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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

File No.: 3BC-ALT1015/TR/G1, H1, J12

June 8, 2011

Douglas Craig, M.Sc.
Directorate of Air Programs 3-5
National Defence Headquarters
Ottawa, Canada K1A 0K2

Douglas.Craig@forces.gc.ca

**Subject: Licence No. 3BC-ALT1015 “CFS-Alert” Ellesmere Island, Qikiqtani Region, Nunavut;
Submission of Operational and Maintenance Plan**

Dear Mr. Craig;

The Nunavut Water Board (“NWB” or “Board”) has completed a technical review of the document entitled “Operation and Maintenance Plan CFS Alert (ALT), Nunavut” (Plan), which was submitted on November 30, 2010. The following documents were included with the O&M Plan as appendices:

- CFS Alert – Hazardous Materials Management Plan;
- Spill Contingency Plan, CFS Alert, Nunavut; and
- Quality Assurance and Quality Control Plan, CFS Alert, Nunavut.

The Plan was distributed on February 18, 2011 giving interested persons thirty (30) days to review the submission and make representations by March 21, 2011. Comments were received from Environment Canada (EC) and Indian and Northern Affairs Canada (INAC) on March 21, 2011¹.

EC indicated that:

- 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. The Plan should include these details;
- Section 4.2 of the Plan indicates that hazardous wastes (fuel, glycol and oil rags) are incinerated. A documentation to support that the onsite incinerator is designed for combustion of hazardous waste should be provided;

¹ Environment Canada (EC), March 21, 2011; and Indian and Northern Affairs Canada (INAC), March 21, 2011.

- 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;
- It is recommended that total ammonia nitrogen (TAN) at the sewage outfall be also monitored and reported through this O&M Plan as 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. EC noted that no landfill or HazMat Barrel Farm was mentioned in the preceding sections of Plan or in the O&M Plan. This section should be clarified to indicate the fate of this waste. Also, for completeness, the location of the HazMat Barrel Farm should be added to Figure 1 of Appendix A following the O&M Plan. The Table under Section 4.1 of the O&M Plan should also be updated to include the HAZMAT Barrel Compound and/or HazMat Barrel Farm;
- Section 38 of the Hazardous Material Management Plan makes reference to the IDA site. This acronym shall be defined;
- In Section 2.2 *Sampling Equipment*, the QA/QC Plan specifies sampling parameters, EC recommends the full 23 metal scan;
- It is recommended to follow Nunavut Municipal Open Burning Policy regarding open burning at links: <http://www.gov.nu.ca/env/Open%20burning.pdf>, and http://www.ec.gc.ca/gdd-mw/684B44DD-5780-4F73-BC58-A97E31A19EDC/COM1170_Open_Burning_Brochure_e_v6_for%20web.pdf.

INAC indicated that

- Direct disposal of raw sewage into the environment is prohibited. It is recommended that the explanation of the design and operation of the sewage system be improved;
- The Defence Construction Canada (DCC) should consider the construction of an initial holding cell to provide storage and retention time and incorporate the cell into the new terrace sewage treatment system;
- Clarification should be provided as to what happens with the accumulated ice and frozen effluent (sludge/blackwater) once it is removed from the sewage outfall;
- Burning of camp waste/garbage is only permitted within an approved incinerator. Open burning is discouraged unless approved by the NWB.

On April 15, 2011, the NWB provided the following clarification to the EC concerning its comments:

- The “Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories” (1992) are used by NWB. The guidelines set effluent limits for regulating specific parameters associated with municipal wastewater, including BOD₅. Because the above mentioned Guidelines do not include TAN as a parameter to be measured, that requirement was not included in the Licence terms and conditions. In addition, the Board feels that without having any sewage outfall monitoring results the Board is not in position to reassess the list of parameters incorporated in the licence.

Also the Board notices that the parameters to be monitored by the licence are specified in the

QA/QC Plan, and as such a full 23 metal scan is not required.

The Board finds that the construction of an initial holding cell to provide storage and retention time and incorporate the cell into the new terrace sewage treatment system shall be considered by the Licensee, if the sewage outfall monitoring results show a need for it.

Notwithstanding the above, an approval of the O&M Plan as submitted will be withheld and the Licensee is requested to revise the plan and re-submit for approval within thirty (30) days of the date of this letter. The following additional information shall be included within the revised Operation and Maintenance Plan:

- Section 4.1 of the Plan should include details regarding dimensions and distance from the nearest water body and airfield for Dump 3 and the Battery Dump;
- Documentation to support that the onsite incinerator is designed for combustion of hazardous waste (fuel, glycol and oil rags) should be provided;
- HAZMAT Barrel Compound and/or HazMat Barrel Farm referenced in Sections 32 and 38 of the Hazardous Material Management Plan are to be incorporated in the table under Section 4.1 and to be added to the Figure 1;
- The acronym IDA site referenced in the Section 38 of the Hazardous Material Management Plan should be defined;
- Figures should be properly scaled.

The Licensee is also reminded that open burning is generally discouraged and is to be approved by the NWB.

The NWB has determined that the revised Spill Contingency Plan and the Quality Assurance and Quality Control Plan included with this submission are acceptable and consistent with the terms and conditions in Licence 3BC-ALT1015.

Should you have any questions, please feel free to contact the undersigned at (867) 360-6338 Ext. 30 or k.kharatyan@nunavutwaterboard.org, at your earliest convenience.

Yours truly,

Original signed by:

Karén Kharatyan
Technical Advisor

cc: Distribution List – Qikiqtani