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2 September 2005

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*Via Email*

**RE: NWB4REP Mosher Engineering Ltd. – Repulse Bay Project – New Type 'B'**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act,* the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Mosher Engineering Ltd. is applying for a water licence for water use and waste disposal associated with hydrostatic testing of fuel tanks in their Repulse Bay Project. The proponent has designed a new fuel storage facility for the Hamlet of Repulse Bay and has proposed a construction time-schedule of 1 August to 30 September 2005. The planned location of the new fuel storage facility is 800 m NE of the community, having coordinates of 66° 32'N, 86° 15'W.

The project consists of the building of a new 3,200 $m^3$ vertical tank, the relocation and refurbishment of two 947 $m^3$ vertical tanks, and the relocation of two 92 $m^3$ horizontal tanks (a total of 5 fuel tanks). The fuel tank containment area will be enlarged and a new HDPR Liner will be installed. Furthermore, the project design entails the construction of a new dispenser building and an operator's shelter. A holding cell and sumps will be located within the tank farm dyke.

The proponent will conduct hydrostatic tests on the fuel tanks to determine their capability of storing fuel (i.e., presence of leaks, faulty valves, etc.). Approximately 3,200 $m^3$ (3,200,000 liters) of fresh water will be needed for this testing procedure. The proposed fresh water source is a pond located 0.5 km north of the storage facility area. Prior to pumping this large volume of fresh water, the existing fuel tanks will be drained and cleaned with a pressure washer. The dirty water will then be pumped into steel drums and considered as though it is sludge. In addition, hydrophobic pads will be used to dry the fuel tank floors and will be stored in steel drums upon completion of this task.

It is anticipated that this clean-up activity will require 10-12 steel drums. All steel drums will be turned over to the Hamlet of Repulse Bay for placement at the community's hazardous storage site. Pond water will then be pumped to a fuel tank where it will remain for at least 24 hours. The fuel tank will be checked for leaks throughout this time period. After the initial fuel tank's hydrostatic testing, the pond water will be transferred to a second fuel tank which will undergo the same testing process. This water will be transferred from one tank to another until all five fuel tanks have received a hydrostatic test.

As a requirement of the NWB4REP water licence, the proponent performed a site investigation of the project's fresh water source on 19 July 2005. The purpose of this site investigation was to determine whether or not aquatic life is present in the designated fresh water source (pond). By means of a visual inspection, several castings, the drawing of a site-fabricated fish net, and an interviewing of community residents it was concluded that there is no presence of aquatic life in the pond (according to the proponent's standards). Light ground vegetation was observed in the area surrounding the pond. Prior to the extraction of pond water, water samples will be sent to *Enviro-Test* in Winnipeg, MB for analysis. The proponent will also have samples taken from the water used in the hydrostatic testing analyzed by *Enviro-Test* before its disposal. Water sample results will be sent to the Nunavut Water Board for approval.

All water samples will be tested for the following properties:

TOTAL DISSOLVED SOLIDS
TOTAL ORGANIC CARBONS
METAL SCAN
BTEX, TVH, AND THE

The submitted Spill Contingency Plan addresses the hydrostatic testing of all new and existing fuel storage tanks. All fuel spills will be reported to the 24 hour Spill Line at (867) 920-8130. The products that will be used when responding to spills (should they occur) along with two fuel spill scenarios have been provided in the plan. The two fuel spill scenarios are: (a) the tipping of sludge-filled drums and (b) the leaking of water during or after the filling of fuel tanks.

Environment Canada is curious to know where the project water will be deposited once the hydrostatic testing activity has been completed. The proponent shall ensure that mitigation efforts which protect the receiving environment from harmful petroleum contamination are implemented. The use of sorbent booms/pads is a suggested method of separating petroleum products from fresh water. A separate concern of Environment Canada is the erosion of soil as a result of water discharged from the fuel tanks. The proponent shall make a substantial effort to prevent the erosion of soil due to this hydrostatic testing activity.

Environment Canada reminds the proponent that all permits and approvals are required prior to the commencement of any work.

Environment Canada recommends that the following conditions be applied throughout all stages of the project:

GENERAL

- The proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes, or sediment 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 other deleterious substance that results from the deposit of the deleterious substance may enter any such water is prohibited.

FUEL STORAGE / SPILL CONTINGENCY / HAZARDOUS MATERIALS

- The proponent shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.
- Drip pans, or other similar preventative measures, shall be used when refueling equipment on site.

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 me if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Regards,

David W. Abernethy
Environmental Assessment Technician