



Environment Canada Environnement Canada

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By Licensing Administrator at 12:36 pm, Apr 26, 2011

Environment Canada
Prairie and Northern Region
P.O. Box 2310
5019 - 52 Street 4th Floor
Yellowknife, NT X1A 2P7

April 21, 2011

Michael McKernan
603 - 386 Broadway Avenue
Winnipeg MB R3C 3R6

by e-mail: mike.mckernal@stantec.com

Re: Arviat Emergency Water Supply Project – Installation of a Reverse Osmosis Plant

Environment Canada (EC) staff have reviewed the above proposal and provide the following comments for your consideration. EC would like to commend the proponent on providing an excellent proposal document, which is clearly written and thorough in scope. The urgent nature of the proposed installation is acknowledged, given the need to supply drinking water to the community. We would also like to note that operation of the plant will be on a short-term basis, and it is anticipated that operations will cease by approximately October of this year.

Further to the request that Environment Canada determine whether the volume and chemistry of the RO reject water constitutes the deposit of a deleterious substance as defined by Section 36(3) of the *Fisheries Act*, we advise that such a determination cannot be made at this time, and recommend that once the plant has been commissioned and the system performance has been equilibrated, that acute toxicity testing be done on a sample from the reject stream. Periodic chemical characterization of the brine effluent should also be done. Backwash waste streams are proposed to be disposed of in the wastewater lagoon, however, if they are to be included in the marine discharge, this should also be tested.

EC supports sampling of the water quality, including tracking downgradient salinity densities. The usefulness of sediment sampling is questionable, given the nature and duration of the discharge.

Please do not hesitate to contact me at (867) 669-4735 with any questions or comments regarding the foregoing.

Yours truly,

Anne Wilson
Water Pollution Specialist

cc: Carey Ogilvie (Head, EA-North, EPOD)
Tim Morton (Enforcement Officer, Enforcement, Environment Canada)