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Nunavut Water Board
Board
SEP 12 2004
Oct 8 2004
Public Registry

September 17, 2004

Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0A 1J0

Re: Water License Application NWB4NUN

To Whom It May Concern::

The City of Iqaluit has been requested to review the above noted water license submission. The material reviewed includes:

- Cover letter dated August 1, 2004;
- Water license application form;
- Groundwater Monitoring and Post-Closure Plan
- Landfarm Operations Plan;
- Spill Response Plan.

As the City is unable to receive soil contaminated with hydrocarbon concentrations above the generic CCME commercial/industrial criteria we recognize the need for a facility for treating hydrocarbon contaminated soil. We are encouraged that the proponent has submitted an application for a water license as this waste disposal site has been operating for several years without one.

This submission represents the City's present requests with respect to the proponent's application, and does not preclude the City from raising future concerns or questions throughout the Water Licensing process.

General Application

1. The City is requesting that all neighboring properties within 200 meters of this facility be notified of this submission and be offered an opportunity to respond to the Nunavut Water Board (NWB) prior to issuance of a water license.
2. The City is requesting clarification to the type of soil analysis and sampling and analysis frequency which will be performed on soils prior to waste entering the landfarm. The City would also request that this information be provided to the board for review prior to acceptance of soil at the facility.
3. Will soils contaminated with both hydrocarbons and heavy metals be accepted at the landfarm.
4. The City is requesting clarification as to the length of time the proponent has requested for the license.

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be placed at an elevation above the lowest elevation of any lined berm in the treatment cell.

13. The proponent suggests that soil contaminated with oils may be accepted at the facility. To our knowledge, heavy oils typically are very resistant to biological breakdown. The City requests the proponent clarify how degradation of heavy oils such as motor oil, transmission fluid, hydraulic oils and grease is to be achieved.
14. The City requests confirmation from the proponent that antifreeze fluid contaminated soil will not be placed in the landfarm.
15. The proponent advises that they will be using an activated carbon water treatment facility to remediate any hydrocarbon impacted water prior to discharge. The City is requesting the proponent detail the monitoring program to ensure the GAC does not become saturated allowing breakthrough of the hydrocarbon contaminants.
16. The proponent has submitted a groundwater monitoring program to periodically check for breaches in the cell liners and resulting hydrocarbon discharges. In the City's opinion the proposed monitoring program is inadequate to ensure protection from uncontrolled hydrocarbon discharges from the site. In our opinion, the wells have not been installed to an adequate depth based on the information provided. The wells should be installed to a minimum of the depth of the permafrost which was estimated at 8'. The piping installed only has a 2' screen on the bottom of the well. If the surface of the groundwater is above the screen, any hydrocarbon product present in the groundwater will not be detected in the well as it will sit on the surface of the water and not be able to enter the well through the submerged screen. In addition it is not clear whether a bentonite seal has been placed around the top of the wells to prevent the infiltration of surface water which could dilute any contaminants in the groundwater. The City requests the proponent address these issues.
17. The water analysis proposed by the proponent is not sufficient in the City's opinion. The City requests that all on-site wells be tested for Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons, Heavy Metals including hydrides and mercury, and Volatile Organic Compounds (VOCs) yearly. The City also requests that water samples be collected both up and down gradient from the drainage ditch passing to the east of the landfarm and that these samples also be analyzed for the above compounds. The City requests these results be provided to the board no later than thirty days after collection of the samples.
18. The proponent suggests the landfarm will be treating approximately 2,000 tonne of soil per year for a period of 25 years. This computes to a total of 50,000 tonne of soil. Using a bulking factor of 2 cubic meters per tonne leads to a total volume of 100,000 cubic meters potentially being received at the facility. However under Section 1.4 of the spill contingency plan the submission notes that at full capacity the landfarm will contain 7,000 cubic meters of soil. This would represent less than 2 years of material based on 2,000 tonne or 4,000 cubic meters per year. In other portion of the submission



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the proponent suggests it could take up to 10 years for remediation to occur. The City requests the proponent clarify the yearly tonnages and the total volume of the landfarm.

19. The proponent is proposing to set up a trust account for post closure activities. The account could have up to \$62,000 in it in the year 2030 to deal with post closure activities, monitoring, and potentially dealing with any remaining contaminated soil. The City feels that this fund would be inadequate should the land farming operation not be successful in the remediation of the soil.

The above requests for clarification and comment are based on the City's initial review of the proponent's submission. The City wishes to reserve the right to make additional requests based either on the initial submission by the proponent or future submissions.

Regards,

Brad L. Sokach, P.Eng.
Director of Engineering

City of Iqaluit

C:\Documents and Settings\Brad Sokach\My Documents\City of Iqaluit Files\Review of Nunatta Water License Application[1].doc



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