Environment Canada **Environnement Canada**

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Our file: 4703 001 004

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Re: NWB1ULU0008 – Wolfden Resources Ltd. – Ulu Gold Project – Water Licence Amendment Application

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 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*.

Wolfden Resources Ltd. (Wolfden) is proposing that the fecal coliform parameter be removed from the list of effluent quality requirements outlined in Part D, section 18 of its Ulu Gold Project water licence. The proponent is obliged to respect a number of sewage effluent quality standards which includes having fecal coliforms not surpass a maximum average concentration of 1,000 CFU/dl. To meet this requirement, Wolfden chlorinates sewage effluent after it passes through a rotating biological contactor (RBC) unit. The proponent wants to eliminate potential aquatic health risks associated with residual chlorine and simplify its treatment plant operations by not having to adhere to the fecal coliform parameter noted above. The proponent has inquired into retrofitting its sewage treatment system with a dechlorinator but was informed by its equipment supplier that this is not possible. Furthermore, according to the equipment supplier, dechlorination processes are rarely supplied in 'package' treatment plants such as the facility currently being used at the Ulu site. Another option explored by the proponent was to install an external in-line dechlorinator which uses sodium bisulfite tablets but this was determined to be impractical due to the cold winter temperatures which would freeze the unit.

Treated sewage effluent is discharged to East Lake via a 550 m, insulated 2 inch pipeline. Sludge is removed from the RBC unit and sewer lift station and deposited on the project's ore pad located approximately 420 m from East Lake. This sludge is covered with waste rock. Run-off from the ore pad flows to East Lake.

The proponent cannot identify any well defined inlet or outlet streams for East Lake. There is some amount of surface and subsurface drainage to Ulu Lake through a boulder filled channel. Due to its relatively small size, isolated position, and barriers to fish passage, it is assumed that fish do not live in East Lake. However, Ulu Lake is known to support lake trout. Wolfden states that primary contact recreational uses or consumption of water for drinking purposes are not practiced in these two lakes. Therefore, they feel that the likelihood of having public health risks

associated with treated sewage effluent discharged into East Lake without being disinfected will be minimal.

Environment Canada does not have objections to the removal of the fecal coliforms limit in the licence, and supports discontinuing the addition of chlorine to the treated effluent.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Regards,

David W. Abernethy
Environmental Assessment Technician

cc: Colette Spagnuolo (Environmental Assessment & Contaminated Sites Specialist, Iqaluit)
Anne Wilson (Water Pollution Specialist, Yellowknife)