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NWB File: 3BC-ALT1015

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Via email: licensing@nunavutwaterboard.org

RE: 3BC-ALT1015 Operation and Maintenance Manual Plan CFS Alert, Nunavut

Environment Canada (EC) has reviewed the above-mentioned Operations and Maintenance Plan (O&M Plan) submitted to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

National Defense submitted an O&M Plan to the NWB as a requirement of Part H, Item 1 of water license 3BC-ALT1015 for Canadian Forces Station (CFS) Alert. Alert is situated on the north-eastern tip of Ellesmere Island, within the Qikiqtani Region of Nunavut and has been in continuous operations as part of the Canadian Military since 1958. On-site personnel ranges from 50 to 100 individuals but can rise to 400 during military training exercises.

Upon review of the O&M Plan, EC provides the following comments and recommendations for the NWB's consideration:

O&M Plan

- Section 2.3 of the Plan indicates that no data exists for determining the composition of solid water generated at the station. As a best management practice, EC recommends tracking solid waste so that performance can be tracked with respect to waste reduction.
- Section 4.1 of the Plan is missing details regarding dimensions and distance from the nearest water body and airfield for Dump 3 and the Battery Dump. For completeness, the Plan should be revised to include these details.
- Section 4.2 of the Plan indicates that hazardous wastes such as fuel, glycol and oil rags are incinerated. Please provide documentation to support that the onsite incinerator is designed for combustion of hazardous waste.
- With respect to Section 7.3, please clarify the parameter being tested is cBOD₅ (includes only the carbon component of BOD), not BOD₅ (includes the nitrogen + carbon component of BOD). The proposed EC Wastewater Effluent Regulation for the south and the CCME Municipal Wastewater Strategy both indicate cBOD₅ as the parameter to be regulated. Therefore, for consistency with the proposed regulation, CBOD₅ should be tested in Alert.

- In addition to the parameters being monitored in the sewage effluent, EC recommends that total ammonia nitrogen (TAN) at the sewage outfall also be monitored and reported through this O&M plan. TAN plus pH will give information about the toxicity of the sewage effluent.
- Section 32 of the Hazardous Material Management Plan indicates that ash generated from incinerated batteries is currently sealed in 45-gallon drums and placed in the HazMat Barrel Farm until the suitable landfill mentioned above is constructed. This sentence is lacking context as no landfill or HazMat Barrel Farm was mentioned in the preceding sections of this Plan nor the O&M Plan. Please update this section to clearly indicate the fate of this waste. Also, for completeness, please add the location of the HazMat Barrel Farm to Figure 1 of Appendix A following the O&M Plan.
- Section 38 of the Hazardous Material Management Plan makes reference to the location of the HAZMAT Barrel Compound. For completeness, EC recommends the Table under Section 4.1 of the O&M Plan be updated to include the HAZMAT Barrel Compound and/or HazMat Barrel Farm so that all waste sites are consolidated in one Table for easy reference.
- Section 38 of the Hazardous Material Management Plan makes reference to the IDA site. Please define this acronym.
- In Section 2.2 *Sampling Equipment*, the QA/QC Plan specifies sampling parameters, EC recommends the full 23 metal scan.
- EC notes the communications dated 9 December and 8 February between the NWB and the proponent, respectively, regarding deficiencies to the O&M Plan. EC suggests that the Plan be updated to reflect the additional information provided by the proponent.
- EC notes that the proponent will use open air bonfires as a means of disposal approximately 6 or 7 times per year. EC does not encourage the open burning of wood waste. However, considering the logistical constraints of CFS Alert, EC recommends the following guidance:
 - Solid wastes that are conditionally suitable for open burning are paper products, paperboard packaging and untreated wood. Plywood, painted wood or other treated wood should not be disposed of in this manner. For reference, below is a link to the Nunavut Municipal Open Burning Policy: <http://www.gov.nu.ca/env/Open%20burning.pdf> and below is a link to information from EC regarding open burning: http://www.ec.gc.ca/gdd-mw/684B44DD-5780-4F73-BC58-A97E31A19EDC/COM1170_Open_Burning_Brochure_e_v6_for%20web.pdf
 - EC recommends that all residual waste from the burning be thoroughly collected, removed from site, and disposed of at a suitable facility.

Spill Contingency Plan (Appendix D)

- The Plan should include the following statement, “**all spills** of oil, fuel, or other deleterious materials, **regardless of size**, are to be reported to the NWT-NU 24hr Spill Line (867) 920-8130.
- Refueling shall not take place below the high water mark of any water body and shall be done in such a manner to prevent hydrocarbons from entering any water body frequented by fish.
- EC recommends that a copy of the Plan should be posted at any location where these products are stored and at each fuel cache and refuel station, accessible to on-site crew members.

If there are any changes in the project EC should be notified as further review may be necessary. Comments previously submitted by C. Spavor on behalf of EC regarding water license 3BC-ALT on 15 December 2009 would still apply to this project (see attached). Please do not hesitate to

contact the undersigned with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at Paula.C.Smith@ec.gc.ca

Yours truly,



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