Northwest Territories Municipal and Community Affairs

Municipal and Community Affairs
P.O. Box 2376, Cambridge Bay, NT X0E 0C0

May 27, 1997

Hamlet of Pelly Bay
General Delivery
Pelly Bay, NT
X0E 0C0

Attention: Marla Limousin, SAO

WATER SUPPLY; INFRASTRUCTURE APPLICATION

WATER SUPPLY SYSTEM: I wish to assure you that finding a solution to the saline intrusion problem at the Pelly Bay Water Treatment Plant has been (from my last visit in Jan. 1997) and still is a priority in this Regional Office. What is needed is a permanent solution. Raising the intake is attractive, but in my humble opinion, it is a temporary solution - it will result in a reduced winter storage when ice cover and the resulting increased dead storage (the volume of water below the raised intake) is taken into account. The solution must be on the basis of a 20 year horizon forecasted demand. It is very doubtful that raising the intake will meet this requirement. It is reasonable to infer from the duration (reportedly 7 months; this is most unusual) of this particular event that there is no flow in the river in winter, else the natural flow would have diluted and flushed out the saline water by now. This is a further reason to preserve the existing winter storage capacity - adequate supply must outweigh the " inconvenience" of drawing water with the pumps on the water truck or by using a portable pump as applicable.

We sympathise with the difficulties the community is experiencing, but we are hampered in proposing alternate solutions until conditions (ice break up/ summer weather) permits us to examine the site first hand. For what it is worth, we are resolving a similar problem in Kugluktuk. What we learn from that project will benefit Pelly Bay significantly. As for the following solutions: a) raising the intake; b) adjustable floating arm intake - they have been tried and found wanting in Kugluktuk.

We suggest the use of a portable pump to fill the water delivery truck, in response to the truck's inability to access the draw point/hole due to the reduced bearing capacity of the ice. Attached are quote(s) for such a portable pump. You may purchase it under your water and sewer program and discuss a possible reimbursement with the Regional Superintendent of MACA at a later date. In addition we are also looking at conductivity metres to ensure that saline water does not enter the plant again. Depending on funding, the meters may be installed as part of the plant pump controls or it may be a hand-held model. I will seek clarification with respect to funding from the Regional Superintendent.

INFRASTRUCTURE APPLICATION: Finally, EDC, has submitted your Infrastructure Program Proposal to the Nunavut Impact Review Board for consideration. You may direct your enquiries to Ms Jaida Edwards of the Nunavut Impact Review Board at 403-983-2593.

In summary, resolving the saline intrusion in the water supply system is foremost on our minds and we empathise with the current difficulties with the water supply; we await suitable conditions (ice break-up) at the site to undertake a visit to gather information and propose a solution. You may call me at 403-983-7269, if there any questions.

Sincerely,

Kojo Kumi, P.Eng.
Municipal Planning Engineer