Environment Canada Environnement Canada

Environmental Assessment North
Environmental Protection Operations (EPO)
Qimugjuk Building 969 PO Box 1870
Iqaluit, NU X0A 0H0
Tel: (867) 975-4631
Fax: (867) 975-4645

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EC file: 4770 001
NWB file: 1BH-CHE----

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

Via email: licensing@nunavutwaterboard.org

RE: 1200217 1BH-CHE---- Chesterfield Hydrostatic Testing – Kivalliq Region

Environment Canada (EC) has reviewed the information regarding the above-mentioned water license application, as submitted to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act 1999*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Inukshuk Construction Ltd. is applying to the NWB for a new Type B water license to support upgrades and expansion to the existing Fuel Storage Facility at Chesterfield Inlet. Proposed activities include cleaning and relocation of one existing 1379 cu.m LSDL Vertical Tank, construction of one new 1933 cu.m LSDL Vertical Tank, construction of one new 582 cu.m Gasoline Vertical Tank, and cleaning and relocation of two existing Horizontal Tanks which will be converted to slop tanks. Approximately 2000 m^3 of salt water will be used to hydrostatically test the tanks and all tanks will be cleaned. Water will be pumped from the beach of Chesterfield Inlet and will be disposed of by allowing the water to seep from a modified 45 gallon drum, filtered through hydrophobic pads. Work is proposed to occur in 2012.

Based on the information provided, EC provides the following comments for the NWB's consideration:

General

- The proponent shall not deposit, nor permit the deposit of chemicals, sediment, wastes, or fuels associated with the project into any water body. According to the *Fisheries Act*, Section 36 (3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- EC is pleased that the tank sludge and hydrocarbon residuals will be contained and sent for disposal at an approved facility. EC recommends that the proponent ensure that all hazardous waste manifesting and tracking requirements under the *Nunavut Environmental Protection Act* and *Transportation of Dangerous Goods Act* are adhered to.
- EC recommends that effluent not be discharged to the marine environment unless the CCME water quality guidelines for the protection of aquatic life in the marine environment are met.

The available guidelines for the parameters listed in the application are provided below for ease of reference:

Parameter	**CCME Water Quality Guidelines for the Protection of Aquatic Life - Marine**
Physical parameters	
pH	7.0-8.7
Conductivity	-
Hardness	-
TSS	Maximum increase of 25 mg/L from background for any short-term (i.e. less than 24 h period)
Petroleum Hydrocarbons	
Benzene	110 µg/L
Toluene	215 µg/L
Ethylbenzene	25 µg/L
Xylene	-
Total Petroleum Hydrocarbons	-
Metals	
Lead	-
Mercury	0.016 µg/L
Arsenic	12.5 µg/L
Chromium	56 µg/L (trivalent form)
Cadmium	0.12 µg/L
Copper	-
Aluminum	-
Zinc	-
Iron	-
Major Ions	
Specific ions not specified in application	

- Erosion protection measures should be used at the discharge point to prevent sedimentation of adjacent waterbodies.
- EC would like further information on the number of hydrophobic pads to be used, and the frequency with which they will be changed during the filtering.
- EC recommends that a map outlining the location where the treated water will be released, especially in relation to waterbodies (i.e. update Appendix C to indicate water intake and release locations).
- Mesh screens, or other preventative measures, should be used to prevent aquatic organisms from entering the water intake house in Chesterfield Inlet.
- The proponent shall ensure that any hazardous waste generated during the course of the project receives proper treatment and disposal at an approved facility.
- The proponent shall ensure that appropriate erosion control methods are in place at the location where the treated water is to be released such that water clarity or sediments are not affected or disturbed.
- If a tank has been cleaned after welding, residues must be removed prior to hydrostatic testing.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. 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,

Paula C. Smith
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)
Allison Dunn (Sr. Environmental Assessment Coordinator, EPO, Iqaluit, NU)
Ron Bujold (Environmental Assessment Officer, EPO, Yellowknife, NT)