



WOLFDEN RESOURCES INC.

309 Court Street South
Thunder Bay, Ontario
P7J 1H1
Tel: (807) 346-1668
Fax: (807) 345-0284

June 17, 2005

Mr. Philippe di Pizzo
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Dear Mr. di Pizzo:

**Re: Application for Amendment to License # NWB1ULU0008 –
WOLFDEN RESOURCES INC. – ULU ADVANCED EXPLORATION PROJECT**

Wolfden Resources Inc. is requesting a minor amendment to license # NWB1ULU0008, associated with the Ulu Mining Exploration and Development project. The purpose of the amendment, outlined in detail below, is to minimize potential risks associated with wastewater discharges from the site. The consulting firm of Gartner Lee Limited has provided technical assistance to Wolfden Resources for the purpose of this submission.

Requested Amendment to License

- Remove the Fecal Coliform parameter from the list of effluent quality requirements outlined in Part D, Section 18.

Rationale for the Amendment Request

The current license requires all sewage effluent to meet a number of effluent quality requirements, including Fecal Coliforms, which must not exceed a maximum average concentration of 1000 CFU/dl (Part D, Section 8). In order to consistently meet this effluent requirement, the effluent from the Rotating Biological Contact (RBC) treatment unit must be disinfected. The existing system has the capability of providing chlorine-based effluent disinfection. However, residual disinfectant contained in wastewater effluent from this process may pose some potential risk to aquatic life. While the aquatic health risk is expected to be quite low, this particular risk could be eliminated entirely by not

activating the effluent disinfection component of the treatment process.

Guidance regarding the need for effluent disinfection is provided in "Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories (1992)". This document notes that for all discharges to freshwater environments (Note f to Table 4.1), "treated effluent ordinarily need not be disinfected; however, disinfection will be required in any case where site-specific studies show that it is needed for protection of public health".

Treated sewage effluent is discharged to the 1.8 ha, East Lake. There are no well defined inlet or outlet streams associated with the lake. However, some surface and subsurface drainage from East Lake to Ulu Lake is expected to occur through a relic boulder filled channel. The lake has a maximum water capacity of 40,900 m³, corresponding to a maximum water depth of 6.2 metres. The small size and isolated position of the waterbody, and barriers to fish passage are assumed to preclude the existence of fish in East Lake. Ulu Lake is known to support fish, specifically lake trout.

There are no primary contact recreational uses of East Lake and water is not abstracted from the lake for any purpose. Water quality samples (typically 1 litre or less) are taken from the lake periodically using standard procedures that address and minimize potential bacteriological risks to the sampler. There are also no primary contact recreational uses of Ulu Lake and water from the lake is not taken for drinking water purposes. Based on the use characteristics of both East Lake and Ulu Lake, the public health risks associated with discharging treated sewage effluent that has not been disinfected are considered to be minimal.

Sewage Treatment Process at the Ulu Project Site

The sewage treatment process at the site is a fully-contained system comprised of a primary settlement tank, a Rotating Biological Contact (RBC) tank, a secondary settling tank, a chlorinator, and a chlorine contact chamber. Clarified, treated effluent from the secondary settling tank is routed to the chlorinator and chlorine contact chamber prior to discharge from the treatment unit through a 4-inch outlet pipe. Chlorination disinfection can be achieved by charging the chlorinator with 4-inch calcium hypochlorite tablets. Additional process design and operation details are included in the report previously submitted to the Nunavut Water Board, "Ulu Advanced Exploration Project, Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintenance Plan, February 2005".

Effective disinfection within the treatment unit will result in some level of residual chlorine being discharged to the receiving environment. Residual chlorine does not accumulate in the environment and will dissipate relatively quickly in an aquatic environment. Larger sewage treatment systems utilizing chlorine-based disinfectants often include facilities for dechlorinating the effluent prior to discharge. Dechlorination capabilities are not included within the fully-contained system installed at the Ulu site. According to the equipment supplier (Seprotech Systems Incorporated, Mississauga, Ontario), dechlorination processes are rarely supplied in "package" treatment plants such as the facility at the Ulu site. According to the equipment supplier, the existing system cannot be retrofitted to include dechlorination within the contained treatment system. An external in-line dechlorinator, using sodium bisulfite tablets could be installed. However since it would not be contained within the existing structure, there is no practical method to provide protection from freezing. A further consideration regarding effluent dechlorination is the additional operator control and maintenance required. Sodium bisulfite is a strong reducing agent and can result in depressed dissolved oxygen levels in the receiving environment if improperly used.

Summary

There is minimal public exposure to treated sewage effluent discharged from the Ulu project site to East Lake. As a result, it is recommended that the treated sewage effluent not be disinfected prior to discharge to East Lake. This recommendation is consistent with the 1992 Northwest Territories wastewater guidelines and, if implemented, would simplify treatment plant operations and eliminate any potential aquatic health risks associated with residual chlorine. To facilitate implementation of this recommendation, Wolfden Resources Inc. is requesting the water license # NWB1ULU0008 be amended to remove the Fecal Coliform parameter from the list of effluent quality requirements outlined in Part D, Section 18.

I trust the above provides sufficient information for you to consider this request for a minor amendment to water license # NWB1ULU0008. If you require any additional information please do not hesitate to contact me.

Regards,

Wolfden Resources Inc.

David B. Stevenson, M.Sc., P.Geo.
Mine Manager, Ulu