Technical Summary of Pangnirtung Water, Sewer and Solid Waste Management Bhabesh Roy. M.A.Sc., P.Eng. MPE, GN-CGS

A water licence was issued by Nunavut Water Board (NWB) in 2002 for five years period to allow for the use of water and disposal of waste for the Municipality of Pangnirtung, Nunavut (62⁰10'N, 92⁰36'W). This existing water licence will expire on Nov.30, 2007. Nothing has been changed in water supply system since 2002. Under this licence, the annual quantity of water used for all purposes shall not exceed 100,000cubic meters using Duval River as the fresh water source.

Solid waste from this community of roughly 1,756 populations is disposed in a landfill site which is inappropriately sited due to ecological concerns, odour and windblown litter; poorly operated and maintained. This facility is nearing its capacity under the current configuration and waste sources/loadings. A feasibility study has been conducted on the solid waste management and assessed the options:

- sitting a new landfill further from the community,
- constructing an incinerator or
- a combination of both.

After commissioning the new facility, the existing facility will be decommissioned.

Pangnirtung is the only community with a Wastewater Treatment Plant. This plant was built in 2003. Recently a study on the comprehensive performance evaluation of the plant has been conducted and proposed three optimization options:

- Low Cost upgrade,
- Medium cost upgrade and
- High cost upgrade.

These upgrades have been proposed to get implemented in phases in the next seven years.

These projects have been presented to the Council and the public as well. The design phase is expected to start in a short period of time.