



Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
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Yellowknife, NT X1A 2P7

ECCC File: 6600 000 014
NWB File: 1BR-SHE1016

September 12, 2017

Via email to: licensing@nwb-oen.ca

Richard Dwyer
Licence Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Mr. Dwyer:

RE: 1BR-SHE1016 – Defence Construction Canada – CAM-3 Shepard Bay Project – Long Term Monitoring Program

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned long-term monitoring program and is submitting the following comments via email as requested by the NWB. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

1. Groundwater Monitoring Program Contaminants

On p.7 on the Water Licence Renewal document, in section 2.3 Water Monitoring, Defence Construction Canada (the Proponent) states that groundwater samples will be analyzed for the following parameters (total concentrations): arsenic, cadmium, chromium, cobalt, copper, lead, nickel and zinc. ECCC agrees that these parameters should be analyzed. However, since no particular contaminant(s) of concern are mentioned in the report, ECCC is of the opinion that a full suite of metal parameters should be tested with a full Inductively Coupled Plasma (ICP) metal scan to ensure there is no contamination.

Furthermore, on page 9 of the Water Licence Renewal document, the Proponent mentions that an Environmental Working Group (EWG) was created to review the monitoring reports and provide recommendations on the monitoring plan and

remediation requirements. It is also said that "[...] the EWG reviews the monitoring reports in accordance with the methodology as described previously". ECCC is unable to find the previously described methodology and believes that the EWG should consider using the federal interim groundwater quality guidelines as comparison when reviewing the monitoring reports. ECCC provides the following recommendations:

- a) ECCC recommends that the Proponent consider analyzing additional parameters by using a full ICP metal scan when monitoring groundwater.
- b) ECCC recommends that the EWG consider using the federal interim groundwater quality guidelines as comparison when reviewing the monitoring reports.

2. Quality Assurance and Quality Control

ECCC notes that in the Water Licence Renewal document, there is no mention of Quality Assurance and Quality Control (QA/QC) in regards to sampling. ECCC believes the Proponent should provide details on their QA/QC methodology. At a minimum, ECCC suggests that field duplicates and field blanks be taken for groundwater sampling events.

ECCC recommends that the Proponent describe their QA/QC procedures and that these procedures include field duplicates and field blanks.

Should you require further information, please do not hesitate to contact me at (867) 669-4746 or Gabriel.Bernard-Lacaille@canada.ca.

Sincerely,



Gabriel Bernard-Lacaille
Environmental Assessment Coordinator

cc: Melissa Pinto, Senior Environmental Assessment Coordinator
ECCC Review team
Alison Street, Department of National Defence