



Environment Canada
Environnement Canada

Environment Canada
Prairie and Northern Region
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Your File: 3BM-CLY0909
Our File: 4782 043

Richard Dwyer
Licensing Administrator
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

Re: Hamlet of Clyde River – Compliance Plan Review

On behalf of Environment Canada (EC), I have reviewed the information submitted for the Compliance Plan for the Hamlet of Clyde River. The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, and Section 36(3) of the *Fisheries Act*.

The Hamlet of Clyde River submitted a Compliance Plan as part of their Water Licence Renewal package in October, 2009. After review of the plan, the Nunavut Water Board (NWB) requested that deficiencies in the plan be addressed before the Board deemed the Renewal Application to be complete. A response to the Board's request was received in December 2009. As the Compliance Plan requires Board approval, the NWB invited EC to review and provide comments on the Plan. To this end, EC has the following comments for the Board's consideration:

In general, the documents submitted as part of the compliance plan are difficult to piece together to form a clear plan and implementation schedule for all conditions in the expired licence. It is difficult to assess whether this Compliance Plan will lead to full compliance with the licence given its disjointed nature. Therefore, comments are provided below to address the specific licence conditions that require further attention by the applicant and the Board. Given that both the Sewage Disposal Facility and the Solid Waste Facility are nearing the end of their useful life and new facilities are being planned and constructed, the approach was taken that the licence conditions should apply to the current facilities with provision for licence amendments when the new facilities are commissioned.

Operation and Maintenance (O&M) Plan Item F, 1

- An Operation and Maintenance (O&M) manual should be in place for all infrastructure that is currently in use, regardless of their stage in their design life. The O&M manual for the Water Supply Facility is outdated, as stated by the applicant, and requires updating and approval by the Board. The applicant should submit a timeline and plan for an updated Water Supply Facility O&M manual.
- For the Waste Management Facility, no O&M manual exists. The applicant should submit a timeline and plan for Waste Management Facility O&M manual. When the new landfill is commissioned, an update to the O&M manual should be submitted.
- For the Sewage Disposal Facility, the applicant should submit a timeline of when the O&M manual for their current facility will be completed, and once completed submit the O&M manual to the board for approval. When the Enhanced Sewage Disposal Facility is commissioned, an updated O&M manual should be submitted for review.

Monitoring Program (Item D, 2, 8, 9, 10)

- The Compliance Plan dated October 27th, 2009 indicates that because of time-sensitivity for shipping samples to the Ottawa lab, only BOD and TSS will be analyzed. However, the Monitoring Program requires the following parameters be analyzed three times annually:

upon commencement, mid-way and at the end of discharge periods at Stations CLY-4, CLY-5, CLY-6a and b, and CLY-7.

Biochemical Oxygen Demand – BOD ₅	Faecal Coliforms
Total Suspended Solids	pH
Conductivity	Nitrate-Nitrite
Oil and Grease (visual)	Total Phenols
Magnesium	Calcium
Sodium	Potassium
Chloride	Sulphate
Total Hardness	Total Alkalinity
Ammonia Nitrogen	Total Zinc
Total Cadmium	Total Iron
Total Cobalt	Total Manganese
Total Chromium	Total Nickel
Total Copper	Total Lead
Total Aluminum	Total Arsenic
Total Mercury	Total Organic Carbon (TOC)

However, only BOD, TSS, pH, Fecal Coliforms and Oil and Grease have specified effluent quality limits at CLY-4, 5, and 6. Furthermore, acute toxicity tests should be performed annually at stations CLY-4, 5, and 6b. The applicant should submit a timeline and plan to comply with the requirements of this monitoring program.

Monitoring Program Data (Item B, 1 and H, 3)

- The applicant has submitted very limited data for the monitoring program which should have been in place since 2003, when the current licence was issued. Data from previous years is outstanding and, if no other data exists, should be stated as such.

Sludge Management (Item H, 6)

- The applicant maintains that the existing lagoon has an accumulation of sludge in the bottom of it, and that no treatment is to take place. During the planned rehabilitation of this lagoon, the sludge should be removed, treated and tested before determining an appropriate and environmentally sound method of final disposal. The applicant should submit a timeline and plan to appropriately remove and dispose of the sludge.

Landfill leachate monitoring (Item H, 7)

- Monitoring of CLY-2 should commence as soon as water begins to melt and leave the landfill site. It is important to characterize the leachate before the decommissioning phase in order to develop appropriate plans for Closure and Reclamation of the current landfill site. The applicant should submit a timeline and plan to monitor CLY-2 until closure and reclamation is complete.

Quality Assurance, Quality Control (QA/QC) Plan

- Currently, no QA/QC Plan has been approved by the Board. The topics listed in the applicant's letter, dated October 2009, should be covered in the QA/QC Plan along with the appropriate contact information for the Analytical Laboratory. The applicant should submit a timeline and plan to provide a QA/QC plan to the Board for approval.

Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 669-4715 or by email at mary.kelly@ec.gc.ca

Yours truly,

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