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KAVAMATKOT APIKHOIYIT
DEPARTMENT OF JUSTICE
MINISTÈRE DE LA JUSTICE

September 27, 2019

Mr. Philippe Di Pizzo
Executive Director
P.O. Box 119
Gjoa Haven, NU
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BY FAX 1 867 360 6369

Dear Mr. Di Pizzo:

**Re: Licence NWB1NAN0208 – HHERA, Phase 2 ESA, and
Emergency Response Reports - GN Comments**

These comments are provided on behalf of the Government of Nunavut, with respect to the following reports submitted by Canzinc/ Breakwater Resources Ltd. as required by their License NWB1NAN0208.

In addition to this response, the GN has also requested by e-mail, April 24th, 2003 (attached) a second opportunity to submit comments and expert review regarding the HHERA and Phase 2 ESA reports.

1. HHERA and Phase 2 ESA - SQRO's and related concerns

The Government of Nunavut recommends that the NWB not accept the HHERA or Phase 2 ESA until further study can be carried out by qualified reviewers addressing the following points:

- **Whether assumptions included in these two reports are appropriate.** GN Regulators are concerned about a number of assumptions underlying these two studies, particularly (but not limited to) the use of 1985 soil geochemistry measures, to establish background or "naturally occurring" metal level estimates for the town site, dock, and general mine area. There are several reasons why a layperson would ask whether the background metal levels assumed in these reports are acceptable. For example, how can the use of 1985 data reflect naturally background levels of metal concentration, given that human activities such as exploring, developing, and mining had been in progress in this area for over a decade before these measures were taken? These concerns have potentially serious implications, and require expert review and commentary in order to be validated or satisfied. An inappropriately high background level could lead to SQRO's that allow inappropriate ongoing residual metal contamination near Nanisivik, even after remediation is complete. GN and DIAND jointly have engaged EBA Associates, to prepare a peer review addressing this issue.

- **Why are the recommendations for Nanisivik Mine, and the recommendations Polaris Mine different?** Polaris is more remote from human communities than Nanisivik, however, the Cantox reports prepared for Polaris recommends SQRO's which are significantly more restrictive than the reports presently under review. Our questions are: i) why the difference? and ii) does this reflect a problem with the assumptions used in either set of reports? GN and DIAND jointly have engaged EBA Associates, to prepare a peer review addressing this issue.

GN Regulators recommend that the HHERA and Phase 2 ESA should include sampling south of Twin Lake, both to increase slightly the geographic scope of the study, and more importantly to provide more appropriate data in support of the background metal levels ultimately adopted in the approved versions of these reports. The sampling area recommended by the GN would run from a point southeast of West Twin Lake, north-easterly to the north-west of Kuhulu Lake.

2. HHERA and Phase 2 ESA – Human Health and related concerns

- **Carcinogenic risk from lead exposure:** The EBA review report submitted in March 2003, documented a scientifically recognized¹ potential for cancer as the result of lead exposures. This should be incorporated in the HHERA.
- **Lead impacts on Pregnant Women and or Foetal health:** The Government of Nunavut recommends that the NWB not accept the HHERA or Phase 2 ESA until further study can be carried out by qualified reviewers addressing the impacts of lead exposure on reproductive health, including the health of Pregnant Women and foetal life. The American Conference of Governmental Industrial Hygienists, have classified inorganic lead as a reproductive hazard. The National Institute for Occupational Safety and Health, NIOSH, has determined that lead can damage a developing foetus and that lead stored in bone can be released to the blood system during pregnancy.
- **General risks from lead dust, and related assumptions:** GN Regulators are concerned by environmental findings from our recent Housing Study (Attachment #2), which appear to indicate a serious risk of unacceptable exposure, and resulting harm to human health, based on the levels of indoor contamination in residences. Given this contradictory result, GN Public Health Officials are especially concerned about potential omissions, or wrong assumptions in the HHERA and Phase 2 ESA regarding the pathways or likelihood of human exposure based on existing lead contamination levels generally, and at the town site in particular.

To resolve all of these concerns relating to human health, GN has engaged Dr. Tenenbein, M.D., FRCPC, FAAP, FAAC, FACMT, to provide an expert assessment of these two reports from a qualified human health perspective. Dr. Tenenbein is the only expert we could locate in Canada who has the full expertise required for this evaluation. His CV is the third attachment to these GN comments.

¹ International Agency for Research on Cancer; Canadian Environmental Protection Agency; B.C. Workers' Compensation Board; State of California.

3. Emergency Response Plan

GN Regulators were generally pleased with the Emergency Response Plan submitted by CanZinco Ltd, however it is important to emphasize the need for ongoing dialogue and cooperation in this area. In particular:

- As presently drafted the plan falls short of GN Regulatory requirements, and cannot be approved by GN Environmental Protection. By way of an overview, the GN Environmental Protection standards for Contingency Planning and Spill Reporting require that the spill response section of this Plan state the following information more clearly, even where this may involve a restatement or summary of existing information filed with NWB².
 - Name, Job Title and 24-hour contact information for the CanZinco Official in charge of Spill Response;
 - Confirmation of the name, title and contact information for the Company CEO generally responsible for activities Nanisivik;
 - The Plan must be revised to clearly address the following:
 - Location, size and capacity of the facility
 - Type and quantity of contaminants
 - Site map
 - Description of training for Spills, including the contents of the training, and an ongoing list of individuals on-site who are qualified to respond to spills
 - Inventory and location of spill response equipment.
- Emergency response equipment for fire or medical responses at the mine site should be inspected and recertified, particularly the fire truck and breathing apparatus. This will be incorporated in upcoming related inspections;
- Proposed airport emergency response should be reviewed and updated on an ongoing basis with Airport authorities, particularly in light of the variable numbers of qualified CanZinco and/or reclamation staff on site over the next 3-5 years;
- Proposed fire and medical emergency response should also be reviewed and updated on an ongoing basis with the relevant GN and municipal authorities. Once again, the variable numbers of qualified CanZinco and/or reclamation staff on site over the next 3-5 years is causing a concern for Regulators: if the Plan does not reflect actual on-site response capacity, then in event of an emergency the Plan could actually induce errors when GN and municipal authorities attempt to mount a complementary response;
- The plan should also take into consideration that fire-fighting equipment and personnel from Arctic Bay may not be available to respond to an emergency, due to weather or other obstacles. In this case, depending on the availability and the

² Additional information about GN Environmental Protection standards for Contingency Planning and Spill Reporting is available on request – GN Contact: Robert Eno

availability of persons on-site with appropriate emergency response training, the best response may be to cordon off the affected site and undertake reasonable action to prevent the spread of fire to neighboring structures.

Thank you for the opportunity to provide these comments. Should you have any questions about this GN submission or any wider issues relating to GN's role and concerns about the closure of Nanisivik, I can be reached by e-mail or c/o Crowne Plaza Hotel Phone (613) 237 3600, pending my return to Iqaluit May 2nd 2003.

Sincerely,

Susan Hardy,
Legal Counsel

Encl.