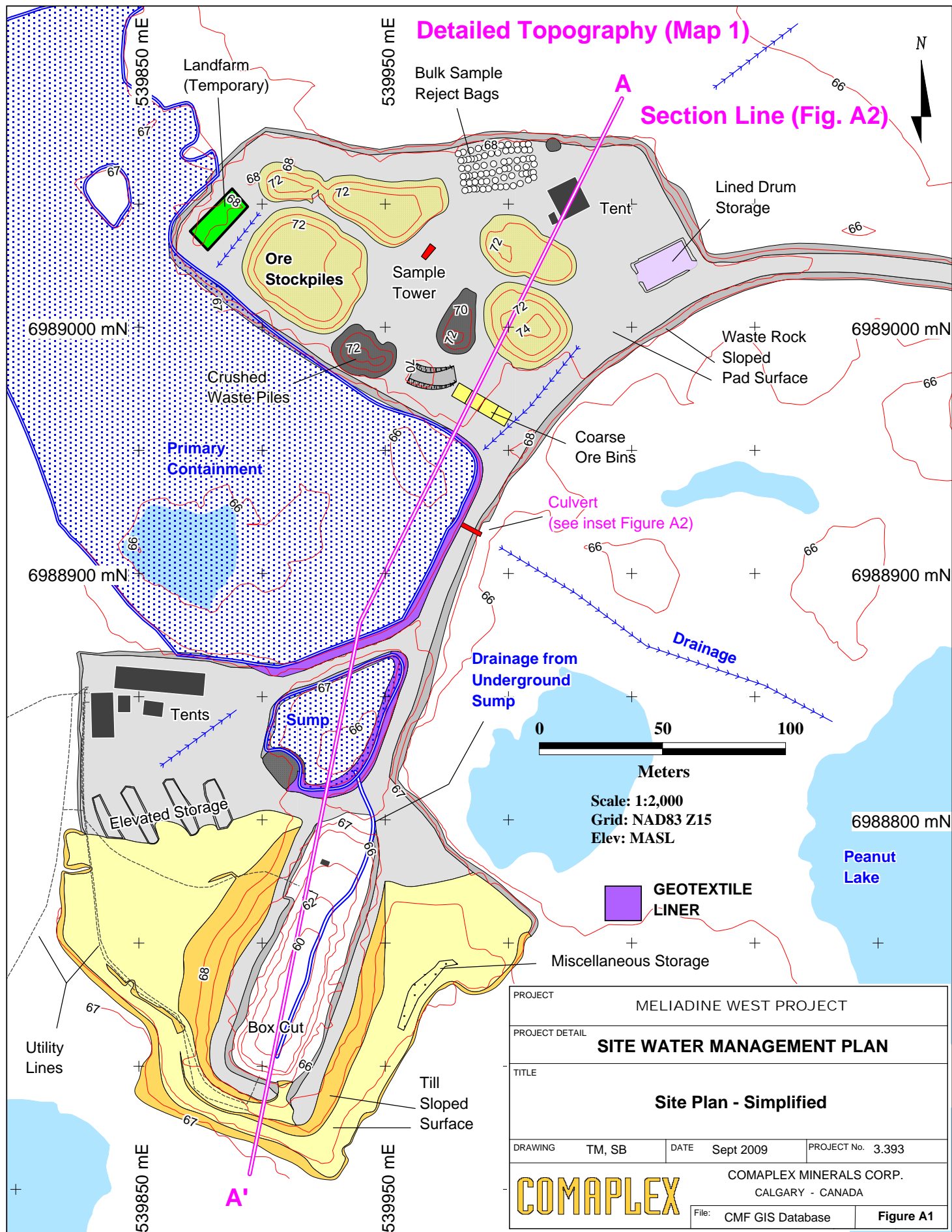
## **Updated Site Plans**

Figure A1 provides an updated simplified site plan for the underground development area at the Meliadine West Gold Project. Topographic contours shown on Figure A1 based on a site survey completed in September of 2009. Detailed topography with 10 cm contour intervals is given in attached Map A1. Figure A2 is a cross section of the underground development area giving further liner installation details. The line of the cross section is shown on Figure A1. The objectives of the plan including risks and mitigation options, and details of the properties of the installed liners are provided in the main body of the Site Water Management Plan (June 2008) and are not repeated here.

## **Liner Installation Details**

The geotextile liner installed along the southeast margins of the primary containment area and sump is shown on Figure A1 and Figure A2. Detailed installation plans are provided below:

- Personnel conversant in liner installation operated the equipment during the installation.
- The north facing slopes of the pad and roads were cut and sloped using the backhoe bucket in preparation for acceptance of the liner.
- The toe of the slope (tundra) was cleared of large rock.
- The top surface of the road and pad in this area was kept at 0.3m below grade prior to this period in anticipation of the liner installation.
- A backhoe smoothed and shaped the receiving slopes to ~ 45deg.
- A cut was made through the road and above the tundra at the position shown on the sketches to receive the culvert.
- A 3ft steel culvert was prepared with a 4" wide steel "I" beam frame welded onto the one end.
- The culvert and frame were lowered into position and <1" crushed rock was packed around the culvert to keep it in position.



PROJECT	MELIADINE WEST PROJECT		
PROJECT DETAIL	SITE WATER MANAGEMENT PLAN		
TITLE	Site Plan - Simplified		
DRAWING	TM, SB	DATE	Sept 2009
		PROJECT No.	3.393
COMAPLEX		COMAPLEX MINERALS CORP.	
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File:		CMF GIS Database	Figure A1

Section Legend

Liner

Primary Containment (P)

Sump (S)

Ore Pile

Stockpiled Till

Waste Rock Pads and Roads

In-Situ Frozen Till

Bedrock (Greywacke)

PROJECT

MELIADINE WEST PROJECT

PROJECT DETAIL

SITE WATER MANAGEMENT PLAN

TITLE

CROSS SECTION A - A'  
STOCKPILE AND PORTAL AREA

DRAWING

TM, SB

DATE

Sept 2009

PROJECT No.

3.393

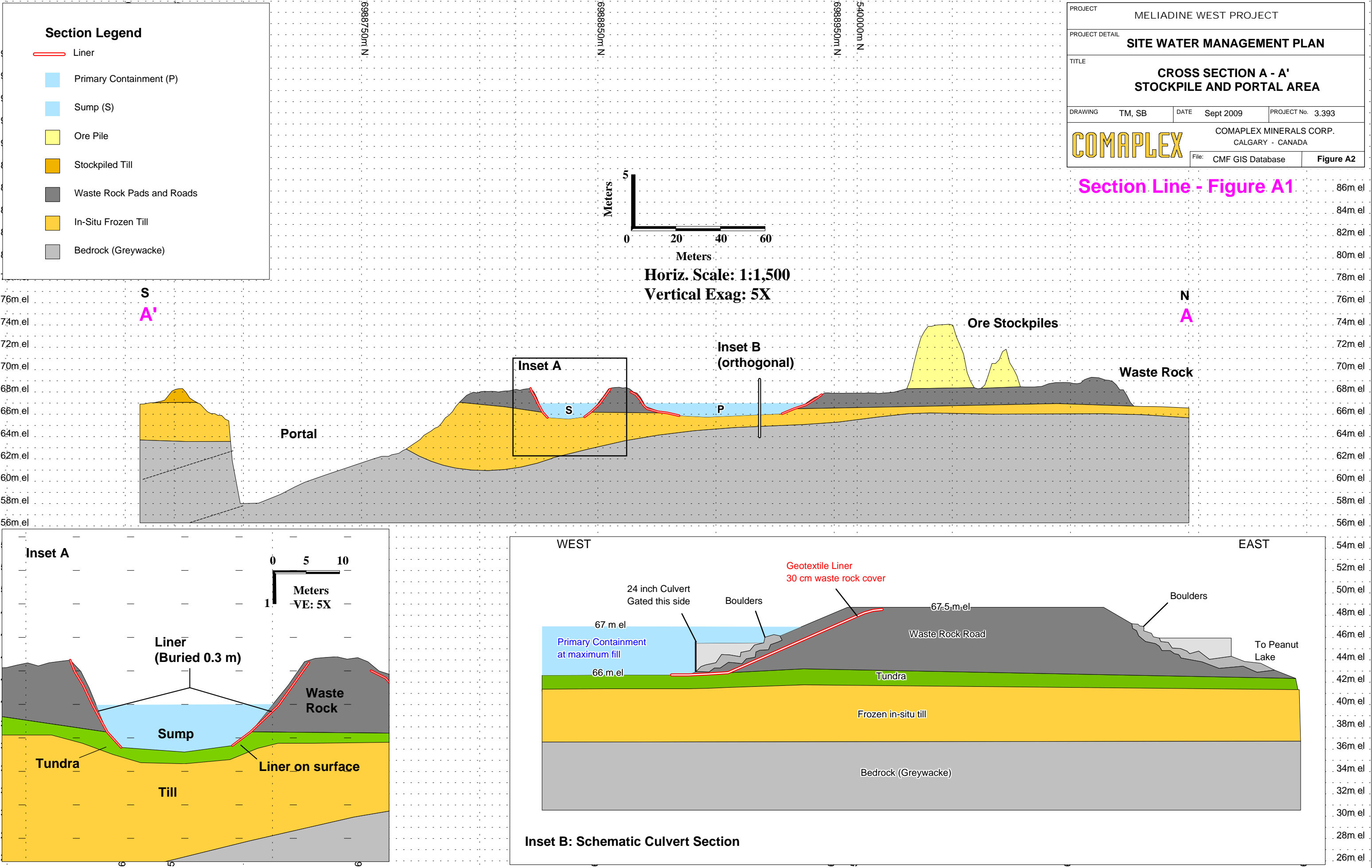
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File:

CMF GIS Database

Figure A2



- The tundra and road remained frozen at the time of installation (early spring 2008).
- A single length of geotextile filter material was run out in each respective area, between the positions shown on the sketches.
- The geotextile material was run out ~1m from the toe and from the crest.
- A break in the geotextile was made to allow the culvert to extend through the geotextile surface.
- Extra geotextile material was allowed in the vicinity of the culvert to allow lapping of the material into the perimeter of the culvert.
- An extra layer of geotextile was laid on top of the first layer, at, and ~4m in either direction from the culvert, to cater for any breaks in the initial layer.
- The geotextiles were intermittently anchored in position at the toe and crest of the slope with rock debris, during installation.
- Rip rap of approximately 0.3m was placed on the toe, sloped surface and crest to cover and trap the material.
- Great care was taken not to puncture the material during this process.
- <1" crushed rock was then placed, filling voids and building up a smooth surface.
- The road surface was then covered with <0.3m rock and a final layer of <1" rock to the current elevation.
- The culvert was capped off with pre-cut 4" timbers inserted into the I beam frame.
- The culvert was then further capped using several layers of <1" crushed rock and geotextile which was again lapped out onto the sloped portion of the road.

## **Revisions to Site Water Management Plan**

The Site Water Management Plan is revised to accommodate the following terms and conditions of Water License 2BB-MEL0914.

1. Seven sites are to be regularly monitored:
  - **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 greywater sump prior to effluent entering wetland area, when flow is 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 camp water system and drilling practices have been modified such that it is possible to measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling, and other purposes from all sources. An amendment request based on the data collected from these monitoring devices is anticipated.

3. GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.

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

Biochemical Oxygen Demand – BOD<sub>5</sub>

Faecal Coliforms

Total Suspended Solids pH

Oil and Grease (and visual)

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.

6. The Licensee shall obtain representative samples of the water column below any ice where required under Part F, Item 7 (Drilling under lake ice). Monitoring shall include but not be 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.