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Philippe di Pizzo
Nunavut Water Board
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NUNAVUT WATER BOARD

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PUBLIC REGISTRY

Dear Mr. Di Pizzo,

I have recently returned from a site visit to the Meadowbank Gold Project on August 10th, 1999, with Julie Dahl, a co-worker. During our discussions with Brian Alexander, the Project Manager, several questions were raised regarding conditions in their water licence. There was some confusion with the wording of conditions for the trenching program. These conditions are discussed below and it is recommended that clarification be provided to the proponent.

9. Conditions Applying to Trenching

- A) Condition number 7 refers to burlap screens placed around berms to prevent runoff water, caused by the trenching program, from entering any water bodies. It is recommended that this condition be reworded to state "The Permittee shall use berms (with geotextile screens if necessary) to prevent surface runoff of water from the trenching program from entering any water bodies." It is expected there will eventually be movement of accumulated water via groundwater to a water body. Therefore the distinction should be made to reflect surface runoff.

Brian was unsure of the purpose of the burlap screens around the berms. Our understanding of this condition was that the screens were to ensure there was no sediment from the trenching program entering the receiving water body.

Note: During the site tour it was noted that water is accumulating in the sumps constructed for the trenching program. In the application Cumberland Resources didn't expect to encounter ground water and assumed that water would exfiltrate from the sumps. It is in the best interest of Cumberland Resources to submit a

contingency plan for managing the wastewater including the possible need for adding flocculates, adjusting pH and actively discharging water from the sumps.

- B) Condition number 7 has no upper limits associated with the parameters being analyzed. Upper limits must not be exceeded when wastewater is discharged to the environment, to ensure that the proponent's activities are not in violation of other federal environmental protection legislation. Such legislation serves to protect the aquatic life in the receiving water bodies. The company has identified the potential for Acid Rock Drainage in the area of the trenching program, therefore a pH limit must be indicated. The company has also indicated that they will be trenching in sulfide-bearing rock, therefore it is recommended that sulfates also be added to the list of parameters being analyzed.

Brian has requested additional information on sampling techniques, appropriate sample containers (dependent on parameter being analyzed) and a recommended laboratory. Environment Canada may be able to provide advice with respect to the above.

Copies of amendments 1 and 2 of the water licence were provided to Julie and myself. We offer the following suggestions where the wording on several conditions were ambiguous.

These are listed below:

Amendment No. 2

1. **Under Conditions Applying to Trenching, number 2.** It states that "...any wastewater is disposed of in a *properly* constructed sump or an *appropriate* natural depression...". Words like *properly* and *appropriate* leave room for individual interpretation. One person's definition of *appropriate* may be quite different from another's. Therefore it is recommended these be removed, or clarified.
2. **Conditions for the use and storage of fuel, chemicals and additives**
Under this section number 8 instructs the permittee to construct a dyke around each stationary fuel container. An exception should be made for fuel containers that are self-bermed. This is the case at the Meadowbank gold project.

Number 11 states all combustible waste petroleum products are disposed by incineration and removal from the site. Does the removal from site refer to disposal of ash after incineration?

3. **Conditions for the use and protection of water**

Number 10 states "... erosion of the banks of any body of water on or adjacent to the land...". This would be more clearly stated as "The Permittee shall not do anything that will cause erosion of the banks adjacent to water and shall provide..."

Amendment No. 1

8. Conditions for Weir Construction, Operation and Removal:

1. IV refers to "**sites**" affected by the weir construction. It is recommended that the wording of this condition read "The site", as the weir should not affect more than one area. If it appears that more site may be affected the proponent will need to re-examine their construction methods.
2. V. states the "...channel is not *significantly* obstructed during the spring freshet." Again the term *significantly* leaves room for interpretation and should be clarified.

It is important that water licences issued by the board are clear, direct and unambiguous in order to provide guidance to the proponents and a mechanism for the permitting body to control and monitor activities. To facilitate the understanding of conditions within the licences, the wording should be carefully chosen and reviewed.

I hope this letter offers some useful suggestions. I would also like to request copies of all water licences issued by the Nunavut Water Board, for my files. These can be faxed to the Iqaluit DFO office at (867) 979-8039.

If you have any questions or concerns with regards to the above please do not hesitate to contact me at (867) 979-8007.

Regards,

Margaret Keast
Habitat Management Biologist
Nunavut Area

cc. Brian Alexander, Project Manager, Cumberland Resources Ltd.
dd. Julie Dahl, Habitat Coordinator, Fisheries & Oceans - Yellowknife