

#### 4.4 MONITORING PROGRAMS

Environmental mitigation and monitoring will be employed to assure activities comply with environmental provisions included in permits, legislation, corporate policies and industry Best Management Practices. In addition to mitigating measures included within the mine design, a number of management, monitoring and protection plans have been developed to monitor potential effects to the receiving environment; site facilities; and mitigation success. These plans have been provided to YG Energy, Mines and Resources in conjunction with a *Construction Site Plan* which will be implemented to fulfill requirements under the Quartz Mining Licence. The *Construction Site Plan* and associated monitoring plans have been prepared in support of the phased Quartz Mining Licence, which will initially enable project construction.

The following list comprises plans or design reports that have been prepared and submitted to YG to date as part of the Construction Site Plan for the project. Please refer to the *Construction Site Plan* within Appendix N-2 for these documents.

1. Construction Surface Water Management Plan
2. Waste Management Plan
3. ARD Protocol for Evaluation of Construction Materials
4. Report on Preliminary Design Waste Rock Storage Area
5. Preliminary Detailed Closure and Reclamation Plan
6. Environmental Monitoring Program
7. Health and Safety & Emergency Response Guide
8. Heritage Resources Protection Plan
9. Wildlife Protection Plan

Additionally, a framework for an adaptive management plan has been developed and is included in Appendix V. As the project progresses, revisions will be made to the plans to address changing site conditions.

The detailed design report for the Heap Leach Facility will be provided to YG Energy, Mines and Resources in support of the Quartz Mining Licence as it becomes available. Prior to operations a Heap Leach Facility Operating Plan will also be developed to establish procedures designed to ensure that all liquids are accounted for in the operation of the mine.

Monitoring programs for an established environmental surveillance network at the site are ongoing. The overall *Environmental Monitoring Program* for the site will continue and be expanded upon. This overall *Environmental Monitoring Program* encompasses monitoring plans for water resources, aquatic resources, terrestrial resources, meteorology, and geotechnical aspects. Proposed monitoring of surface waters, effluent discharges, mine water and groundwater is also discussed within this program, as well as in Section 5.0, Licence Specifications below.

The Quartz Mining License also requires an annual inspection of all structures on the site. The first of these was conducted in August 2009 and the associated reports are included in Appendix N-5 and N-6.

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