



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
918 Nunavut Drive
Iqaluit, NU, X0A 3H0

Your file - Votre référence
3BM-CLY1924
Our file - Notre référence
GCDOCS# 132995387

February 5, 2025

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 and Renewal Application for the Hamlet of Clyde River,
Type B Water Licence No. 3BM-CLY1924**

Dear Richard,

Thank you for the January 9, 2025 invitation to review the referenced licence amendment and renewal application, submitted by the Government of Nunavut Department of Community and Government Services on behalf of the Municipality of Clyde River, for Type B Water Licence No. 3BM-CLY1924.

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.

The applicant shall provide confirmation from the Nunavut Water Board that all outstanding water license fees have been paid in full prior to approval of this application.

If there are any questions or concerns, please contact me at (867) 975-3877 or Joyce.Demers@rcaanc-cirnac.gc.ca or Andrew Keim at (867) 975-4550 or Andrew.Keim@rcaanc-cirnac.gc.ca.

Sincerely,

Joyce Demers, B.Sc.,
Industrial Coordinator

Canada 



Technical Review Memorandum

Date: February 5, 2025

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

From: Joyce Demers – Industrial Coordinator, CIRNAC

Subject: Crown-Indigenous Relations and Northern Affairs Canada's Review of the Licence Amendment and Renewal Application for the Hamlet of Clyde River, Type B Water Licence No. 3BM-CLY1924

Region: ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

A. BACKGROUND

The municipality of Clyde River is located within the Qikiqtani Region of Nunavut on the shore of Patricia Bay, at the geographical coordinates 70° 27' N and 68° 33' W. The municipality operates a water supply facility (natural lake reservoir called Emirtavik Lake, pumphouse with truck fill) and solid and sewage waste management facilities (solid waste disposal facilities with municipal waste, bulk metal disposal area which also includes hazardous waste, there is also a two-cell lagoon and natural tundra wetland system with truck discharge area) under the Type B Municipal Licence No. 3BM-CLY1924.

The Government of Nunavut Community of Government Services (GN-CGS) is applying, on behalf of the Hamlet of Clyde River, for the 20 year renewal and amendment of licence.

There are 21 amendments which are as follows:

1. Change term "Hamlet" to "Municipality";
2. Remove requirement to report daily quantities of sewage and solid waste discharged to monthly and annually;
3. Remove municipal boundaries to "in the areas of the Water Supply or Waste Disposal Facilities" for spills related to Licenced Facilities;
4. 53,600 cubic metres to 72,000 cubic metres yearly with max 299 cubic meters daily
5. Removal of requiring a hydrological study be conducted on Emirtavik Lake to determine the viability of the water sources for future use and submitting the study in the 2025 annual report instead of before the increase;
6. Amend compliance points of CLY-4 and CLY-5 to CLY-6b as CLY-6b is the end point of treatment;
7. Amend the parameter BOD5 to cBOD with a 100 mg/L maximum concentration of any grab sample;
8. Amend the maximum concentration of any grab sample of 120 mg/L for total suspended solids;



9. Remove Plan entitled “Hazardous Waste Segregation, Storage and Transportation Procedure” dated July 2019 and replace it with a plan called Municipality of Clyde Operation & Maintenance Plan for Municipal Water Licence: Solid Waste Disposal Facilities” dated November 2024;
10. Amend “Spill Response Plan – Clyde River, Nunavut” dated June 19, 2019 to “Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence” dated November 2024;
11. Amend “Clyde River Truck-fill Operations and Maintenance Manual” which was submitted in the 2019 annual report to “Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Water Supply Facilities” dated November 2024;
12. Amend “Solid Waste Operation and Maintenance Plan” to “Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Solid Waste Disposal Facilities” dated November 2024;
13. Amend submission timeline for inspections of engineered facilities related to the management of water and waste shall be carried by an Engineer (Civil, Municipal or Geotechnical) before commissioning any facility from 60 days after the inspection to 60 days after receiving the inspection report;
14. Amend “Spill Response Plan - Clyde River, Nunavut” under Part F Item 7a to read the updated plan titled “Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence” dated November 2024;
15. Remove sampling points CLY-6a, CLY-9, CLY-10, CLY-11, and CLY-12 from monitoring program [H-1 and H-4];
16. Remove requirement to measure and record daily, monthly, and annual quantities in cubic metres of sewage discharged;
17. Amend “Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2” dated July 2012 to “Municipality of Clyde Operation & Maintenance Plan for Municipal Water Licence: Sewage Disposal Facilities” dated November 2024;
18. Remove requirement to monitor annually in early to mid-fall, prior to freezing, for the presence of seepage within standpipes at Monitoring Station(s) CLY-11. If seepage is observed, the licensee shall sample and analyze the seepage for the parameters listed in Part H Item 4;
19. Remove requirement to monitor temperature at Monitoring Station(s) CLY-9 and CLY-10, a minimum of twice annually, in early spring and mid to late fall in accordance with the approved Operations and Maintenance Plan entitled “Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2” dated July 2012;
20. Remove requirement to monitor settlement and displacement annually at Monitoring Station(s) CLY-12 in accordance with the approved Operations and Maintenance Plan entitled “Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and 15 NUNAVUT WATER BOARD | Licence No. 3BM-CLY1924 Maintenance Manual Volumes 1 and 2” dated July 2012;
21. Remove requirement for monitoring results of settlement stations at Monitoring Stations CLY-9, CLY-10, CLY-11, and CLY-12 in future annual reports.



The application also suggests that there are also future plans in 2026 to upgrade the solid waste disposal facility which documentation and correspondence will be provided when available.

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
1	Environmental Emergency Contingency Plan
2	Location of Spill Kits Not Easily Identifiable and Locked
3	MSDS Sheets
4	Sewage Spill Cleanup - Dilution
5	QA/QC Sampling Locations GPS Coordinates
6	Decanting Process
7	OM Plan Sewage Disposal Facility
8	OM Plan Solid Waste Disposal Facility
9	OM Plan Solid Waste Disposal Facility – Fence
10	OM Plan Solid Waste Disposal Facility – Hazardous Materials
11	Open Burning
12	OM Plan Water Supply Facility Inconsistencies
13	OM Plan Water Supply Facility – Daily Quantities Missing
14	OM Plan Solid Waste Disposal Facility
15	Length of Renewal Application
16	Proposed Amendments to the Water Licence

**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
190820 3BM-CLY1924 Renewal Licence-OASE	Nunavut Water Board, August 20, 2019
241219 3BM-CLY1924 Amendment Justification Letter-IMLE	Government of Nunavut Community and Government services, October 17, 2024
241219 3BM-CLY1924 Cover Letter-IMLE	Government of Nunavut Community and Government services, November 1, 2024
241219 3BM-CLY1924 Letter of Authorization-IMLE	Municipality of Clyde River, September 17, 2024
241219 3BM-CLY1924 NPC Letter of Conformity Determination 2019-IMLE	Nunavut Planning Commission, April 26, 2019
241219 3BM-CLY1924 NPC Letter of Conformity Determination 2024-IMLE	Nunavut Planning Commission, September 13, 2024
241219 3BM-CLY1924 Plan for Compliance 2024-IMLE	N.A., N.D.
241219 3BM-CLY1924 Summary English-IMLE	N.A., N.D.
250107 3BM-CLY1924 Environmental Emergency Contingency Plan with Appendices-IMLE	Government of Nunavut Community and Government services and Dillon Consulting Limited, November 2024
250107 3BM-CLY1924 Environmental Monitoring and QA QC Plan with Appendices-IMLE	Government of Nunavut Community and Government services and Dillon Consulting Limited, November 2024
250107 3BM-CLY1924 OM Plan Sewage Disposal Facility with Appendices-IMLE	Government of Nunavut Community and Government services and Dillon Consulting Limited, November 2024
250107 3BM-CLY1924 OM Plan Solid Waste Disposal Facility with Appendices-IMLE	Government of Nunavut Community and Government services and Dillon Consulting Limited, November 2024
250107 3BM-CLY1924 OM Plan Water Supply Facility with Appendices-IMLE	Government of Nunavut Community and Government services and Dillon Consulting Limited, November 2024
250108 3BM-CLY1924 Application for Amendment and Renewal-IMLE	Government of Nunavut Community and Government services, December 19, 2024
250109 3BM-CLY1419 Renewal Notice-OMLE	Nunavut Water Board, January 9, 2025
250109 3BM-CLY1924 Renewal&Amendment Water Licence Application-OMLE	Nunavut Water Board, January 9, 2025
200116 3BM-CLY1924 IQALUIT-#1269293-v2-2019_CLYDE_RIVER_INSPECTION_REPORT-ILAE	Crown-Indigenous Relations and Northern Affairs Canada, October 3, 2019



C. RESULTS OF REVIEW

1. Environmental Emergency Contingency Plan

Comment:

Section 4.0 Spill Reporting Procedure states that “Fill out the NWT/Nunavut Spill Report Form (Appendix B) within thirty (30) days of the spill event occurring.” However no Appendix B was provided. I believe it should be read as Appendix A. This is a concern as the individual writing the report may not know which report the plan is referring to.

Recommendation:

(R-01) CIRNAC recommends that the applicant double check if they meant to write Appendix A instead of B and provide appendix B if it is required.

2. Location of Spill Kits Not Easily Identifiable and Locked

Comment:

Section 6.2 Spill Response Equipment Inventory states that “The spill response kits should be stored in the on-site locker at the Hazardous Waste Storage Area provided for this purpose. Some equipment may be stored in other areas throughout the community.”. It is not easily identifiable where the location of the spill kits are. Spill kits should not be locked in the event of a spill they need to be easily assessable to ensure maximum effectiveness of the clean up efforts. Spill kits need to be placed in areas where spills are likely to occur.

Recommendation:

(R-02) CIRNAC recommends that the applicant clarify the location of all spill kits and ensure that they remain unlocked.

3. MSDS Sheets

Comment:

MSDS sheets should be provided in the Municipality of Clyde River Environmental Emergency Contingency Plan such as but not limited to the hazardous items listed in Table 1 Potential Hazardous Materials: granular hypochlorite, diesel fuel, gasoline, lubrication oil, antifreeze, hydraulic oil, motor oil, batteries, Jet-A fuel, and propane. Having the MSDS sheets included in the plan will give the individual cleaning the spill more knowledge on the hazardous substance being cleaned and gives important cleanup and safety information.

Recommendation:

(R-03) CIRNAC recommends that the applicant provide the MSDS sheets for hazardous materials which personnel working are likely to encounter.



4. Sewage Spill Cleanup - Dilution

Comment:

Section 5.4 Mitigative Measures: Sewage states that “A small spill (truck leak or household tank leak) is not a significant environmental issue, site control containment and clean up can be accomplished without significant concerns. Dilution with water is an effective remedy for any residual.” The document also states that the mitigative measures to follow a large spill should be to “Dilute with water pumped from local streams”. Dilution is not a form of treatment.

The Proponent is reminded that is sewage contamination is a hazardous waste and can persist for weeks or months, posing a health risk to the community at large. Sewage contains harmful bacteria, viruses, and parasites that can cause a variety of illnesses, including: Gastrointestinal issues (diarrhea, vomiting), children and elders and those with a compromised immune system are especially vulnerable.

The Environmental Guideline for the General Management of Hazardous Waste states that “Hazardous waste must not be mixed or diluted with another substance, or divided into smaller quantities, simply to avoid meeting the definition of a hazardous waste.” (Department of Environment Government of Nunavut, 2010).

Recommendation:

(R-04) CIRNAC recommends that the applicant remove dilution as a form of treatment to cleaning up a sewage spill.

Reference:

Department of Environment Government of Nunavut. (2010). *Environmental Guideline for the General Management of Hazardous Waste*. Retrieved January 31, 2025 from https://www.gov.nu.ca/sites/default/files/publications/2022-01/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20%28revised%20Oct%202010%29_0.pdf

5. QA/QC Sampling Locations GPS Coordinates

Comment:

Please include GPS coordinates for the sampling locations in Table 1: Water License Sampling Locations in the Environmental Monitoring and QA QC Plan. Including the GPS coordinates in the plans that make reference to them will ensure accuracy in compliance.



Recommendation:

(R-05) CIRNAC recommends that the applicant provide the GPS coordinates for the sampling locations in Table 1 in the Environmental Monitoring and QA QC Plan.

6. Decanting Process

Comment:

In the OM Plan Sewage Disposal Facility document under section 6.0 SDF Design is states that “Sewage trucks will continue discharging to the lagoon throughout the decanting process”. Under section 7.0 Effluent discharge it states that the duration of decanting will take a month to process. The new sewage that is being placed during this period will not have had enough time to go through some form of treatment before it is released into the environment. The concern is that during the decanting process a whole month worth of sewage will just be diluted instead of treated. Clyde River has two lagoons and could decant one while using the other to ensure maximum effectiveness of the lagoon and wetland system.

Under section 7.0 Effluent Discharge it states that the average discharge flowrate is unknown. The concern is that the decanting process may create divots in the ground when it is released causing the wetland treatment to be under utilized and therefore less effective for treatment.

Recommendation:

(R-06) CIRNAC recommends that the applicant clarify how their decanting process works with regards to timeline and release into the wetlands.

The proponent is reminded that effective treatment requires holding times in a passive Lagoon treatment system to achieve treatment that includes time for flocculation and settling, biodegradation via organic decomposition and ultraviolet disinfection through sunshine and photosynthesis. It is incumbent on the proponent to provide an operations and maintenance manual that meets these minimum objectives.

7. OM Plan Sewage Disposal Facility

Comment:

The list of appendices details that there is an appendix B which has photographs. These were not included in the plan and it is unclear what information they had.

Recommendation:

(R-07) CIRNAC recommends that the applicant include Appendix B or remove it in the table of contents from the OM Plan Sewage Disposal Facility.



8. OM Plan Solid Waste Disposal Facility

Comment:

- a. List of appendices outlines that an appendix B which has photographs and C listed as other. These were not included in the plan and therefore not sure what they were about. Appendix A was as-built drawings however unsure about the image found in that appendix. The concern is that this may be important information required to the plan.
- b. In section 1.2.1 include: temperatures reaching 50°C in July, and a single cell sewage lagoon instead of two lagoon cells. This is just a small typo observed what should be corrected.
- c. Under section 7.0 Monitoring, Table 1- Requirements should also include a section for quantifying the amount of waste discharged at the solid waste disposal facility as required by the water licence Part B item d “the daily, monthly and annual quantities in cubic metres of each and all waste discharged; including the hazardous and non-hazardous waste accepted at the Solid Waste Facilities” [Note that the applicant is requesting to remove daily and keep monthly/annual quantities and therefore CIRNAC suggests that the applicant should update and submit the updated plan with the annual report when the water board renders its decision.]

Recommendation:

(R-08) CIRNAC recommends that the applicant include Appendix B and C, fix the temperature error and include a line in table 1 under section 7 including the requirement of the water licence Part B item d [unless it is no longer required by the water licence see comment 16.2, 14].

9. OM Plan Solid Waste Disposal Facility – Fence

Comment:

Under section 5.1 Municipal Waste Disposal in the document labeled OM Plan Solid Waste Disposal Facility states that “There is a dilapidated fence located on the south face of the landfill which is intended to prevent debris from being blown from the site into the ocean.” The concern is that this fence will degrade to the point where it is no longer useful which would potentially allow debris to enter into nearby water bodies.

Recommendation:

(R-9) CIRNAC recommends that the applicant provide information about ensuring that the fence remain in workable conditions.



10. OM Plan Solid Waste Disposal Facility – Hazardous Materials

Comment:

Under section 5.1 Municipal Waste Disposal in the document labeled OM Plan Solid Waste Disposal Facility states that

“The landfill does not have berms, gate, lights or designated areas for different wastes. This facility reportedly has a capacity issue.

The Bulky metals site is located at the north of the access road and opposite to the sewage lagoon. This site receives all the metal wastes without any segregation. A dump truck or low bed is used to transport bulky metals from the community to this site. A hazardous waste management cell was not built within the bulky metals site. As a result, the hazardous wastes are mixed up with other materials.”

The water licence states under Part D item 7 that “The Licensee shall segregate and store all hazardous materials and/or hazardous waste within the Solid Waste Disposal Facility in a manner as to prevent the deposit of deleterious substances into any water until such a time as proper disposal arrangements are made.”

The concern is that hazardous waste will end up in nearby water bodies. The excel sheet labeled Plan for Compliance 2024 states that “Solid waste facility upgrades expected to take place in 2026 pending Council Motion approving the project and available funding.” and also states that it is in compliance. Hazardous waste should be contained within a lined berm as well as segregated.

Figure 2 located in OM Plan Solid Waste Disposal Facility in Appendix A shows segregation of the hazardous materials. It is unclear how hazardous materials are being segregated and if they are under what conditions.

Recommendation:

(R-10) CIRNAC recommends that the applicant clarify how hazardous materials are being segregated and properly stored. If this can not be met then the compliance plan should be updated to read – Non-Compliant.

11. Open Burning

Comment:

All burning should occur within an incinerator or some kind of approved burn cage, etc to reduce the amount of ash and unburnt debris flying into nearby water bodies.

Recommendation:

(R-11) CIRNAC recommends that the applicant not open burn.



12. OM Plan Water Supply Facility Inconsistencies

Comment:

The OM Plan Water Supply Facility states that there is an Appendix B listed as other however it is not provided.

Under section 4.0 security and control with regards to access control to the facility it states that “Perimeter fencing around the lagoon” when talking about the water supply facility.

Recommendation:

(R-12) CIRNAC recommends that the applicant fix the inconsistencies in the plan and then take operational steps to fix the deficiencies in the operations on site.

13. OM Plan Water Supply Facility – Daily Quantities Missing

Comment:

Under section 7.0 Monitoring in table 1 states, “Monthly and annual quantities of fresh water obtained from all sources”. It should read “**Daily, monthly and annual** quantities of fresh water obtained from all sources in order to be compliant with the water licence Part B item 1.c “the daily, monthly and annual quantities in cubic metres of freshwater obtained from all sources”.

Recommendation:

(R-13) CIRNAC recommends that the applicant update the table to reflect the water licence requirements.

14. OM Plan Solid Waste Disposal Facility

Comment:

Under section 15 it states that household solid wastes such as household waste, small meal waste, tires, electronics, paper wood, etc will be collected from bins and dropped off at the solid waste site. It is unclear if tires and electronics are placed with the regular municipal waste and then burned at the site.

Under section 15 it states that hydrocarbon contaminated soils will be placed into the landfarm however there was no mention of a landfarm in the OM Plan Solid Waste Disposal Facility or any other plan submitted to the Nunavut Water Board.

Recommendation:

(R-14) CIRNAC recommends that the applicant clarify how tires and electronic waste will be disposed of and clarify if Clyde River has a landfarm.



15. Length of Renewal Application

Comment:

The application for amendment and renewal document states that the applicant is applying for a 23 year renewal while the Summary document states that they are applying for a 20 year renewal/amendment application.

Recommendation:

(R-15) CIRNAC recommends that the applicant clarify the length of the renewal application but recommends a license for no longer than 5 years to allow the applicant to come into compliance with the license.

16. Proposed Amendments to the Water Licence

Comment:

Table 3. Proposed Amendments to Water Licence and CIRNAC's Position

Number	Water Licence Item #	Request	CIRNAC Position
1	All Application items	Change term "Hamlet" to "Municipality";	Agrees / no position
2	B-1-d	Remove requirement to report daily quantities of sewage and solid waste discharged to monthly and annually	Differs to the Nunavut Water Board
3	B-7	Remove municipal boundaries to "in the areas of the Water Supply or Waste Disposal Facilities" for spills related to Licenced Facilities	Does not agree
4	C-2 and quantity of water use	53,600 cubic metres to 72,000 cubic metres yearly with max 299 cubic meters daily	Agrees under condition
5	C-3	Removal of requiring a hydrological study on Emirtavik Lake during the summer of 2025 to determine the viability of the water sources for future use and submitting the study in the 2025 annual report	Does not agree
6	D-2	<ul style="list-style-type: none"> a. Amend compliance points of CLY-4 and CLY-5 to CLY-6b as CLY-6b is the end point of treatment; b. Amend the parameter BOD5 to cBOD with a 100 mg/L maximum concentration of any grab sample; 	<p>Agrees to change BOD5 to CBOD5</p> <p>Clarification needed for b and c</p>



		c. Amend the maximum concentration of any grab sample of 120 mg/L for total suspended solids	
7	F-1	Remove Plan entitled "Hazardous Waste Segregation, Storage and Transportation Procedure" dated July 2019	Does not Agree
8	F-2	Amend "Spill Response Plan – Clyde River, Nunavut" dated June 19, 2019 to "Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence" dated November 2024	Does not Agree
9	F-3	Amend "Clyde River Truck-fill Operations and Maintenance Manual" which was submitted in the 2019 annual report to "Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Water Supply Facilities" dated November 2024	Does not Agree
10	F-4	Amend "Solid Waste Operation and Maintenance Plan" to "Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Solid Waste Disposal Facilities" dated November 2024	Does not Agree
11	F-5	Amend submission timeline for inspections of engineered facilities related to the management of water and waste shall be carried by an Engineer (Civil, Municipal or Geotechnical) before commissioning any facility from 60 days after the inspection to 60 days after receiving the inspection report	Agrees as it is done before commissioning any facility
12	F-7-a	Amend "Spill Response Plan - Clyde River, Nunavut" under Part F Item 7a to read the updated plan titled "Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence" dated November 2024	Does not Agree
13	H-1	Remove sampling points CLY-6a, CLY-9, CLY-10, CLY-11, and CLY-12 from monitoring program	Does not Agree
14	H-3	Remove requirement to measure and record daily, monthly, and annual quantities in cubic metres of sewage discharged	Differs to the Nunavut Water Board
15	H-4	Remove sampling points CLY-6a from monitoring program	Agrees



16	H-8	Amend "Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2" dated July 2012 to "Municipality of Clyde Operation & Maintenance Plan for Municipal Water Licence: Sewage Disposal Facilities" dated November 2024	Does not Agree
17	H-9	Remove requirement to monitor annually in early to mid-fall, prior to freezing, for the presence of seepage within standpipes at Monitoring Station(s) CLY-11. If seepage is observed, the licensee shall sample and analyze the seepage for the parameters listed in Part H Item 4	Does not Agree
18	H-10	Remove requirement to monitor temperature at Monitoring Station(s) CLY-9 and CLY-10, a minimum of twice annually, in early spring and mid to late fall in accordance with the approved Operations and Maintenance Plan entitled "Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2" dated July 2012	Does not Agree
19	H-11	Remove requirement to monitor settlement and displacement annually at Monitoring Station(s) CLY-12 in accordance with the approved Operations and Maintenance Plan entitled "Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and 15 NUNAVUT WATER BOARD Licence No. 3BM-CLY1924 Maintenance Manual Volumes 1 and 2" dated July 2012	Does not Agree
20	H-12	Remove requirement for monitoring results of settlement stations at Monitoring Stations CLY-9, CLY-10, CLY-11, and CLY-12 in future annual reports	Does not Agree



16.2 & 16.14 – Reporting Quantities of Sewage and Solid Waste

2	B-1-d	Remove requirement to report daily quantities of sewage and solid waste discharged to monthly and annually	Differs to the Nunavut Water Board
14	H-3	Remove requirement to measure and record daily, monthly, and annual quantities in cubic metres of sewage discharged	Differs to the Nunavut Water Board

Comment:

The concern is that an non-accurate amount of waste will be reported therefore in the event of some kind of spill/mishap it will go underestimated. Larger spills are important to quantify for getting proper funding for clean up operations. CIRNAC differs to the Nunavut Water Board for substantive changes to monitoring requirements under the license.

Recommendation:

(R-16.2, 14) CIRNAC recommends that the applicant ensures that they are capable of an accurate reading of the sewage and solid waste be made monthly and annually and differs to the Nunavut Water Board for substantive changes to monitoring requirements under the license.

16.3 – Municipal Boundaries and Spills

3	B-7	Remove municipal boundaries to “in the areas of the Water Supply or Waste Disposal Facilities” for spills related to Licenced Facilities	Does not agree
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Comment:

The concern is that spills made around town by the applicant (such as a sewage truck leaking down a road) would not be covered in the water licence and therefore the applicant might not remediate spills as they would no longer be responsible for them. Spills must be cleaned regardless of who is at fault.

Recommendation:

(R-16.3) CIRNAC recommends that the applicant talk with QEC and NHC and discuss amongst themselves about how to fix this issue.



16.4 – Increase Amount of Water Intake

4	C-2 and quantity of water use	53,600 cubic metres to 72,000 cubic metres yearly with max 299 cubic meters daily	Agrees under condition
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Comment:

CIRNAC does not disagree with allowing the new yearly maximum be 72,000 cubic metres. CIRNAC's concern is with the capacity of the sewage lagoon as well as the capacity for the wetlands to be able to treat the increased amount of waste.

Note that in the OM Plan Sewage Disposal Facilities document under section 1.2 SWDF [sewage disposal facility] Site Summary that the design life of the of the facility is expected to expire in 2028. The water licence length will be past this date and therefore it is important to ensure that there is a plan in place to ensure that sewage is properly held, treated and disposed of during the full length of the water licence.

The 2019 inspection report states that “At the time of the inspection, the sewage lagoon was in-use. The walls were operating as intended, no signs of leakage, but some slumping or erosion were observed on the west side of the lagoon walls ...”. The concern is that the lagoon would not be able to hold the increased capacity.

The Hydrologic study set to be conducted in 2025 on Emirtavik Lake must be completed before the increase in water is taken. The concern is that the lake will not be able to viability sustain the increased water consumption.

Recommendation:

(R-16.4) CIRNAC recommends that the applicant state if the lagoons are capable of holding the increased capacity during the full term of the licence, the wetlands will be able to handle the increased amount of waste for treatment in order to remain compliant with the sewage discharge criteria of the licence and upon provision of the Hydrologic study that verifies the increased usage is sustainable.

16.5 – Hydrological Study

5	C-3	Removal of requiring a hydrological study on Emirtavik Lake during the summer of 2025 to determine the viability of the water sources for future use and submitting the study in the 2025 annual report	Does not agree
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Comment:

CIRNAC does not disagree with removing the requirement for a hydrological study to be conducted on the water source to ensure sufficient volume. CIRNAC agrees that the study can be conducted in 2025 and submitted during the 2025 annual report as long as the applicant does not deplete the water source.

Recommendation:

(R-16.5) CIRNAC recommends that the applicant not deplete the water source and that the requirement to conduct a hydrological study to ensure sufficient volume stay a requirement within the water licence.

16.6 – Compliance Points and Concentration of Samples

6	D-2	<ul style="list-style-type: none">a. Amend compliance points of CLY-4 and CLY-5 to CLY-6b as CLY-6b is the end point of treatment;b. Amend the parameter BOD5 to cBOD with a 100 mg/L maximum concentration of any grab sample;c. Amend the maximum concentration of any grab sample of 120 mg/L for total suspended solids	<p>Agrees to change BOD5 to CBOD5</p> <p>Clarification needed for b and c</p>
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Comment:

CIRNAC agrees that CBOD5 is considered to be better practice than BOD5 readings and has agrees with that change.

CIRNAC does not understand the reasoning for changing compliance points CLY4/5 to CLY-6b nor what is meant by grab sample. *Good Engineering Practice for Northern Water and Sewer Systems*, Government of Northwest Territories (2017) indicates that applicants effluent criteria should be as follows: for CBOD5 25 mg/L and total suspended solids 25 mg/L. It is unclear what the reasoning is for asking BOD5 maximums be 100 mg/L and total suspended solids maximum to be 120 mg/L.

Recommendation:

(R-16.6) CIRNAC recommends that the applicant clarify what is being asked for and the reasoning for the CBOD5 and total suspended solids maximum to be elevated compared the best practices.



16.7, 16.8, 16.10, 16.12 & 16.16 – Updated Management Plans

7	F-1	Remove Plan entitled “Hazardous Waste Segregation, Storage and Transportation Procedure” dated July 2019	Does not Agree
8	F-2	Amend “Spill Response Plan – Clyde River, Nunavut” dated June 19, 2019 to “Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence” dated November 2024	Does not Agree
10	F-4	Amend “Solid Waste Operation and Maintenance Plan” to “Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Solid Waste Disposal Facilities” dated November 2024	Does not Agree
12	F-7-a	Amend “Spill Response Plan - Clyde River, Nunavut” under Part F Item 7a to read the updated plan titled “Municipality of Clyde River Environmental Emergency Contingency Plan for Municipal Water Licence” dated November 2024	Does not Agree
16	H-8	Amend “Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2” dated July 2012 to “Municipality of Clyde Operation & Maintenance Plan for Municipal Water Licence: Sewage Disposal Facilities” dated November 2024	Does not Agree

Comment:

CIRNAC notes that some of the 2019 Manuals were more clear than the proposed 2024 Manuals. It was difficult to find what was changed between the two plans as the document control section was not properly filled.

Recommendation:

(R-16.7,8,10,12,16) CIRNAC recommends that the applicant submit the updated plans with the document control section filled to reflect which sections were removed or edited.



16.9 – Clyde River Truck-fill Operations and Maintenance Manual

9	F-3	Amend “Clyde River Truck-fill Operations and Maintenance Manual” which was submitted in the 2019 annual report to “Municipality of Clyde River Operation & Maintenance Plan for Municipal Water Licence: Water Supply Facilities” dated November 2024	Does not Agree
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Comment:

CIRNAC has unable to find the plan in the 2019 annual report as a 2019 annual report was not submitted. The plan is also not included in the 2018 or 2020 annual reports. Without the manual/plan CIRNAC cannot comment.

Recommendation:

(R-16.9) CIRNAC recommends that the applicant submit the Clyde River Truck-fill Operations and Maintenance Manual for review before removing.

16.13, 16.17, 16.18, 16.19& 16.20 – Removal of Sampling Location CLY-6a, CLY-9, CLY-10, CLY-11, and CLY-12 from monitoring program

13	H-1	Remove sampling points CLY-6a, CLY-9, CLY-10, CLY-11, and CLY-12 from monitoring program	Does not Agree
17	H-9	Remove requirement to monitor annually in early to mid-fall, prior to freezing, for the presence of seepage within standpipes at Monitoring Station(s) CLY-11. If seepage is observed, the licensee shall sample and analyze the seepage for the parameters listed in Part H Item 4	Does not Agree
18	H-10	Remove requirement to monitor temperature at Monitoring Station(s) CLY-9 and CLY-10, a minimum of twice annually, in early spring and mid to late fall in accordance with the approved Operations and Maintenance Plan entitled “Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and Maintenance Manual Volumes 1 and 2” dated July 2012	Does not Agree
19	H-11	Remove requirement to monitor settlement and displacement annually at Monitoring Station(s)	Does not Agree



		CLY-12 in accordance with the approved Operations and Maintenance Plan entitled "Clyde River Wastewater Facility, Clyde River, Nunavut, Operations and 15 NUNAVUT WATER BOARD Licence No. 3BM-CLY1924 Maintenance Manual Volumes 1 and 2" dated July 2012	
20	H-12	Remove requirement for monitoring results of settlement stations at Monitoring Stations CLY-9, CLY-10, CLY-11, and CLY-12 in future annual reports	Does not Agree

Comment:

CIRNAC does not agree to remove sampling points CLY-9, CLY-10, CLY-11, and CLY-12 without seeing the justification of removing them. CGS contracted Dillon to conduct a study regarding the frequency of an of an engineer's inspection of the water and waste infrastructure including the Clyde River sewage lagoon which will be provided in the 2024 annual report. Therefore, without evidence stating why these sampling points should be removed CIRNAC does not agree to remove them.

CIRNAC agree with the removal of CLY-6a as a sampling point because it is redundant.

Recommendation:

(R-16.13,17,18,19,20) CIRNAC recommends that the applicant submit an application to remove sampling point CLY-9, CLY-10, CLY-11, and CLY-12 after it has provided the study stating that those points are no longer required.