

ANNUAL REPORT, 2023
FOR THE MUNICIPALITY OF POND INLET, NUNAVUT

YEAR BEING REPORTED: 2023

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License # 3BM-PON2025 issued to the Municipality of Pond Inlet, Nunavut.

- i) - iii) tabular summaries of all data generated under the “Monitoring Program”; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged.

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (m^3)	Quantity of Sewage Waste Discharged (Estimated)
January	4,401.116	Same
February	4,210.870	Same
March	4,674.972	Same
April	4,300.212	Same
May	4,658.995	Same
June	4,367.556	Same
July	4,357.308	Same
August	4,512.341	Same
September	4,430.654	Same
October	4,612.278	Same
November	4,406.135	Same
December	4,539.536	Same
Annual Total	53,471.974	Same

Note: The average consumption volume is considered equal to the discharge volume in each month because there is no meter at the end of the discharge pipe.

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- iv. **A summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities.**

Solid Waste Disposal Area and Sewage Lagoon had waste oil, batteries, and propane tanks removed and conducted during this reporting period.

The floating water intake at the Truck fill station has been upgraded from a single pump system to a dual pumping system, along with a new heat trace system to maintain the intake infrastructure until a new permanent intake can be constructed.

- v. **A list of unauthorized discharges and a summary of follow-up action taken.**
None.

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- vi. **A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year.**

No abandonment or restoration activities took place during this reporting year.

- vii. **A summary of any studies requested by the Board that relate to waste disposal, water use, or reclamation, and a brief description of any future studies planned;**

The Planning Study for the new WTP is now completed. The area is being investigated for any archaeological concerns. Completion of the new Water Treatment Plant which will include new water intake infrastructure is scheduled to be completed in 2026. Amendment/renewal application will be submitted in 2024.

- viii. **Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and**

Suspected sewage lagoon leakage has been identified and confirmed. Presently the berm is acting as an exfiltration structure. As per the completed Dam Safety Report sewage lagoon berm(s) are not considered structurally compromised. Municipality and CGS will continue to follow the recommendations outlined in the Dam Safety Report.

- ix. **Updates or revisions to the approved Operation and Maintenance Plans.**

There are no updates or revisions on approved Operation and Maintenance Plans until the new water station is operational in 2026.

- x. **ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:**

Hamlet's Public Works Department is working hard to follow GN 's technical staff's and CIRNAC inspector's advice to operate the water-licensed facilities. CGS will support the Public Works Department with sampling water, wastewater and leachate and have them tested in Caducean Lab in Ottawa.

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The Municipality of Pond Inlet also participated in a pilot project by the GN Department of Environment to remove hazardous waste from the community. This was done to demonstrate if the project was feasible despite logistical challenges, and to show the financial implications of hazardous waste removal. The following work was completed:

- Over 870 drums were emptied;
- 18 totes were shipped south for disposal;
- 80 drums were packaged;
- 74 totes were winterized and are half full;
- 2 Quatrex bags are full and ready to be shipped.

The project report provided by the GN Department of Environment is found in Appendix E.

xi. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Hamlet has currently an active water license. They are working closely with CGS technical staff to keep the water-licensed facilities in Compliance.

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Appendix A: PON-4 Effluent Quality Limits

Appendix B: Certificate of Analysis – July 7, 2023

Appendix C: Hazardous Materials Spill 2023

Appendix D: 2023 CIRNAC Inspection Report

Appendix E: Hazardous Material Report provided by GN Department of Environment

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Appendix A

PON-4 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	DATE: July 7, 2023
BOD ₅	120 mg/L	3 mg/L
Total Suspended Solids	180 mg/L	3 mg/L
Fecal Coliform	1x10 ⁶ CFU/100 mL	<10 cfu/100mL
Oil and Grease	No visible sheen	<1 mg/L
pH	Between 6 and 9	6.65 pH Units

Appendix B

C.O.C.: G 096052

REPORT No: 23-016711 - Rev. 0

Report To:

Hamlet of Pond Inlet
P.O Box 379
Pond Inlet, NVT X0A 0S0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: David Stockley

DATE RECEIVED: 2023-Jul-10
DATE REPORTED: 2023-Jul-24
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER: 180

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	2	OTTAWA	VKASYAN	2023-Jul-12	A-IC-01	SM 4110B
BOD5 (Liquid)	2	KINGSTON	MDUBIEN	2023-Jul-13	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	2	OTTAWA	SBOUDREAU	2023-Jul-10	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	2	OTTAWA	SLOZO	2023-Jul-10	FC-001	SM 9222D
ICP/MS Total (Liquid)	2	OTTAWA	TPRICE	2023-Jul-13	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	2	OTTAWA	NHOGAN	2023-Jul-12	D-ICP-01	SM 3120B
Mercury (Liquid)	2	OTTAWA	TBENNETT	2023-Jul-18	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	2	KINGSTON	AMANIYA	2023-Jul-17	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	2	KINGSTON	TMCBRYDE	2023-Jul-24	O&G-001	SM 5520
Phenols (Liquid)	2	KINGSTON	KWELCH	2023-Jul-17	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	2	OTTAWA	VKASYAN	2023-Jul-10	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	JMACINNES	2023-Jul-17	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an *



Steve Garrett
Director of Laboratory Services

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 23-016711 - Rev. 0

Parameter	Units	R.L.	Client I.D.	PON-4 (Sampled)	PON-5 (Frozen - Sampled from Lagoon @ Discharge Point)
			Sample I.D.	23-016711-1	23-016711-2
			Date Collected	2023-07-07	2023-07-07
				-	-
Fecal Coliform	CFU/100mL	1		<10	300000
Alkalinity(CaCO3) to pH4.5	mg/L	5		22	398
pH @25°C	pH units	-		6.65	7.79
Conductivity @25°C	uS/cm	1		83	1140
Chloride	mg/L	0.5		9.0	65.9
Nitrate (N)	mg/L	0.05		1.35	0.11
Nitrite (N)	mg/L	0.05		0.07	<0.05
Sulphate	mg/L	1		2	6
BOD5	mg/L	3		3	36
Total Suspended Solids	mg/L	3		3	35
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		1.56	96.8
Total Organic Carbon	mg/L	0.2		7.4	108
Phenolics	mg/L	0.001		<0.001	0.643
Hardness (as CaCO3)	mg/L	-		20	60
Aluminum (Total)	mg/L	0.01		0.09	0.12
Cadmium (Total)	mg/L	0.005		<0.005	<0.005
Calcium (Total)	mg/L	0.02		3.17	11.3
Chromium (Total)	mg/L	0.002		<0.002	<0.002
Cobalt (Total)	mg/L	0.005		<0.005	<0.005
Copper (Total)	mg/L	0.002		0.005	0.127
Iron (Total)	mg/L	0.005		0.181	0.676



Steve Garrett
Director of Laboratory Services

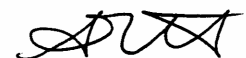
The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 23-016711 - Rev. 0

			Client I.D.	PON-4 (Sampled)	PON-5 (Frozen - Sampled from Lagoon @ Discharge Point)
			Sample I.D.	23-016711-1	23-016711-2
			Date Collected	2023-07-07	2023-07-07
Parameter	Units	R.L.		-	-
Lead (Total)	mg/L	0.02		<0.02	<0.02
Magnesium (Total)	mg/L	0.02		2.00	7.28
Manganese (Total)	mg/L	0.001		0.069	0.091
Nickel (Total)	mg/L	0.01		<0.01	<0.01
Potassium (Total)	mg/L	0.1		2.1	30.9
Sodium (Total)	mg/L	0.2		6.4	63.9
Zinc (Total)	mg/L	0.005		0.005	0.064
Arsenic (Total)	mg/L	0.0005		<0.0005	0.0008
Mercury	mg/L	0.00002		0.00008	0.00006

			Client I.D.	PON-4 (Sampled)	PON-5 (Frozen - Sampled from Lagoon @ Discharge Point)
			Sample I.D.	23-016711-1	23-016711-2
			Date Collected	2023-07-07	2023-07-07
Parameter	Units	R.L.		-	-
Oil & Grease (Total)	mg/L	1.0		<1.0	14.0



Steve Garrett
Director of Laboratory Services

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Appendix C

No reported spills or unauthorized discharges during reporting period.

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Appendix D



Crown-Indigenous Relations
and Northern Affairs Canada

Relations Couronne-Autochtones
et Affaires du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Municipality of Pond Inlet	David Stockley
License No. / Expiry	Representative's Title
3BM-PON2025	Chief Administrative Officer
Land Authorization No. / Expiry	Land Authorization Expiry
N/A	N/A
Date of Inspection	Inspector
September 22, 2023	Sean Noble-Nowdluk/Joseph Monteith
Activities Inspected	
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Mining
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Other: Potable Water Source, Waste Water Treatment, Solid Waste Facility, Hazardous Waste Facility
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Fuel Storage

SECTION 1 ☒ Comments (s. 1) ☐ Non-Compliance with Act or Licence (s. 2) ☐ Action Required (s. 3)

On Friday, September 22, 2023 I, Sean Noble-Nowdluk, along with Joseph Monteith, Inspectors with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC) completed a visit of the site named above for the purpose of verifying terms and conditions which the water licence was issued upon. Inspectors Noble-Nowdluk and Monteith were accompanied by the Hamlet Foreman to the sites.

The following list of items were inspected for compliance with the issued and valid water licence:

- Municipal Potable Water Intake Station
- Water Reservoir
- Municipal Water Source
- Sewage Discharge Area
- Sewage Lagoon
- Solid Waste Facility (Metal dump, wood dump, white waste)
- Hazardous Waste Facility

Most of the sites met the requirements within the Water Licence. CIRNAC inspectors have detailed the list of items that need to be addressed to get back into compliance with the Licence.

Upon completion of the municipal inspection, Inspectors Noble-Nowdluk and Monteith met with Pond Inlet's Chief Administrative Officer David Stockley to discuss the findings.

SECTION 2 ☐ Comments (s. 1) ☒ Non-Compliance with Act or Licence (s. 2) ☐ Action Required (s. 3)

1. Untreated sewage is actively leaking from the East corner of the lagoon. This is a violation under Part D – Section 6 of the water licence.
2. Decanting of the sewage lagoon was taking place while the inspectors were at the site. CIRNAC inspectors were not notified prior to decanting, a violation under Part D – Section 3, of the water licence.
3. Hazardous waste consisting of batteries and waste oil were observed at the solid waste facility and not at the designated hazardous waste facility. This issue is non-compliant with Part D – Section 10 of the water licence.

SECTION 3 ☐ Comments (s. 1) ☐ Non-Compliance with Act or Licence, (s. 2) ☒ Action Required (s. 3)

1. The Licensee must repair the damaged section of the lagoon to bring it back to compliance with the Licence.
2. The Licensee shall provide notice to an Inspector at least ten days prior to decanting of the Sewage Facility.
3. Hazardous Waste must be segregated and placed in a designated Hazardous Waste Facility.



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and Northern Affairs Canada


Relations Couronne-Autochtones
et Affaires du Nord Canada

Licensee or Representative David Stockley	Inspector's Name Sean Noble-Nowdluk/Joseph Monteith
Signature 	Signature 
Date Oct 24 / 2023	Date October 24, 2023

Appendix D

 Crown-Indigenous Relations and Northern Affairs Canada Relations Couronne-Autochtones et Affaires du Nord Canada

Photo Log	Location
Photo #1	Water Pumpouse
	
Description: Hamlet employees pumping water in to a water truck.	

Photo Log	Location
Photo #2	Water Reservoir
	
Description: View of water intake pipe from behind the pumphouse.	

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Photo Log	Location
Photo #3	Pumphouse Station
	
Description: Water intake meter inside the pumphouse.	

Photo Log	Location
Photo #4	Sewage Lagoon
	
Description: Photo of sewage lagoon facing North.	

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and Northern Affairs Canada Relations Couronne-Autochtones
et Affaires du Nord Canada

Photo Log	Location
Photo #5	Sewage Lagoon
	
Description: Hamlet employees were actively decanting during the time of the inspection. Inspectors were not notified prior to decanting the lagoon.	

Photo Log	Location
Photo #6	Sewage Lagoon
	
Description: Photo of Lagoon from Northeast corner. The leak in the lagoon seems to be coming from this general area.	

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Photo Log	Location
Photo #7	Hazardous Waste Facility
	
Description: Old fuel drums at the Hazardous Waste Facility.	

Photo Log	Location
Photo #8	Hazardous Waste Facility
	
Description: Hazardous waste such as propane tanks, vehicle batteries, old fuel drums at the designated Hazardous Waste Facility.	

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Photo Log	Location
Photo #9	Solid Waste Facility
	
Description: Old batteries and waste oil jugs were observed all around the Solid Waste Facility.	

Photo Log	Location
Photo #10	Solid Waste Facility
	
Description: Waste oil was observed within a lined berm inside the Solid Waste Facility.	

Appendix E



Photo 1
Aerial view of the Site.



Photo 2
Closeup aerial view of the Site.



Photo 3

A view of all the drums identified and segregated before the liquid transfer.



Photo 4

A view of all the drums identified and segregated before the liquid transfer.



Photo 5

A view of the diaphragm pump, transferring mixed liquid waste into a tote tank.



Photo 6

A view of local workers transferring mixed liquid waste into a tote tank.



Photo 7

A view of the empty drums after day 3.



Photo 8

View of the packaged liquid after day 3.



Photo 9

A view of the wooden skids and tote tanks arriving in Pond Inlet on August 15.



Photo 10

A overview of the site during the fieldwork.



Photo 11

A view of the 18 packaged tote tanks at the beach barging area.



Photo 12

A view of the winterized containers at the end of the fieldwork.



Photo 13

A view of the
winterized containers
at the end of the
fieldwork.