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Your file - Votre référence
NWB1NAN0208
Our file - Notre référence
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May 16, 2005

Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0E 1J0

Via electronic mail to:
licensing@nwb.nunavut.ca

Re: Reclamation of K-Baseline area

On behalf of Indian and Northern Affairs Canada, Water Resources Division (INAC-WRD), I would like to thank the Nunavut Water Board (NWB) for the opportunity to provide comment on the March 24, 2005 letter of Gartner Lee Limited (the GLL Letter) with respect to the Reclamation of the Nanisivik Mine K-Baseline area. INAC-WRD's review of this letter was undertaken in consultation with EBA Engineering Consultants Limited.

The GLL Letter proposes a modification to the abandonment and reclamation activities as are currently approved under Part G of Water Licence NWB1NAN0208 (the Current Licence), specifically with respect to the disposal of hydrocarbon contaminated soil from the K-Baseline area. The currently approved plan for the disposal of this ~7,400 m^3 of hydrocarbon contaminated K-Baseline soil provides for its disposal in the underground mine. Access to the underground disposal area was to be obtained via the East Adit (88 Portal).

The East Adit entrance is now reported to have incurred the formation of an extensive ice plug. The development of an ice plug has rendered the underground mine inaccessible via this route, and as a result the GLL letter proposes two alternatives for the disposal of the K-Baseline hydrocarbon contaminated soil. These include:

- Disposal in the underground mine via the West Adit (01 Portal) using a modified disposal location already targeted for hydrocarbon contaminated soils (Alternative 1); or
- Disposal in the East Open Pit under the approved thermal barrier cover system (Alternative 2).

INAC-WRD appreciates that, should the first alternative be selected for implementation, complications may be incurred with respect to increased haulage requirements and associated delays in subsequent reclamation activities. INAC-WRD is

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of the opinion, however, that Alternative 1 is the preferred reclamation alternative with respect to the protection of freshwater and permafrost quality.

Should, however, the NWB choose to approve the implementation of Alternative 2, the following recommendations are provided:

1. Approval is required from INAC- Land Administration, who administers the Land Lease for disposing of the hydrocarbon contaminated soil in the East Open Pit.

2. Excavation, haulage and placement of the hydrocarbon contaminated soils in the East Open Pit should take place under frozen conditions.

3. The hydrocarbon contaminated soil should be covered with a layer of waste rock and then the approved thermal cover consisting of 1.95 m of shale and 0.25 m of Twin Lake sand and gravel. It is of particular importance that the hydrocarbon contaminated soils be covered with at least a single layer of waste rock AND then the 2.2 m thick thermal cover.

4. The East Open Pit be completely filled and recontoured to eliminate water ponding on the thermal cover.

5. The formation of permafrost, surface stability of the pit, and water quality must be monitored as per the Closure and Reclamation Monitoring Plan.

6. All materials must be placed in the pit in the manner noted in the BGC Engineering Inc. (BGC) Quality Assurance/Quality Control Plan for Surface Reclamation and Cover Construction report, dated November 18, 2004. This report suggests that waste rock be placed in lifts not greater than 1.0 m thick, that construction debris be placed and compacted in lifts no greater than 1.0 m, and that voids are filled with fine-grained material. These measures will lessen the potential for settlement on the thermal cap surface, potential water ponding and subsequent infiltration.

Please do not hesitate to contact the undersigned if there are any questions or concerns with respect to this submission.

Best regards,
Original signed by:

Stephanie Hawkins
Qikiqtani Regional Coordinator