



Environment Environnement
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Our File 4703 001

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Via Email : licensingadmin@nunavutwaterboard.

Re: 2BB-MRY0710 D19 Bulk Sampling Program Landfill Site Design Report

Environment Canada comments and recommendations on the above noted document:

- 1) The Proponent notes that a permanent land fill site is required but then proposes to build a temporary facility. Environment Canada recommends that any facility constructed for the bulk sampling program be sited and constructed with sufficient capacity to be used for the longer term Mary River mine should it ever be built.
- 2) The Proponent discusses monitoring at various points during the Report but there is no discussion of how the monitoring data would be used to manage the land fill. Environment Canada recommends that the Proponent provide information on how the monitoring data will be used to inform site management decisions.
- 3) In section 2.7 the Proponent states that *"In coarser overburden with limited organic cover, the thickness of the active layer is anticipated to vary between 1.5 and 2.5 m based on a review of preliminary thermistor data collected in 2007."* The Proponent then goes on to state in section 3.3 that *"In order to achieve permafrost encapsulation in the landfill site, the final cover will be thicker than the active layer. Based on an active layer approximately 1 m thick, the final cover will be 1.5 m thick."* Given that the aim is for permafrost to encapsulate the material and that the active layer is potentially 2.5 meters deep it is unclear why then the final cover on closure would be limited to 1.5 meters. Environment Canada requests clarification of this apparent contradiction.
- 4) In Section 3.5 the Proponent states that *"If it is determined that fencing is required, a temporary snow fence will be installed for operations."* It is unclear what criteria will be used to determine if fencing is required. Snow fence is designed to generate snow drifts, in the arctic changes to the snow pack can result in impacts on the underlying permafrost. Environment Canada requests that the proponent describe what criteria will be used to determine if fencing is required and recommends that, should fencing be necessary, the appropriate type be utilized.
- 5) In Section 5.1 the Proponent indicates that an operations and Maintenance Manual will be completed. Environment Canada requests the opportunity to review/comment on the document prior to site operations.
- 6) In Section 5.3.5 the Proponent states that *"It is expected that the active layer will progress into the landfill waste and cover material"* however the proponent only plans to monitor ground warming by observing visual cues such as soil creep. Environment Canada suggests that the proponent utilize a more sensitive method of assessing soil temperature such as thermistors so that any problems can be detected early and remedial action taken.
- 7) The Proponent states that the waste will be inert and thus not be an attractant for wildlife. All project personnel should receive training on proper waste management to ensure that no food wastes and other wildlife attractants inadvertently end up in the landfill.

- 8) The Proponent does not view prevention of windblown debris as an issue because waste will either be too heavy to blow away (i.e. scrap steel) or will consist of ashes that will be placed into containers prior to being brought to the landfill site. However, the Proponent should be careful to not underestimate the strength of the wind in the Arctic. It is not unusual to have winds in the Arctic that exceed 50 km/hr and severe wind-storms with even greater wind speeds. Wind gusts can exceed 100km/hr. The Proponent should ensure that waste is either heavy enough or secure enough to withstand any extreme wind storms than might occur in the area. For example, containers with ash should be a minimum size and filled to a minimum level to ensure they do not blow away in a wind storm.

Thank you for the opportunity to comment, please contact me if you have any questions or comments with regard in the foregoing (204) 983-4815 or by email at mark.dahl@ec.gc.ca.

Sincerely,

Mark Dahl
Contaminants Biologist

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