ANNUAL REPORT, 2022
FOR THE MUNICIPALITY OF POND INLET, NUNAVUT

YEAR BEING REPORTED: 2022

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 (L)	Quantity of Sewage Waste Discharged (Estimated)
January	4,292,246.14	Same
February	4,033,059.00	Same
March	4,608,412.40	Same
April	4,355,540.00	Same
May	4,554,905.70	Same
June	4,054,149.00	Same
July	4,312,579.40	Same
August	4,351,427.00	Same
September	4,354,073.20	Same
October	4,424,424.10	Same
November	4,630,883.80	Same
December	4,527,236.60	Same
Annual Total	52,498,936.34	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.

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 no modifications/improvements carried out during this reporting period.
Floating water intake at Truck fill station had been upgraded from single pump system to 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 summary of follow-up action taken;
None.

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;
Planning Study for new WTP is completed.
New Water Treatment Plant which will include new water intake infrastructure will be going RFP stage for detailed design in fiscal year 2023/24

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

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. However, lack of trained operators is paramount issue. CGS will support the Public Works Department with sampling water, wastewater and leachate and have them tested in Caduceon Lab in Ottawa.

xi. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Hamlet has currently an active water licence. They are working closely with GN's technical staff to keep the water licensed facilities in Compliance.

Appendix A: PON-4 Effluent Quality Limits

Appendix B: Certificate of Analysis

Appendix C: Hazardous Materials Spill Database, Pond Inlet 2022

Appendix D: Pond Inlet 2022 CIRNAC Inspection Report

Appendix A

PON-4 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	DATE:16-August-2022
BOD_5	120 mg/L	103 mg/L
Total Suspended Solids	180 mg/L	45 mg/L
Fecal Coliform	$1x10^6$ CFU/100 mL	194000 cfu/100mL
Oil and Grease	No visible sheen	13.4 mg/L
pH	Between 6 and 9	7.82 pH Units

Appendix B

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-23387 (i)

Report To:

Hamlet of Pond Inlet
P.O Box 379,
Pond Inlet Nunavut X0A 0S0 Canada
Attention: David Stockley

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 25-Jul-22
DATE REPORTED: 03-Aug-22
SAMPLE MATRIX: Waste Water

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		PON-2			
			Sample I.D.		B22-23387-1			
			Date Collected		25-Jul-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
PHC F1 (C6-C10)	µg/L	25	MOE E3421	27-Jul-22/R	< 25			
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	27-Jul-22/K	50			
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	27-Jul-22/K	23700			
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	27-Jul-22/K	4700			
Acenaphthene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.08			
Acenaphthylene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Anthracene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.05			
Benzo(a)anthracene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.2			
Benzo(a)pyrene	µg/L	0.01	EPA 8270	29-Jul-22/K	< 0.03			
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	29-Jul-22/K	< 0.1			
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.05			
Chrysene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Fluoranthene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.05			
Fluorene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.05			
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.06			
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.07			
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.07			
Methylnaphthalene 2-(1-)	µg/L	1	EPA 8270	29-Jul-22/K	< 1			
Naphthalene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.2 [1]			
Phenanthrene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.08			
Pyrene	µg/L	0.05	EPA 8270	29-Jul-22/K	< 0.05			
Benzene	µg/L	0.5	EPA 8260	27-Jul-22/R	< 0.5			
Toluene	µg/L	0.5	EPA 8260	27-Jul-22/R	3.8			
Ethylbenzene	µg/L	0.5	EPA 8260	27-Jul-22/R	< 0.5			

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

Tahir Yapici Ph.D
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-23387 (i)

Report To:

Hamlet of Pond Inlet
P.O Box 379,
Pond Inlet Nunavut X0A 0S0 Canada
Attention: David Stockley

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 25-Jul-22
DATE REPORTED: 03-Aug-22
SAMPLE MATRIX: Waste Water

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		PON-2			
			Sample I.D.		B22-23387-1			
			Date Collected		25-Jul-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Xylene, m,p-	µg/L	1.0	EPA 8260	27-Jul-22/R	< 1.0			
Xylene, o-	µg/L	0.5	EPA 8260	27-Jul-22/R	< 0.5			
Xylene, m,p,o-	µg/L	1.1	EPA 8260	27-Jul-22/R	< 1.1			

1. Elevated MDL due to sample matrix

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-25807

Report To:

Hamlet of Pond Inlet
P.O Box 379,
Pond Inlet Nunavut X0A 0S0 Canada
Attention: Jasper Singoorie

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 12-Aug-22
DATE REPORTED: 18-Aug-22
SAMPLE MATRIX: Waste Water

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		Suspected Sewage Wastewater Leak			
			Sample I.D.		B22-25807-1			
			Date Collected		09-Aug-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	17-Aug-22/K	51.1			
Nitrite (N)	mg/L	0.1	SM4110C	15-Aug-22/O	< 0.1			
Nitrate (N)	mg/L	0.1	SM4110C	15-Aug-22/O	< 0.1			
Total Coliform	cfu/100mL	1	MOE E3371	13-Aug-22/O	17000			
E coli	cfu/100mL	1	MOE E3371	13-Aug-22/O	300			
Background	cfu/100mL	1	MOE E3371	13-Aug-22/O	151000			
Fecal Strep.	cfu/100mL	1	MOE E3371	13-Aug-22/O	700			
Fecal Coliform	cfu/100mL	1	MOE E3371	13-Aug-22/O	400			

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Tahir Yapici Ph.D
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G104707 **REPORT No. B22-26335**

Report To:

Hamlet of Pond Inlet
P.O Box 379,
Pond Inlet Nunavut X0A 0S0 Canada
Attention: David Stockley

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 17-Aug-22
DATE REPORTED: 25-Aug-22
SAMPLE MATRIX: Waste Water

JOB/PROJECT NO.: Waste Water
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		Waste Water Pon 4			
			Sample I.D.		B22-26335-1			
			Date Collected		16-Aug-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Conductivity @25°C	µmho/cm	1	SM 2510B	17-Aug-22/O	1060			
Nitrite (N)	mg/L	0.1	SM4110C	19-Aug-22/O	< 0.1			
Nitrate (N)	mg/L	0.1	SM4110C	19-Aug-22/O	0.1			
Chloride	mg/L	0.5	SM4110C	19-Aug-22/O	60.7			
Sulphate	mg/L	1	SM4110C	19-Aug-22/O	1			
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	17-Aug-22/O	377			
Arsenic	mg/L	0.0005	EPA 200.8	24-Aug-22/O	0.0007			
Total Organic Carbon	mg/L	0.2	EPA 415.2	17-Aug-22/O	89.9			
Mercury	mg/L	0.00002	SM 3112 B	22-Aug-22/O	0.00003			
pH @25°C	pH Units		SM 4500H	17-Aug-22/O	7.82			
Oil & Grease-Total	mg/L	1.0	SM 5520	22-Aug-22/K	13.4			
Fecal Coliform	cfu/100mL	1	MOE E3371	17-Aug-22/O	194000			
Calcium	mg/L	0.02	SM 3120	24-Aug-22/O	11.0			
Cadmium	mg/L	0.005	SM 3120	24-Aug-22/O	< 0.005			
Cobalt	mg/L	0.005	SM 3120	24-Aug-22/O	< 0.005			
Copper	mg/L	0.002	SM 3120	24-Aug-22/O	0.100			
Chromium	mg/L	0.002	SM 3120	24-Aug-22/O	< 0.002			
Magnesium	mg/L	0.02	SM 3120	24-Aug-22/O	6.58			
Sodium	mg/L	0.2	SM 3120	24-Aug-22/O	58.7			
Nickel	mg/L	0.01	SM 3120	24-Aug-22/O	< 0.01			
Lead	mg/L	0.02	SM 3120	24-Aug-22/O	< 0.02			
Zinc	mg/L	0.005	SM 3120	24-Aug-22/O	0.070			
Aluminum	mg/L	0.01	SM 3120	24-Aug-22/O	0.09			
Iron	mg/L	0.005	SM 3120	24-Aug-22/O	0.638			
Manganese	mg/L	0.001	SM 3120	24-Aug-22/O	0.087			
Potassium	mg/L	0.1	SM 3120	24-Aug-22/O	27.9			
Hardness (as CaCO3)	mg/L	1	SM 3120	24-Aug-22/O	55			

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
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DATE RECEIVED: 17-Aug-22
DATE REPORTED: 25-Aug-22
SAMPLE MATRIX: Waste Water

JOB/PROJECT NO.: Waste Water
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		Waste Water Pon 4			
			Sample I.D.		B22-26335-1			
			Date Collected		16-Aug-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	19-Aug-22/K	96.2			
Phenolics	mg/L	0.001	MOEE 3179	22-Aug-22/K	0.571			
Total Suspended Solids	mg/L	3	SM2540D	22-Aug-22/K	45			
BOD(5 day)	mg/L	3	SM 5210B	19-Aug-22/K	103			

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Appendix C

No reported spills or unauthorized discharges during reporting period.

Appendix D

No CIRNAC inspection in 2022.