CITY OF IQALUIT

WATER LICENCE 3AM-IQA1626

2021-2024 Annual Report Review Response

October 3, 2025

Richard Dwyer

Manager of Licencing

Nunavut Water Board

Dear Mr. Dwyer,

The following are the City of Iqaluit responses to comments and recommendations contained in CIRNAC's Technical Review Memorandum dated July 28, 2025. There are a few outstanding responses the City is still working on and these will be forwarded as soon as they are finalized.

Yours truly,

Kevin Kerr, P.Eng.

Director of Engineering & Capital Projects

C. UNRESOLVED RECOMMENDATIONS ON THE 2021 ANNUAL REPORT

1. Quantify and report the volume of spills or unauthorized discharges in the future

CIRNAC Comment on the City of Iqaluit's response
A total of only four spills were reported in the 2024 Annual Report, and three of the four spill reports did not include a volume of spill. CIRNAC requests confirmation that the City is recording volume of spills in 2025 and will be reporting them in the 2025 Annual Report.

City of Iqaluit's response
Yes, the City is recording volume of spills in 2025 and will be reporting them in the 2025 Annual Report. Operational staff have been reminded to include estimated volumes in all spill reports.

D. LICENSEE RESPONSE TO CIRNAC UNRESOLVED RECOMMENDATIONS ON THE 2022 ANNUAL REPORT

3. Sampling for the monitoring and QA/QC program

CIRNAC Comment on the City of Iqaluit's response
(R-03b) S::CAN data was not provided as in the revised 2023 Annual Report nor in the 2024 Annual Report. It is acknowledged that the 2023 data would not be available due to storage issues, however no data was provided in 2024 following CIRNAC 2023 recommendations. CIRNAC recommends the City submit updated S::CAN device downloading and data storage procedures with their response to the 2024 Annual Report comments.

City of Iqaluit's response
S::CAN data was not available for 2024 however the City can now access S::CAN data through a web-based portal so download and data storage procedures are not required. S::CAN data should be accessible through the web-based portal beginning with the 2025 annual report.

CIRNAC Comment on the City of Iqaluit's response
(R-03e) The City of Iqaluit response indicates that operating procedures have been updated for the WTP. Review of 2024 WTP log sheets indicate that the pH recorded was regularly below the GCDWQ 7.0. CIRNAC recommends the City provide an update on steps taken to meet pH guideline.

City of Iqaluit's response
The existing caustic soda system is not working. City staff are currently engaging a third-party consultant to restore the system to full operation. This process will involve reviewing and accessing the existing system to ensure it can be made operational, as well as coordinating the logistics to secure all necessary materials and equipment required to bring it back online. The objective is to have the system functioning by 2026 in order to maintain pH levels within the GCDWQ of 7.0 to 10.5.

5. Updated plans, manuals and reports in 2022

CIRNAC Comment on the City of Iqaluit's response

(R-05c) City of Iqaluit Operations and Maintenance Manual Landfill and Waste Transfer Station

City of Iqaluit's response

O&M manual for the North 40 Landfill Site and the Waste Transfer Station is in the Appendix

CIRNAC Comment on the City of Iqaluit's response

(R-05d) Updates to WWTP Operations and Maintenance Manual following substantial completion/commissioning

City of Iqaluit's response

O&M manual for the WWTP is in the Appendix

CIRNAC Comment on the City of Iqaluit's response

(R-05e) Updates to the Iqaluit Water Treatment Plant Operation and Maintenance Manual to reflect the modifications of the filters to GAC media.

City of Iqaluit's response

Outstanding, City will follow up and forward response by the end of the year.

6. Un-authorized discharges and spills

CIRNAC Comment on the City of Iqaluit's response

(R-06b) An updated Spill Contingency Plan that specifies the most common causes of spills and unauthorized discharges and incorporates these causes into the Plan has not been submitted to the Nunavut Water Board for review. CIRNAC recommends an updated Spill Contingency Plan is submitted.

City of Iqaluit's response

An updated Spill Contingency Plan is in the Appendix

9. Supplementary Lake Geraldine Water Balance Modelling for 2022

CIRNAC Comment on the City of Iqaluit's response

(R-09b) CIRNAC recommends an updated schedule for completion of the Water Balance modelling be provided with the City's 2024 Annual Report responses and the Bathymetric Survey and Lake Geraldine Water Balance modelling report be submitted with the City's Water Licence Renewal Application.

City of Iqaluit's response

A bathymetric survey was completed in 2024 and the data provided to the City's consultant, WSP. WSP have provided a draft technical memo which is included with these responses. A copy of the final memorandum will be provided once the City and our consultants review the draft. It should be completed in time to be included in our licence renewal application.

E. LICENSEE RESPONSE TO CIRNAC UNRESOLVED RECOMMENDATIONS ON THE 2023 ANNUAL REPORT

2.Sampling for the monitoring and QA/QC program

CIRNAC Comment on the City of Iqaluit's response

(R-02a) To clarify, CIRNAC does not expect the City to provide the data in a table similar to Schedule I of the Water Licence. CIRNAC recommends the City provide the sampling locations, sampling frequency, and analyses in compliance with Schedule I of Water Licence No. 3AM-IQA1626 in the 2024 Annual Report.

City of Iqaluit's response

The City acknowledges its responsibility for not providing the sampling locations, sampling frequency, and analyses in full compliance with Schedule I of Water Licence No. 3AM-IQA1626. Current City staff are aware of all sampling points, including those added under the amendments. The City is committed to improving the quality and consistency of sampling reports in 2026 and is also pursuing the procurement of the necessary equipment to support proper sampling activities.

CIRNAC Comment on the City of Iqaluit's response

(R-02b) CIRNAC acknowledges the missing samples were not taken in 2023. CIRNAC reiterates that the City conduct monitoring and sampling in accordance with Schedule I of the Water Licence. It should be noted that Amendment 5 added Item 1:l to the Water Licence, which is for the "Construction and operation of the new solid waste management facilities, including the Waste Transfer Station, the New North Landfill, and associated infrastructure." Monitoring requirements for the stations relating to the Waste Transfer Station and the North 40 landfill during both construction and operation of these sites are outlined in Schedule I. CIRNAC recommends the City confirm water sampling is taking place in accordance with the Water Licence in 2025.

City of Iqaluit's response

The City acknowledges its responsibility for not providing samples for the WTS and The New North Landfill in full compliance with Schedule I of Water Licence No. 3AM-IQA1626 and its amendments. The City is committed to improving the quality and consistency of sampling reports in 2026 and is also pursuing the procurement of the necessary equipment to support proper sampling activities. Neither the WTS nor The New North Landfill have been put into operation to date.

3. ATCO Loop decommissioning and Federal Road Utilidor Extension

CIRNAC Comment on the City of Iqaluit's response

(R-03) The City has not clarified whether the required notification was carried out prior to the construction. Part G, item 1 of the Water Licence 3AM-IQA1626 conditions requires the Licensee to notify the Board at least 60 days prior to commencing modifications of facilities authorized under this Licence. Further, Part G, item 3 of the Water Licence 3AM-IQA1626 conditions requires the Licensee to submit to the Board for review, within 90 days of completion of the modification, as-built plans and drawings stamped by an Engineer,

City of Iqaluit's response

The required notification was not provided prior to construction, nor has the City submitted stamped as-built drawings. The City acknowledges that the article was misinterpreted, as it was originally understood that notification requirements applied only to upgrades at the Water Treatment Plant and Wastewater Treatment Plant. It has since been clarified that notification is also required for upgrades to the water distribution and wastewater collection systems.

6. Future Wastewater Treatment Plant studies planned

CIRNAC Comment on the City of Iqaluit's response

(R-06) The City of Iqaluit response to CIRNAC Comments/Recommendations for the 2022 Annual report (Recommendation R-04), indicated that "The City continues to address the operational challenges at the Wastewater Treatment Plant and implement remedial actions to ensure that the full treatment process is operational. The City has dedicated funds in 2024 to perform an holistic review of the plant and initiate updates and upgrades to parts of the system that are not operating as designed." The City has not indicated that this review has been completed in 2024. CIRNAC recommends the City provide a status update on the 2024 holistic review.

City of Iqaluit's response

The 2024 holistic review was not completed due to staff turnover and differing approaches taken to address any issues at the Wastewater Treatment Plant (WWTP). At present, the City is in the process of planning necessary HVAC upgrades for the WWTP, with detailed design scheduled to proceed in 2026. Appropriate notice will be provided as this project advances.

7. Un-authorized discharges and spills

CIRNAC Comment on the City of Iqaluit's response

(R-07a) CIRNAC recommends the City of Iqaluit provide the estimates or ranges for spill volumes when precise measurements are not available. If estimating is not possible, explain why.

City of Iqaluit's response

The City will provide estimates or ranges for spill volumes going forward. If estimates are not provided an explanation of why this information is not included will be provided.

CIRNAC Comment on the City of Iqaluit's response

(R-07b) CIRNAC recommends the City of Iqaluit provide clarification on how it was determined that the average volume spilled was less than 100 litres.

City of Iqaluit's response

The City is unable to substantiate the statement due to staff turnover; however, the City accepts full responsibility and will ensure that estimated spill volumes are provided moving forward.

CIRNAC Comment on the City of Iqaluit's response

(R-07c) CIRNAC recommends the City of Iqaluit provide more details on the follow-up actions, especially if they differ between incidents. Provide details on how spills were collected and disposed of and specify if additional monitoring or corrective actions were taken.

City of Iqaluit's response

The follow-up actions for most spills are generally consistent. City staff first scrape with the appropriated equipment and clean the affected area, with the removed material typically hauled to the lagoon, as it is primarily sludge. The sewer lines are then inspected using camera equipment to identify the cause and determine whether a break or collapse has occurred. Once the issue is located, City staff excavate around the damaged section, carry out the necessary repairs, and backfill the area with new material.

CIRNAC Comment on the City of Iqaluit's response

(R-07d) CIRNAC recommends the City of Iqaluit provide information on spills in addition to the reported wastewater spills.

City of Iqaluit's response

The City believes all spills have been reported. Can CIRNAC provide further clarification? Are there specific instances that CIRNAC are aware of that have not been reported?

9.Dam Safety Inspection Reports – Construction Works

CIRNAC Comment on the City of Iqaluit's response

(R-09a-b) CIRNAC recommends the City of Iqaluit clarify the required timeline for completion of the following:

a) Removal of the contaminated soil around the base of the hydro pole adjacent to the south berm.

City of Iqaluit's response

The City is coordinating removal of the contaminated soil and it is scheduled to be completed prior to December 19, 2025.

b) Removal and replacement of the contaminated soil atop the center and north berms.

City of Iqaluit's response

This work has been completed and confirmed by Concentric Engineering in June 2024.

c) Installation of new rip-rap material within the upstream face of the north and center berms before the reservoir is re-filled.

City of Iqaluit's response

he reservoir is currently full. The City will engage a contractor to complete the required work prior to May 29, 2025, in advance of the pumping season.

d) Minor work required to repair erosion damage within the north access road and new steel culverts.

City of Iqaluit's response

The City staffs are scheduled to get this completed by December 19, 2025.

e) Outstanding deficiencies remaining to be corrected by Nunavut Excavation.

City of Iqaluit's response
This work has been completed and confirmed by Concentric Engineering in June 2024.

f) Repair of the depressions at the base of the upstream face of the center and north berms.
City of Iqaluit's response
Addressed. No depressions were observed in the latest Meco DSI 2024 report provided.

g) Exercising and testing of the valves within the valve chamber
City of Iqaluit's response
The intake valve is being replaced in 2026. Going forward the valves will be exercised regularly.

h) Grout Injection Collars project above the surface
City of Iqaluit's response
Outstanding. Will be completed in 2026.

i) Instrumentation installed in 2019 is not being monitored
City of Iqaluit's response
Thermistors are now being monitored by City Staffs

j) Intake valve is not regularly operated and may not work on demand
City of Iqaluit's response
Intake valve chamber will be replaced in 2026

h) Planned CCTV instrumentation at the spillway is not installed
City of Iqaluit's response
City is looking into installing monitoring instrumentation in 2026.

11. 2023 Sample Results
CIRNAC Comment on the City of Iqaluit's response
(R-11a) CIRNAC recommends the City of Iqaluit advise if consideration has been given for exhaustion of GAC media and its ability to continue to remove hydrocarbons.
City of Iqaluit's response
The City contacted WSP for a response and WSP provided the following response - GAC capacity is tracked using turbidity post filter. There are setpoints for turbidity that will initiate a backwash once exceeded. If the turbidity is not exceeded after a period of time, the filter will initiate a backwash anyways based on time. This ensures the media stays fresh. If the media were exhausted, the turbidity would not be reduced post filter after a backwash or the frequency of backwashing would start to increase showing the media wasn't being cleaned. We do not expect media replacement to occur very often.

CIRNAC Comment on the City of Iqaluit's response

(R-11b) CIRNAC recommends the City of Iqaluit compile the lab results in an Appendix table with comparison to the applicable guidelines.

City of Iqaluit's response

Outstanding - City reviewing

12. Water Treatment Plant Report

CIRNAC Comment on the City of Iqaluit's response

(R-12) CIRNAC recommends the City of Iqaluit provide information on how GAC capacity is being tracked and steps that are in place in the event that the GAC media has reached capacity and requires replacement.

City of Iqaluit's response

Similar to the response to (R-11a) WSP provided the following response - GAC capacity is tracked using turbidity post filter. There are setpoints for turbidity that will initiate a backwash once exceeded. If the turbidity is not exceeded after a period of time, the filter will initiate a backwash anyways based on time. This ensures the media stays fresh. If the media were exhausted, the turbidity would not be reduced post filter after a backwash or the frequency of backwashing would start to increase showing the media wasn't being cleaned. We do not expect media replacement to occur very often.

14. Chlorine and Bacteria Results from the WTP (2023)

CIRNAC Comment on the City of Iqaluit's response

(R-14) S::CAN data was not provided as part of the 2023 Annual report due to storage issues. The 2024 Annual report did not include any S::CAN data following the 2023 CIRNAC recommendation. It is recommended that the City download the S::CAN data on a regular basis throughout the year to include in the Annual Report. CIRNAC requests the City confirm S::CAN data will be included in the 2025 Annual Report.

City of Iqaluit's response

Yes S::Can data will be included in the 2025 Annual Report.

15. 2024 Lake Geraldine Water Balance Assessment

CIRNAC Comment on the City of Iqaluit's response

(R-15) CIRNAC understands that the Bathymetric Survey is now complete, and the Lake Geraldine Water Balance modelling is ongoing. CIRNAC recommends an updated schedule for completion of the Water Balance modelling be provided with the City's 2024 Annual Report responses and the Bathymetric Survey and Lake Geraldine Water Balance modelling report be submitted with the City's Water Licence Renewal Application.

City of Iqaluit's response

A bathymetric survey was completed in 2024 and the data provided to the City's consultant, WSP. WSP have provided a draft technical memo which is included with these responses. A copy of the final memorandum will be provided once the City and our consultants review the draft. It should be completed in time to be included in our licence renewal application.

F. CIRNAC RECOMMENDATIONS ON THE 2024 ANNUAL REPORT

1.Water Withdrawal Reporting

CIRNAC Comment on the City of Iqaluit's response

(R-01) CIRNAC recommends the City clarify if Table 1 presents 2023 or 2024 raw water withdrawal data. If it presents 2023 data, it is recommended to provide the data for 2024.

City of Iqaluit's response

The data in Table 1 is from 2024. Table was mislabelled

2. Wastewater Discharge Reporting

CIRNAC Comment on the City of Iqaluit's response

(R-02) CIRNAC requests that the City record and report the annual treated sewage volumes discharged from the Sewage Lagoon (IQA-02) between July 30, 2024, and August 9, 2024, in the 2024 Annual Report.

City of Iqaluit's response

City staff identified a factory defect with the installed flow meter. The unit has since been returned to the supplier, and the replacement flow meter is scheduled to be installed in preparation for 2026.

3. Dam Safety Inspections / Dam Safety Review

CIRNAC Comment on the City of Iqaluit's response

(R-03) CIRNAC recommends the following:

a) The City of Iqaluit complete the four "very high priority" deficiencies (two newly identified, and two previously identified) within the year:

- Data collection from installed instrumentation

  City of Iqaluit's response

  Thermistors are now being monitored by City Staffs

- Repair and cut all protrusions remaining from the grout injection repairs

  City of Iqaluit's response

  Outstanding. Will be completed by the end of 2026

- Repair or relocation of the intake valve

  City of Iqaluit's response

  The City has contracted a third party to complete the relocation and replacement of the Lake Geraldine Intake Valve. Design work is being completed with the actual replacement scheduled to be completed in 2026.

- Installation of CCTV instrumentation at the spillway

  City of Iqaluit's response

  City is looking into installing monitoring instrumentation in 2026

b) The City of Iqaluit provide a detailed plan that describes how the identified deficiencies will be addressed within the timelines provided in the DSR and DSI.

City of Iqaluit's response

City is still working on this and a response would be provided by the end of 2025.

c) The City of Iqaluit detail all proposed and ongoing actions to address the deficiencies in future reports.

City of Iqaluit's response

Acknowledged. The City will include all proposed and ongoing actions identified in DSR and DSI in future annual reports.

d) The City of Iqaluit clarify whether contaminated soil atop the center and north berms has been removed and replaced.

City of Iqaluit's response

This work has been completed and confirmed by Concentric Engineering in June 2024.

4. Dam Safety Inspections / Dam Safety Review for Wastewater Treatment Facilities

CIRNAC Comment on the City of Iqaluit's response

(R-04) Dam Safety Inspections / Dam Safety Review for Wastewater Treatment Facilities

CIRNAC recommends that the City of Iqaluit:

a. Conduct a DSR and/or DSI for the Wastewater Treatment Facilities and provide the results in future annual reports.

   City of Iqaluit's response

   The City will conduct a DSR or DIS for the wastewater treatment facilities as required.

b. CIRNAC notes that if a DSR has not been completed within the last 10-years, CIRNAC recommends that one be completed in 2025.

   City of Iqaluit's response

   The City will have a DSR completed in 2026 and scheduled regularly as required going forward.

c. CIRNAC recommends a DSI be completed annually and submitted with future Annual Reports.

   City of Iqaluit's response

   Acknowledged and this work will be scheduled going forward.

5. Waste Disposal Reporting

CIRNAC Comment on the City of Iqaluit's response

(R-05) CIRNAC recommends the City of Iqaluit:

a. Confirm whether Table 6 summarizes the estimated monthly and annual quantities of waste deposited at the West 40 Landfill including the volume of waste transported by municipal garbage trucks and cover material utilized.

City of Iqaluit's response

Yes Table 6 summarizes the estimated quantities and includes waste transported by municipal garbage trucks and cover material utilized.

b. Confirm if the City of Iqaluit is estimating the waste amount being stored in its landfill.

City of Iqaluit's response

Yes, the City estimates the waste amounts and the quantities are verified by Drone survey annual.

6. Monitoring Program Reporting

CIRNAC Comment on the City of Iqaluit's response

(R-06) CIRNAC requests that the City:

a) Conduct monitoring and sampling in accordance with Schedule I of the Water Licence. In particular, it is requested that the City follows the monitoring and sampling requirements for the following monitoring stations that had missing samples in 2024:

•IQA-01
•IQA-02
•IQA-04
•IAQ-05
•IAQ-06

City of Iqaluit's response

Field sampling was not completed at the applicable stations; however, this will be carried out moving forward. Volumes were not recorded because the City experienced factory defects with the flow meter installed at the lagoon. Additionally, missed sampling tests at the WWTP were the result of staff turnover. Bacterial samples that exceeded the hold time were primarily due to shipping logistics, as delivery to the laboratory is dependent on the availability and timeliness of courier services, which can result in delays.

Beginning in 2026, the City will conduct monitoring and sampling in full compliance with Schedule I of the Water Licence. This will include completing all required field and lab sampling at the applicable stations and providing clear explanations in future reports for any missed sampling activities.

b) Follows the monitoring and sampling requirements for the following monitoring stations that had missing sample parameters/analytes in 2024:

•IQA-01
•IQA-02

- IQA-04
- IAQ-05
- IAQ-06
- IAQ-08A
- IAQ-08B

City of Iqaluit's response

The City acknowledges that certain parameters were missed in these samples and will ensure their inclusion in the 2026 reporting. These parameters will include reduction potential, conductivity, temperature, pH, acute toxicity, volume, orthophosphate, nitrite, and nitrate. In addition, the City will update its reporting tables to reflect all monitoring stations identified in City license and its amendments.

c) Confirm with the third-party laboratory that sample results reported under ICP/MS (Liquid) are dissolved metals meeting requirements of Potable Water (PW) in Schedule I Table 1.

City of Iqaluit's response

Yes, the samples results are for dissolved metals

d) Schedule I of the Water Licence notes that IQA-03, IQA-07, IAQ-09 and IAQ-11 are inactive sample stations. A statement should be made in the Annual Reports acknowledging this or stating why these stations are inactive and no longer sampled.

City of Iqaluit's response

A statement should be made in the Annual Reports acknowledging the inactive sample stations

e) CIRNAC requests that the City confirm the station IDs pertaining to the Waste Transfer Station and North 40 Landfill where no sampling was conducted and provide an update on when sampling of these monitoring stations will be conducted in the 2024 Annual Report.

City of Iqaluit's response

The monitoring stations pertaining to the WTS and the New North Landfill are still under review by the City, as we remain in communication with the third-party consultant involved in setting those stations. The City is actively planning to initiate monitoring at these locations in 2026, which will include both surface water and groundwater assessments. Monitoring will consist of field sampling as well as laboratory testing

f) Provide a summary report of data and information generated under the Monitoring Program in 2024 including: tabulated analytical results and comparison to applicable criteria; utilization of the station IDs in Water Licence 3AM-IQA1626 when submitting samples to the laboratory for analysis; if samples were not collected meeting the frequency requirement, provide an explanation as to why it was not done (e.g., weather); and, provide QA/QC data or provide an explanation as to why it was not done.

City of Iqaluit's response

City is currently working on this and a response would be provided in December 2025

7. Construction Activity Reporting

CIRNAC Comment on the City of Iqaluit's response

(R-07) CIRNAC requests that the City provide the following:

a) A construction summary report for the North 40 landfill and waste transfer facility in the 2024 Annual Report or 2025 Annual Report, depending on the exact date that the facilities were complete.

City of Iqaluit's response

City will have this included in the 2025 report making sure it is a construction summary report prepared by an Engineer that includes, among other relevant information, as-built drawings, documentation of field decisions that deviated from original plans, and any data used to support these decisions

CIRNAC Comment on the City of Iqaluit's response

b) Clarification on whether the City notified the board in advance of construction activities carried out in 2023 and whether as-built plans and drawings stamped by an Engineer were provided to the board within 90 days of completion of those activities.

City of Iqaluit's response

Notification was not provided and as built drawings have not been provided. The City will provide as built drawings.

8. Water Treatment Facility

CIRNAC Comment on the City of Iqaluit's response

CIRNAC requests that the City confirm the following:

a. Timeline for UV system upgrades at the Water Treatment Plant
   City of Iqaluit's response
   The UV reactors were replaced in 2024 and attached in the Appendix is the O&M manual

b. Frequency of UV lamp replacement and that UV units are in working as designed
   City of Iqaluit's response
   The 2024 reported lamps are replaced every 500 hrs however this was incorrect, and they are changed every 5000hrs in accordance with the manufacturer's recommendation. The UV system is operated and maintained in accordance with the Manufacturer's recommendations.

c. Which filters are regularly changed during routine maintenance. If the referenced filters are the media filters, provide details on procedure for changing filters.
   City of Iqaluit's response
   The filter changed is for the air handlers and the UV. Preventive maintenance is as per manufacture recommendation.

9. Revisions to Plans, Manuals and Reports approved under the Licence

CIRNAC Comment on the City of Iqaluit's response

(R-09a) CIRNAC requests that the City submit to the Nunavut Water Board the updated O&M manual for the WWTP when it becomes available for review.

City of Iqaluit's response

O&M Manual is included in the Appendix and would be sent to the NWB for review

(R-09b) CIRNAC requests that the City confirm that upgrades completed at the WTP and WWTP were direct replacements (no change in make/model) that would not result in modifications required for the O&M manuals to reflect upgrades.

City of Iqaluit's response

The City is actively addressing this matter and will confirm whether the replacements were direct. If the replacements are determined to be direct, no updates to the Operations and Maintenance (O&M) Manual will be required, as recommended.

10. Spill Reporting and Follow-Up Actions

CIRNAC Comment on the City of Iqaluit's response

(R-10) CIRNAC requests that the City provide the following:

a. For entries with "unknown" spill volumes, provide estimates or ranges for spill volumes when precise measurements are not available. If estimating is not possible, explain why.

   City of Iqaluit's response

   The City will provide estimates or ranges for spill volumes going forward. If estimates are not provided an explanation of why this information is not included will be provided.

b. Clarification on whether it was considered a small (<10 L), medium (10-100 L) or large spill (>100 L) based on the spill types in the General Spill Response Plan. Recommend adding this information to the NWT/NU Spill Report Form to aid personnel to quantify spill when completing a spill report by estimating the size of the spill (i.e., small, medium or large) at a minimum.

   City of Iqaluit's response

   This information has been added to our spill report moving forward

c. More details on the follow-up actions, especially if they differ between incidents. Provide details on how spills were collected, disposed of and specify if additional monitoring or corrective actions were taken.

   City of Iqaluit's response

   The follow-up actions for most spills are generally consistent. City staff first scrape and clean the affected area, with the removed material typically hauled to the lagoon, as it is primarily sludge. The sewer lines are then inspected using camera equipment to identify the cause and determine whether a break or collapse has occurred. Once the issue is located, City staff excavate around the damaged section, carry out the necessary repairs, and backfill the area with new material.

d. Information on spills in addition to the reported wastewater spills.

City of Iqaluit's response

The City believes all spills have been reported. Can CIRNAC provide further clarification? Are there specific instances that CIRNAC are aware of that have not been reported?

11. Reporting on Closure and Reclamation Work

CIRNAC Comment on the City of Iqaluit's response

(R-11) CIRNAC requests the City provide an update on when the Closure and Reclamation Plan for the for the West 40 Landfill will be submitted to the Nunavut Water Board.

City of Iqaluit's response

The existing closure and reclamation plan is included in the appendix. The City will update this plan prior to the West 40 Landfill being closed. Plan update is currently scheduled for 2027.

12.Updates on Implementation Plan, including changes and status of the Upgraded Wastewater Treatment Plant

CIRNAC Comment on the City of Iqaluit's response

(R-12) CIRNAC requests the City submit the holistic review report with the 2024 Annual Report, along with a plan and timeline to address the remedial actions identified in the report.

City of Iqaluit's response

The 2024 holistic review was not completed due to staff turnover and differing approaches taken to address any issues at the Wastewater Treatment Plant (WWTP). At present, the City is in the process of planning necessary HVAC upgrades for the WWTP, with detailed design scheduled to proceed in 2026. Appropriate notice will be provided as this project advances.

13. Reporting on Studies Requested by the Nunavut Water Board

CIRNAC Comment on the City of Iqaluit's response

(R-13) CIRNAC recommends the City of Iqaluit submit to the Nunavut Water Board:

a. An updated and recalibrated Lake Geraldine Water Balance Model to address the new bathymetric survey data collected in 2024 and the updated metrological information

   City of Iqaluit's response

   A draft technical memo from WSP has been included in the Appendix.

b. An updated Spill Contingency Plan that addresses the most common causes of spills and unauthorized discharges

   City of Iqaluit's response

   updated Spill Contingency Plan included in the Appendix.

c. An updated schedule for completion of the Water Balance modelling and the report once complete.

   City of Iqaluit's response

   A draft technical memorandum is included with these responses and the final document will be provided once finalized by the end of 2025.

14. Review of Procedures for Packaging, Storage, and Shipment of Hazardous Waste

CIRNAC Comment on the City of Iqaluit's response

(R-14) CIRNAC requests that the City:

a. Confirm which hazardous wastes have not been shipped for final disposal and how they will continue to be managed on-site.

City of Iqaluit's response

In 2024, hydro fluorosilicic acid was not shipped out due to budget constraints. These items were stored in sealed drums in a confined area in the operating center yard and will be shipped out in 2025.

b. Confirm whether the materials used to manage hazardous wastes (i.e., absorbent/rags/filters/totes, etc.) have been used and are now contaminated.

City of Iqaluit's response

Materials used to manage hazardous waste are stored in open top bulk totes on site and shipped out annually.

c. Append records of confirmation of proper disposal of hazardous wastes shipped for final disposal to the 2024 Annual Report.

City of Iqaluit's response

The City will contact contractor responsible for the removal and disposal of hazardous waste for records confirming proper disposal of hazardous wastes shipped for final disposal.

15. Update on Landfill Capacity

CIRNAC Comment on the City of Iqaluit's response

(R-15) CIRNAC requests that the City confirm the plan with respect to future waste management at the West 40 landfill.

City of Iqaluit's response

The City plans to continue using the West 40 Landfill site to take advantage of the airspace still available. Once the West 40 Landfill space is full the site will be decommissioned and closed out. City solid waste operations will then shift to the North 40 Landfill site. This is expected to take place within the next two to three years.

16. 2024 Sample Results

CIRNAC Comment on the City of Iqaluit's response

(R-16) CIRNAC requests that the City provide the following:

a)Compile the lab results in an Appendix table with comparison to the applicable guidelines or instruct the lab to include the guidelines in the lab report for easy reference and comparison.

City of Iqaluit's response

Outstanding - City is working on it

b)A status update on the WWTP, along with an implementation plan for next steps to address the operational challenges and/or facility deficiencies.

City of Iqaluit's response
The city has budgeted for HVAC upgrades at the WWTP and plans to begin preliminary investigation and design of an aeration system for the sewage lagoon as part of the 2026 budget.

c) Clarification if the caustic soda system is being used for pH adjustment, or provide details on operating procedure for maintaining pH within the Health Canada guidelines.

City of Iqaluit's response
The existing caustic soda system is not working. City staff are currently engaging a third-party consultant to restore the system to full operation. This process will involve reviewing and accessing the existing system to ensure it can be made operational, as well as coordinating the logistics to secure all necessary materials and equipment required to bring it back online. The objective is to have the system functioning by 2026 in order to maintain pH levels within the GCDWQ of 7.0 to 10.5.

d) S::CAN data results (either tabular or as a screenshot graph) for review.

City of Iqaluit's response
S::CAN data was not available for 2024 however the City can now access S::CAN data through a web-based portal so download and data storage procedures are not required. S::CAN data should be accessible through the web-based portal beginning with the 2025 annual report.

e) Clarification of what the minimum UV dose required for primary disinfection is for the WTP. If the minimum dose is 40 MJ/cm^2, it is requested that the City provide rationale for decreasing the dose in 2024.

City of Iqaluit's response
The site specific design data for our Trojan U.V Swift is to meet 3.0 log removal of Cryptosporidium. Dose Pacing is applied to the reactor in automatic mode. in automatic mode the ballast power levels are controlled automatically to meet the target RED while conserving power. As UV demand increases, by either an increase in flow, a decrease in UV transmittance (UVT), or a decrease in lamp intensity, the power level of the lamps increase accordingly. Based on flow, UVT, and the UV sensors, the Trojan UV Dosimeter Calculates RED and Displays the RED delivered by the system in mj/cm2. On average, we maintain 3.3 - 3.6 log removal cryptosporidium at the minimum base power level of 30%, this equates to a dose of around 33 - 36 mj/cm2. This is a result of the high raw water UVT level of around 90% and flow about 2000 L/min.

17. General Spill Response Plan - Reporting

CIRNAC Comment on the City of Iqaluit's response
(R-17) Please refer to CIRNAC recommendations provided in 2024 Annual Report comment 10 for suggestions on how the City can improve spill reporting in accordance with the requirements of the General Spill Response Plan.

City of Iqaluit's response

Acknowledged and staff have been advised to included requested information in all spill reports.

18. General Spill Response Plan

CIRNAC Comment on the City of Iqaluit's response

(R-18) CIRNAC requests that the City: provide a summary of actions taken in the short-term to address the concerns raised in the 2024 inspection reports.

The following three items were identified as non-compliant with associated actions taken.

a) A large section of the fencing surrounding the landfill was not installed. This is non-compliant with part E section 17 of the water licence.

City of Iqaluit's response

The city tendered for the supply and installation of 120m of fencing however only one non-compliant bid (late) was received, and it was significantly over budget. The city will retender in 2026 for the new fencing. The city is currently using seacans along this proposed fence line to help secure the site.

b) Hazardous waste was identified in a seacan that was not placed within secondary containment.

City of Iqaluit's response

Hazardous waste containers are on site and are being used going forward.

c) The fuel storage tank at the new Waste Disposal Facility is located within 31 m of the creek.

City of Iqaluit's response

Following a meeting with former City employees and CIRNAC on July 3, 2024, *"it was clarified that fuel tank storage does not constitute waste disposal, as the tanks are used solely for storage purposes. Therefore, this falls outside the jurisdiction of the City's Water Licence"*

d)confirm whether the two 20-foot dangerous good containers equipped with integrated secondary containment systems are expected to arrive before training in June 2025.

City of Iqaluit's response

The two 20-foot dangerous goods containers arrived in August 2025 and will be in service October 2025. Training was completed in June as scheduled and is being reviewed in October.

APPENDIX