

March 24, 2005

Mr. Robert Carreau Breakwater Resources Ltd. 95 Wellington Street, Suite 2000 Toronto, ON M5J 2N7

Dear Mr. Carreau:

Re: Nanisivik Mine – Reclamation of K-Baseline Area

The reclamation plan for the Nanisivik mine was approved by the Nunavut Water Board (NWB) in a letter dated July 6, 2004. The approval was based on the report, *Nanisivik Mine 2004 Reclamation and Closure Plan, March 2004* (the "Reclamation Plan") as well as other supplemental documents required under Part G of the Water Licence (#NWB1NAN0208) plus evidence presented through the public review process.

The letter of approval provides a number of Terms and Conditions. One of these conditions (No. 16) requires that notification of proposed modifications to the Reclamation Plan be provided to the NWB, for approval, at least 60-days prior to the proposed date of implementation.

This letter will document our thoughts and recommendations regarding a possible modification to the reclamation activities at the K-Baseline Area. Please feel free to circulate this letter directly to the NWB and others if you wish.

The approved reclamation activities for the K-Baseline Area are described in Section 7.3.5 of the Reclamation Plan. Additional relevant details are also described in Supporting Documents G.8 (Rock Piles and Open Pits Closure Plan) and G.16 (Underground Mine Waste Disposal Plan). The specific topic of this letter is the disposal of an estimate 7,400 m³ of hydrocarbon-contaminated soil.



In short, hydrocarbon-contaminated soil was proposed to be disposed of in the underground mine via the East Adit ("88 Portal") entry point. The locations of the K-Baseline Area and the East Adit entry point to the underground mine are identified on the attached figure, which is Figure 19 of the Reclamation Plan. The soil under consideration is described in Report G.13, Environmental Site Assessment. The hydrocarbon is not in a "free-phase" but is affixed to the soil particles within a discreet and fully delineated area removed from Chris Creek and its tributaries. There has been no appreciable movement of the hydrocarbons from the source area even in light of its location in the top of the active layer, which thaws seasonally.

We now understand that an extensive ice plug has formed just inside the East Adit entry point that prevents access into the underground mine through this route. We view the ice plug as a generally positive development regarding the rapid formation of permafrost in the underground mine. However, it's presence requires a modification to the plan for disposal of hydrocarbon-contaminated soils from the K-Baseline area.

We have identified two feasible alternatives:

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

Note that disposal in the underground mine via the 39N Portal entry point in the East Adit area (see attached figure) is not feasible because this portal is blocked by backfill rock used to fill the East Open Pit as approved in the Reclamation Plan.

Alternative No. 1 is feasible and most closely follows the Reclamation Plan by providing for disposal in the underground mine. However, the extra haulage distance is substantial and could affect on the overall soil reclamation program for 2005. The increase in the surface haulage distance is an estimated 3.4 km (1.5 km to 4.9 km). In addition, the underground haulage distance to the specific disposal location for this material would be increased by an estimated additional 1.8 km unless the specific disposal location is relocated to areas NZ7 and NZ9 (Figure 6 of Report G.16, Underground Mine Waste Disposal Plan). Since the number of trucks on the site is already established with no feasible means of increasing the haulage capacity, the only way of accommodating the extra time required for the longer haul distance would be to delay other activities. The estimated delay would be in the order of 9 days (considering the increased surface haulage only). This length of delay could affect the ability to complete all of the required soil reclamation work in 2005, which would need to be assessed.



Alternative No. 2 is feasible and provides for the same level of environmental protection by freezing the contaminated soil into permafrost. The approved 2.2 m thick thermal barrier cover for the East Open Pit has been demonstrated (and approved) as adequate to provide long term protection for mine metal-contaminated soil, waste rock, solid waste in the landfill facility and demolition debris. The East Open Pit is already planned to be used for disposal of metal-contaminated soil and waste rock, including soils and rock hauled from the K-Baseline area, so that the introduction of the hydrocarbon-contaminated soil would not create a "new" reclamation area. The inclusion of the hydrocarbon-contaminated soil into the East Open Pit would not compromise the approved reclamation cover contours provided that field-control on fill placement was provided by the site manager. The approved post-reclamation monitoring program already includes provisions for monitoring and reacting to permafrost formation, surface stability and water quality at the reclaimed East Open Pit (Section 9 of the Reclamation Plan and Report G.9, Closure and Reclamation Monitoring Plan). These measures would be adequate, in our view, to also monitor disposal of the HC-contaminated soil.

Our recommendation is as follows:

- 1. Provide notification to the NWB of the proposed modification to the Reclamation Plan highlighting alternative No. 2 (above) as the preferred approach;
- 2. Blast the hydrocarbon-contaminated soil at K-Baseline from the ground in April to take advantage of frozen condition as a preventative measure for possible release of hydrocarbons. Stockpile the material at the K-Baseline site pending approval of the proposed modification by the NWB;
- 3. If the NWB approves the proposed modification to alternative No. 2 (above), then relocate the soil into the East Open Pit. This should be undertaken as soon as possible following approval (possibly late May) to take advantage of frozen conditions for haulage and placement and to avoid delays to the scheduled covering of the East Open Pit;
- 4. If the NWB approves a modification to alternative No. 1 (above), then relocate the soil into the underground mine via the West Adit entry point to the modified disposal areas. This should be undertaken as soon as possible following approval (possibly late May) to take advantage of frozen conditions for haulage and placement and to avoid delays to closure of the West Open Pit area and the underground mine; and
- 5. If working under alternative No. 1 (above), then re-assess the 2005 reclamation schedule and provide immediate notification to the NWB of any changes or delays introduced by the modification.

We recommend that excavation and haulage of the soil take place under frozen conditions. This is based on our recent experience with soil reclamation at the Polaris Mine where this was demonstrated to be an effective and preferred approach in similar circumstances.



We trust that this information is of benefit to the project. Please let us know if we can be of further assistance.

Yours very truly, GARTNER LEE LIMITED

Eric Denholm, P.Eng.

Senior Mining Consultant