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Our file: 4704 004 021  
NWB file: 2BE-HAK0915

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Via email at: [iporter@nunavutwaterboard.org](mailto:iporter@nunavutwaterboard.org)

**RE: 2BE-HAK0915 – Sabina Gold & Silver Corp. Hackett River Camp Waste Management Plan**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Sabina Gold & Silver Corp. has submitted a Waste Management Plan (Plan) for their Hackett River Camp. This exploration camp is located in the West Kitikmeot Region, approximately 104 km south of Bathurst Inlet, at 65°55'00"N 108°22'00"W. The camp can support up to seventy-five people to directly support exploration activities. This plan is a requirement of the revised Water License 2BE-HAK0915.

Upon review of the Plan, EC provides the following comments and recommendations for the Nunavut Water Board's consideration:

- Environment Canada recommends that all potential products that are attractants to wildlife be made inaccessible to wildlife at all times. Camp waste can attract predators of migratory birds (e.g., foxes and ravens) to an area if not disposed of or stored properly.
- The Plan states that hazardous and non-hazardous wastes are to be shipped to Yellowknife for disposal. Environment Canada suggests that confirmation and authorization from the Yellowknife landfill that they can accept these items be obtained prior to shipment. If this is not possible, does the proponent have other options for waste disposal?
- All sumps, spill basins, and greywater disposal basins should be located in such a manner as to ensure that their contents do not enter any water body, and are to be backfilled and recontoured to match the surrounding landscape when they are no longer required.
- The Plan states that garbage will be incinerated. Please note that EC has developed a Technical Document for Batch Waste Incineration, and is attached and also available at the following web link:

<http://www.ec.gc.ca/drgd-wrmd/default.asp?lang=En&n=82401EC7-1>

The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting. It also suggests that operational data, such as quantities and types of waste, chamber temperatures and burn cycle duration should be recorded and stored for each burn cycle. EC suggests that an annual summary of incineration activities should be reported to the Nunavut Water Board.

- The Plan states that the EcoWaste CA 50 incinerator has been selected. The waste capacity of the incinerator is 200 lbs. per burn cycle. Using a rough waste estimate provided by Chandler (2007) of 30 kg/person/week the amount of waste produced at the Hackett River camp could range from 470 lbs to 700 lbs. per day depending on camp size. EC suggests that the actual amount of waste produced and the daily capacity of the incinerator (number of burn cycles per day) be monitored and reported to ensure incinerator capacity is sufficient for this camp.
- The Plan also states that sewage will be incinerated. Sewage should not be burned in batch incinerators that are typically used in the north. Sewage sludge has high moisture content and low heat content that will increase operating costs dramatically and lead to poor incinerator performance. It is unlikely that the sewage will be completely combusted and could lead to the release of pathogens into the environment. The high moisture materials can leak from the incinerator hearth and lead to equipment damage and present health hazards to workers. Sewage sludge should only be burned in incineration equipment designed for this type of waste. EC recommends that all human waste be packed out in barrels or other sealed containers. If Sabina Gold & Silver Corporation decides to pursue sewage sludge incineration, it should provide the Board with the design specifications of the incinerator and a letter from the manufacturer stating that this equipment is suitable for burning this type of waste.
- The Plan states that hazardous waste will be transported from the Hackett River camp, Nunavut to Yellowknife, Northwest Territories for disposal. Under the *Canadian Environmental Protection Act* (CEPA 1999) and the Interprovincial Movement of Hazardous Wastes Regulations, the transportation of hazardous waste between territories requires that the proponent completes movement documents. The Government of Nunavut only regulates waste in Nunavut and has no authority in the Northwest Territories. An approved movement document should be completed, and it may be of use to clarify the document in the Plan. A copy of the relevant movement document is attached.

Environment Canada commends Sabina for providing a thorough, well-written Plan that incorporates recycling efforts. If there are any changes to the proposed plan, EC should be notified, as further review may be necessary. Previous comments and recommendations submitted by EC staff relating to the Hackett River camp will still apply. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at paula.c.smith@ec.gc.ca

Yours truly,

***Original signed by***

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Craig Broome (Operations Manager, Environmental Enforcement Directorate, Yellowknife, NT)

## References

Chandler, A.J., 2007. Review of Dioxins and Furans from Incineration In Support of a Canada-wide Standard Review A Report Prepared for The Dioxins and Furans Incineration Review Group through a contract associated with CCME Project #390-2007. Available at: [http://www.ccme.ca/assets/pdf/1395\\_d\\_f\\_review\\_chandler\\_e.pdf](http://www.ccme.ca/assets/pdf/1395_d_f_review_chandler_e.pdf)