



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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Your file - Votre référence
1BR-RAN2131
Our file - Notre référence
GCDocs# 104533894

July 26, 2022

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the
Licence Amendment Application for the Rankin Inlet landfarm, Type B Water
Licence No. 1BR-RAN2131**

Dear Richard,

Thank you for the June 24th, 2022 invitation to review the amendment application, submitted by the Government of Nunavut's Department of Community and Government Services, Petroleum Products Division, for Type B Water Licence No. 1BR-RAN2131.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at (867) 975-4550 or Andrew.Keim@canada.ca

Sincerely,

Andrew Keim

Andrew Keim
Regional Manager
Water Resources, Nunavut Regional Office
Crown-Indigenous Relations and Northern Affairs Canada



Technical Review Memorandum

Date: July 29, 2022

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Andrew Keim, Regional Manager, CIRNAC

Subject: Crown-Indigenous Relations and Northern Affairs Canada's Review of
the Licence Amendment Application for the Rankin Inlet Landfarm, Type
B Water Licence No. 1BR-RAN2131

Region: ☐ Kitikmeot ☒ Kivalliq ☐ Qikiqtani

A. BACKGROUND

The community of Rankin Inlet is located within the Kivalliq Region, Nunavut, on the west coast of Hudson Bay. The community is in a zone of continuous permafrost, which has an active layer of approximately one metre.

The Rankin Inlet Fuel Facility is being upgraded and as part of the application for amendment the size of facility is being expanded to accommodate a higher volume of contaminated soils.

The original project allowed for approximately 6000 Cubic meters of contaminated soils and was originally licensed in 2009. That license expired in 2016 and was eventually renewed in 2021 with a 10 year water license.

The existing landfarm is accessed from the same road and located adjacent to the Rankin Inlet Municipal Solid Waste Site. The project was originally intended to hold contaminated soils taken from the Rankin Inlet fuel facility where they were treated and after five years the facility was to be closed. It is unclear if any successful treatment had occurred or if the facility had seen remediated soils removed and placed in the community. No records or reporting's have been provided by the Government of Nunavut's Petroleum Products Division (PPD).

Due to a significant number of spills in 2021, the landfarm has seen a large volume of contaminated soils (above and beyond the designed capacity) deposited in the landfarm. This necessitates PPD to apply for an amendment to the existing Water license requesting an extension be constructed to accommodate the volume of soils now contained within the facility. Plus additional volumes to be deposited this year if the project moves forward.



CIRNAC provides the following comments and recommendations pertaining to the application package. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.



Table 1: Summary of Recommendations

Recommendation Number	Subject
R-1	Existing Volume
R-2	Capacity of new facility
R-3	Maintenance

B. DOCUMENTS REVIEWED AND REFERENCED

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

Table 2: Documents Reviewed and Referenced

Document Title	Author, File No., Rev., Date
CIRNAC Review and comments on 1BR-RAN new application	Ian Parsons, CIRNAC, Sept 3, 2008
1BR-RAN2131 PPD NWB Annual Report for Rankin Inlet Landfarm 2021-ILAE.xls	Government of Nunavut, Department of Community and Government Services Petroleum Products Division, April 2022
Application for a Water Licence	Government of Nunavut, Department of Community and Government Services Petroleum Products Division, March 7, 2022
Amendment to Rankin Inlet Landfarm, Supplement Information Guideline, Operation and Maintenance Plan – Existing Licence # 1BR-RAN2131	Government of Nunavut, Department of Community and Government Services Petroleum Products Division, March 7, 2022
Inspection Report – CIRNAC	Inspector Amsel, July 5, 2022



C. RESULTS OF REVIEW

1. Volume of contaminated soils in existing landfarm

Comment:

On page one of the introduction section of the Supplementary Application filed by the Petroleum Products Division of the Government of Nunavut, (PPD) on March 7th, 2022, the proponent states;

“In 2021, the landfarm experienced large deposit of impacted soil from both PPD spill and other agencies in the community. This implied PPD for an expansion to the existing landfarm which is proposed to construct in May 2022”

CIRNAC is concerned that the existing landfarm is overcapacity as shown by the large stockpiles of untreated materials clearly evident in the July 2022 CIRNAC Inspection report (photos 1 and 2) . The initial landfarm was constructed to hold approximately 5000 Cubic meters of contaminated material however, from the spill records and the increased reports from 2021 this leaves the landfarm with no capacity to treat contaminated soils.

Additionally, given the statement in the application that work was set to commence in May of 2022 and the application is only now being reviewed in July, 2022. CIRNAC is concerned that this work has already begun without the approval of the Water Board.

Recommendation:

(R-01) CIRNAC recommends that PPD stop putting contaminated soils within the facility until remediated soils can be removed following confirmatory testing. This would also ensure the landfarm is staying within the targeted capacity of the facility.

2. Size and capacity of the new facility to be constructed

Comment:

In Detailed Description of Facility section on page one of the Supplementary Application filed by the PPD on March 7, 2022 the proponent states that the facility will be located at the following Coordinates;

*“New Expansion Location GPS – Approximately (Lat/Long) 62°49’52.0” N, 93°49’36.3” W will be designed to hold **7000 CU.M** of contaminated soil which will be screen and remediated inside the landfarm”*



CIRNAC is concerned with the above statement and that there is a lack of new engineered drawings for the new construction. The engineering drawings and maps that were designed for the current landfarm are not sufficient for this expansion as they do not take into consideration the estimated expansion of 7000 cubes of contaminated soil in the design.

Recommendation:

(R-02) CIRNAC recommends that the construction not proceed until such time as the proponent provide proper drawings that are reflective of the proposed expansion and have been stamped and signed by an engineer . At which time they can be distributed and reviewed by regulators and the board.

3. Operation and Maintenance Plan.

Comment:

On page two, the Operation and Maintenance section of the Supplementary Application filed by the Petroleum Products Division of the Government of Nunavut, (PPD) on March 7th, 2022, The proponent states;

“Soil is always deposited no deeper than one meter.”

This statement is not accurate as evident by the photos taken in the CIRNAC inspection report.

Further;

“Contaminated soils are turned once a month during snow free seasons. Care is always taken not to rip the liner as this could cause contaminate leakage”

As noted in the Inspection report on Page 1 Point #7 “Observations”, since the inspection in 2020 there has been areas of concern where the containment liner has been exposed and this has yet to be fixed. The exposed liner poses a serious risk to the integrity of the facility and poor maintenance contributes to the risk that contamination from the landfarm will enter groundwater.

Recommendation:

(R-03) CIRNAC recommends that until such time as the proponent provides evidence of compliance and completed maintenance required by the existing facility the application for expansion be put on hold.