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**RE: NWB 2AM-DOH – Miramar Hope Bay Ltd. – Doris North Gold Project
Nunavut Water Board Guidelines for Applicant**

Thank-you for the opportunity to provide input into the Nunavut Water Board's (NWB) draft guidelines for the completion of the water license application for the Doris North Gold project. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

The following comments have been organized using the numbering system from the draft guidelines for ease of comparison:

- **Section 1.0**
 - The NWB should clarify what is included in the scope of the water license application for the Doris North project. The guidelines state that "MHL shall...consider that information must be presented where there is a potential impact through the deposition of waste." This statement could be interpreted quite broadly to include impacts to wildlife, human health, socio-economics, and other valued ecosystem components and valued socio-economic components. Environment Canada recommends that the NWB clearly identify the scope of the water licensing process to help minimize duplication with the Nunavut Impact Review Board (NIRB) process.
- **Section 2.0**
 - The note to intervening parties should be removed from the guidelines, as this document is intended for the proponent.
- **Section 3.0**
 - The introductory sentence to this section indicates that the list includes only standards and/or guidelines. However, the list also includes legislation and regulations. Environment Canada recommends that the NWB be consistent in the types of documents that they are referencing.
 - If the list is to include legislation/regulations, EC recommends that the following items also be included:
 - *Fisheries Act*
 - Metal Mining Effluent Regulations
 - *Canadian Environmental Protection Act*
 - Federal Registration of Storage Tank Systems for Petroleum Products and Allied petroleum Products on Federal Lands or Aboriginal Lands Regulation

- Sulphur in Diesel Regulation
 - Fuels Information Regulation No. 1
 - Sulphur in Gasoline Regulation
 - Benzene in Gasoline Regulation
 - Interprovincial Movement of Hazardous Waste Regulation
 - Federal Halocarbon Regulation
 - National Pollutant Release Inventory
 - Environmental Emergencies Regulation
 - The following guidelines should also be included in Section 3.0
 - Rather than referring solely to the CCME-Freshwater Aquatic Life Guidelines (FWAL), the NWB may want to reference the Canadian Environmental Quality Guidelines (CEQGs). The CEQGs are the overarching guidelines which integrate national environmental quality guidelines for all environmental media including water (including the FWAL guidelines), soil, sediment, tissue residue, and air.
 - CCME – Canada-wide Standards for Petroleum Hydrocarbons in Soil
 - The CCME guidance document “Environmental Code of Practice for Aboveground and Underground Storage Tank Systems...” should include the reference to the year that it was most recently updated (2003).
 - Depending on the scope of the water licensing process (see comment above), additional items may need to be added to the list to reflect a broader scope, such as guidelines, legislation and regulations regarding wildlife, air quality, etc...
- **Section 4.0**
- The NWB is directing the proponent to “develop design and water management beyond the conceptual and intermediate phases before the submittal of a water license application.” This concern is raised several other times during the guidelines. Given the importance of this issue to the NWB, EC recommends that the NWB be specific regarding what type of engineering drawings are required.
 - Item ix should be clarified, as the intent of this item is unclear. Perhaps the item could be reworded as follows “Details on chemicals or other hazardous or potentially hazardous materials that will be used and will be in contact with or may impact water either directly or indirectly”.
 - Item x should be reworded to read “Mitigation measures that will be implemented when working in water or in close proximity to water.”
 - While EC appreciates and is supportive of the intent of the second paragraph on page 6 regarding adaptive management techniques, EC supports the judicious and appropriate use of adaptive management. Given the inherent complexity and uncertainty of ecological systems, adaptive management recognizes that it is not possible, a priori, to identify the “best” management alternative. Therefore, an experimental approach may be warranted, whereby learning about the system becomes a deliberate goal. Modeling, experimental design, monitoring, and the identification of key decision points are integral parts of adaptive management. When used correctly, adaptive management can allow proponents to continually improve their processes and lessen environmental impacts by allowing for refinements to processes. Environment Canada recommends that the NWB also address the positive aspects of adaptive management in the guidelines, stressing the need for the identification of key decision points in the adaptive management framework.
- **Table of Contents**
- While EC appreciates the holistic approach to water licensing being proposed by the NWB, the NWB should clarify why the proponent is being directed to address noise monitoring, air quality monitoring, wildlife monitoring and issues surrounding the marine jetty in the water license application (see earlier comments regarding scope).
 - The table of contents makes reference to a number of terms and conditions from the NIRB project certificate. However, there are a number of other terms and conditions from the NIRB project certificate that relate to the water license that are not referenced in the

guidelines. Environment Canada recommends that the NWB clarify why certain terms and conditions were highlighted while others were not.

- Section 3.0 “Operations Phase” – it is unclear what these section is of the table of contents is referring to. Environment Canada recommends that the NWB clarify the purpose of Sections 3.1-3.5. Further, it is unclear why Section 6.0 “Residual Impacts” has been included in a separate section rather than as a subsection to 3.4.
 - Section 4.0 should also include an Aquatic Effects Management Plan or similar document.
 - Section 7.0 does not currently include water quality monitoring. Environment Canada recommends that water quality monitoring be explicitly stated in Section 7.0, as ‘aquatic effects’ could be interpreted as referring only to changes in aquatic community structure.
 - Section 8.0 should also address the reclamation of management structures what will be left in place upon closure of the mine.
- **General**
 - The current version of the guidelines is not marked as “draft”. The NWB should ensure that the final version that is circulated to Miramar Hope Bay Ltd. is clearly marked as “final” to minimize potential confusion.
 - Environment Canada recommends that the NWB indicate in the guidelines the method in which the proponent should circulate the completed water license application for review to interested parties. Environment Canada recommends that the proponent contact interested parties ahead of time to determine the number of copies required and the locations to which those copies should be sent. For instance, will the NWB require both hardcopy and electronic copies of the license application and supporting documents?

Environment Canada appreciates the opportunity to provide input into the finalization of the water license application guidelines for the Doris North Gold project, and EC looks forward to continuing to work with both the NWB and Miramar Hope Bay Ltd. during the water licensing process. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at colette.spagnuolo@ec.gc.ca.

Yours truly,

Original signed by

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cc: (Stephen Harbicht, Head, Assessment and Monitoring, Environment Canada, Yellowknife)