2024 ANNUAL REPORT
FOR THE MUNICIPALITY OF KINNGAIT

YEAR BEING REPORTED: 2024

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. **3BM-CAP1925** issued to the **Municipality of Kinngait**.

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 the quantities of water used and the estimated discharge of waste. The water consumption volume is considered equal to the sewage discharge volume because there is no meter at the end of the discharge pipe.

2024 ANNUAL REPORT
FOR THE MUNICIPALITY OF KINNGAIT

Month Reported	Quantity of Water Obtained from all sources (m^3)	Quantity of Sewage Waste Discharged (m^3)	Quantity of Waste Disposed (m^3)	Quantity of Waste Backhauled (m^3)
January	4,169.07	Same	1,553.89	0
February	3,993.75	Same	1,553.89	0
March	4,276.41	Same	1,553.89	0
April	3,515.08	Same	1,553.89	0
May	4,304.70	Same	1,553.89	0
June	3,752.49	Same	1,553.89	0
July	4,397.51	Same	1,553.89	0
August	4,123.95	Same	1,553.89	0
September	4,253.22	Same	1,553.89	0
October	4,546.79	Same	1,553.89	0
November	4,268.56	Same	1,553.89	0
December	4,533.86	Same	1,553.89	0
ANNUAL TOTAL	50,135.39	Same	18,646.62	0

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:

No modifications or major maintenance work carried out in 2024 and none expected in 2025.

V. A list of unauthorized discharges and summary of follow-up action taken:

The oil spill at the Sewage Disposal Facility identified on August 7, 2024, was cleaned up. A spill report was submitted to the NT-NU Spill Line attached as **Appendix C**. The spill was remediated with a backhoe, shovels, and rakes, and contaminated soil was put into Quatrex bags. Details of the clean up as provided in **Appendix D**.

VI. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year:

There was no abandonment and restoration work completed during 2024. There is no abandonment and restoration work anticipated for 2025.

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:

A detailed design is being developed for the mechanical wastewater treatment plant with an expected completion of Fall 2025 with construction tender expected by Winter 2025. Construction on site is expected to commence during summer 2026.

A hydrology study including bathymetry on Tee Lake will take place for the summer 2025 to determine the sustainable water withdrawal from Tee Lake. The report will be provided to the Board in the 2025 Annual Report.

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

No other details on water use or waste disposal requested by the Board by November 1st of 2024.

IX. Updates or revisions to the approved Operation and Maintenance Plans:

Updated Operation and Maintenance Plans for the Water Supply Facility and Solid Waste Disposal Facility, and updated Environmental Emergency Spill Contingency and Environmental Monitoring and QA/QC Plans will be provided within the 2025 Application

for Amendment and Renewal of the Water Licence for approval.

The changes to the Plans will ensure that all information is up to date for the infrastructure, personnel, and procedures for handling regulatory requirements.

X. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- No sludge has been removed from the Wastewater Treatment Facility
- No modifications to the Monitoring Program

XI. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Following up from the 2024 CIRNAC Inspection, the municipality has acted on the Inspector's required actions:

- A spill report has been submitted to the NT-NU Spill Line attached as **Appendix C**.
- The spill has been remediated with a backhoe, shovels, and rakes, and contaminated soil was put into Quatrex bags
- Scattered hazardous wastes (old paint cans, batteries, and old propane batteries) were moved into seacans within the hazardous waste area of the solid waste facility

An updated Compliance Plan will be submitted with the Application for Water Licence Amendment and Renewal within the next month.

APPENDICES:

Appendix A: Summary of Monitoring Data
Appendix B: Certificate of Analyses
Appendix C: Spill Report

Appendix A

Tabular Summary of Monitoring Data

Parameter	**Maximum Concentration of any Grab Sample for *CAP-4* and *CAP-5***	**Units**	**July 16, 2024 *CAP-4* Middle of Discharge**	**July 16, 2024 *CAP-5* Middle of Discharge**
BOD_5	80	mg/L	6	46
Total Suspended Solids	100	mg/L	<3	46
Fecal Coliform	$1x10^4$	CFU/100 mL	12	$4.2x10^4$
Oil and Grease	No visible sheen	N/A	1.2 mg/L	8.0 mg/L
pH	Between 6 and 9	N/A	6.99	7.48

Based on the results, compliance with the effluent quality limits at CAP-4 was achieved; however, compliance was not achieved at CAP-5. The new mechanical wastewater treatment plant is expected in 2027, which will provide better wastewater effluent quality, and the Emergency Sewage Lagoon will no longer be required.

Appendix B

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G 111276 **REPORT No: 24-021849 - Rev. 0**

Report To:
Hamlet of Kinngait
PO Box 30
Kinngait, Nu X0A 0C0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Louis Primeau

DATE RECEIVED: 2024-Jul-18
DATE REPORTED: 2024-Jul-26
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	2	OTTAWA	PCURIEL	2024-Jul-18	A-IC-01	SM 4110B
BOD5 (Liquid)	2	KINGSTON	JWOLFE2	2024-Jul-19	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	2	OTTAWA	SBOUDREAU	2024-Jul-19	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	2	OTTAWA	HALIPDA	2024-Jul-18	FC-001	SM 9222D
ICP/MS Total (Liquid)	2	OTTAWA	AOZKAYMAK	2024-Jul-22	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	2	OTTAWA	APRUDYVUS	2024-Jul-19	D-ICP-01	SM 3120B
Mercury (Liquid)	2	OTTAWA	TBENNETT	2024-Jul-19	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	2	KINGSTON	JYEARWOOD	2024-Jul-23	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	2	KINGSTON	KYUILL	2024-Jul-19	O&G-001	SM 5520
PHC F1 (Liquid)	2	RICHMOND_HILL	FLENA	2024-Jul-24	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	2	KINGSTON	STHOMPSON	2024-Jul-19	PHC-W-001	MECP E3421
Phenols (Liquid)	2	KINGSTON	JMACINNES	2024-Jul-19	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	2	OTTAWA	VKASYAN	2024-Jul-19	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	MCLOSS	2024-Jul-19	TSS-001	SM 2540D

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

Michelle Dubien
Data Specialist

Parameter	Units	R.L.	Client I.D.: CAP-4	Client I.D.: CAP-5
			Sample I.D.: 24-021849-1	Sample I.D.: 24-021849-2
			Date Collected: 2024-07-16	Date Collected: 2024-07-16
			-	-
Fecal Coliform	CFU/100mL	1	12	42000
Alkalinity(CaCO3) to pH4.5	mg/L	5	138	233
Conductivity @25°C	uS/cm	1	612	670
pH @25°C	pH units	-	6.99	7.48
Chloride	mg/L	0.5	36.3	38.4
Nitrate (N)	mg/L	0.05	1.73	<0.05
Nitrite (N)	mg/L	0.05	0.29	<0.05
Sulphate	mg/L	1	95	6
BOD5	mg/L	3	6	46
Total Suspended Solids	mg/L	3	<3	46
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	22.0	62.0
Total Organic Carbon	mg/L	0.2	14.0	49.6
Phenolics	mg/L	0.001	0.001	0.259
Hardness (as CaCO3)	mg/L	0.02	131	63.4
Aluminum (Total)	mg/L	0.01	0.02	0.08
Cadmium (Total)	mg/L	0.005	<0.005	<0.005
Calcium (Total)	mg/L	0.02	37.4	19.3
Chromium (Total)	mg/L	0.002	<0.002	<0.002
Cobalt (Total)	mg/L	0.005	0.010	<0.005
Copper (Total)	mg/L	0.002	0.009	0.024
Iron (Total)	mg/L	0.005	1.13	2.73

Michelle Dubien
Data Specialist

		Client I.D.	CAP-4	CAP-5
		Sample I.D.	24-021849-1	24-021849-2
		Date Collected	2024-07-16	2024-07-16
Parameter	**Units**	**R.L.**	-	-
Lead (Total)	mg/L	0.02	<0.02	<0.02
Magnesium (Total)	mg/L	0.02	9.12	3.65
Manganese (Total)	mg/L	0.001	2.17	0.358
Nickel (Total)	mg/L	0.01	0.01	<0.01
Potassium (Total)	mg/L	0.1	12.8	17.5
Sodium (Total)	mg/L	0.2	33.8	33.5
Zinc (Total)	mg/L	0.005	0.043	0.030
Arsenic (Total)	mg/L	0.0005	0.0024	0.0048
Mercury	mg/L	0.00002	<0.00002	<0.00002

		Client I.D.	CAP-4	CAP-5
		Sample I.D.	24-021849-1	24-021849-2
		Date Collected	2024-07-16	2024-07-16
Parameter	**Units**	**R.L.**	-	-
PHC F1 (C6-C10)	µg/L	25	<25	70
PHC F2 (>C10-C16)	µg/L	50	<50	64
PHC F3 (>C16-C34)	µg/L	400	<400	527
PHC F4 (>C34-C50)	µg/L	400	<400	<400
Oil & Grease (Total)	mg/L	1.0	1.2	8.0

Michelle Dubien
Data Specialist

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G 111277 **REPORT No: 24-021850 - Rev. 0**

Report To:
Hamlet of Kinngait
PO Box 30
Kinngait, Nu X0A 0C0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Louis Primeau

DATE RECEIVED: 2024-Jul-18
DATE REPORTED: 2024-Jul-25
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2024-Jul-18	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	JWOLFE2	2024-Jul-19	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2024-Jul-19	COND-02/PH-02/ALK-02	SM 2510B/4500H/2320B
Fecal Coliforms (Liquid)	1	OTTAWA	HALIPDA	2024-Jul-18	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2024-Jul-19	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2024-Jul-22	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2024-Jul-19	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	JYEARWOOD	2024-Jul-23	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	KYUILL	2024-Jul-19	O&G-001	SM 5520
PHC F1 (Liquid)	1	RICHMOND_HILL	FLENA	2024-Jul-23	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	1	KINGSTON	STHOMPSON	2024-Jul-19	PHC-W-001	MECP E3421
Phenols (Liquid)	1	KINGSTON	JMACINNES	2024-Jul-19	PHEN-01	MECP E3179
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	PRANA	2024-Jul-19	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2024-Jul-19	C-OC-01	EPA 415.2
TP & TKN (Liquid)	1	KINGSTON	KDIBBITS	2024-Jul-23	TPTKN-001	MECP E3516.2
TSS (Liquid)	1	KINGSTON	MCLOSS	2024-Jul-19	TSS-001	SM 2540D
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	FLENA	2024-Jul-23	C-VOC-02	EPA 8260

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

Michelle Dubien
Data Specialist

			Client I.D.	CAP-2
			Sample I.D.	24-021850-1
			Date Collected	2024-07-16
Parameter	Units	R.L.		-
Fecal Coliform	CFU/100mL	1		720
Alkalinity(CaCO3) to pH4.5	mg/L	5		129
Conductivity @25°C	uS/cm	1		551
pH @25°C	pH units	-		7.66
Chloride	mg/L	0.5		36.6
Nitrate (N)	mg/L	0.05		<0.40
Nitrite (N)	mg/L	0.05		<0.40
Sulphate	mg/L	1		99
BOD5	mg/L	3		6
Total Suspended Solids	mg/L	3		26
Phosphorus (Total)	mg/L	0.01		0.14
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		0.20
Total Organic Carbon	mg/L	0.2		10.1
Phenolics	mg/L	0.001		<0.001
Hardness (as CaCO3)	mg/L	0.02		160
Aluminum (Total)	mg/L	0.01		0.20
Cadmium (Total)	mg/L	0.005		<0.005
Calcium (Total)	mg/L	0.02		49.4
Chromium (Total)	mg/L	0.002		0.002
Cobalt (Total)	mg/L	0.005		<0.005
Copper (Total)	mg/L	0.002		0.004

Michelle Dubien
Data Specialist

		Client I.D.	CAP-2
		Sample I.D.	24-021850-1
		Date Collected	2024-07-16
Parameter	**Units**	**R.L.**	-
Iron (Total)	mg/L	0.005	1.48
Lead (Total)	mg/L	0.02	<0.02
Manganese (Total)	mg/L	0.001	0.317
Nickel (Total)	mg/L	0.01	<0.01
Potassium (Total)	mg/L	0.1	8.8
Zinc (Total)	mg/L	0.005	0.050
Arsenic (Total)	mg/L	0.0001	0.0012
Mercury	mg/L	0.00002	<0.00002

Michelle Dubien
Data Specialist

		Client I.D.	CAP-2
		Sample I.D.	24-021850-1
		Date Collected	2024-07-16
Parameter	**Units**	**R.L.**	-
Benzene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Xylene, m,p-	µg/L	1	<1
Xylene, m,p,o-	µg/L	1.1	<1.1
Xylene, o-	µg/L	0.5	<0.5
PHC F1 (C6-C10)	µg/L	25	<25
PHC F2 (>C10-C16)	µg/L	50	<50
PHC F3 (>C16-C34)	µg/L	400	<400
PHC F4 (>C34-C50)	µg/L	400	<400
Oil & Grease (Total)	mg/L	1.0	3.2

Michelle Dubien
Data Specialist

		Client I.D.	CAP-2
		Sample I.D.	24-021850-1
		Date Collected	2024-07-16
Parameter	**Units**	**R.L.**	-
Acenaphthene	µg/L	0.05	<0.05
Acenaphthylene	µg/L	0.05	<0.05
Anthracene	µg/L	0.05	<0.05
Benzo[a]anthracene	µg/L	0.05	<0.06
Benzo(a)pyrene	µg/L	0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.05	<0.05
Benzo(b+k)fluoranthene	µg/L	0.1	<0.1
Benzo(g,h,i)perylene	µg/L	0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.05	<0.05
Chrysene	µg/L	0.05	<0.05
Dibenzo(a,h)anthracene	µg/L	0.05	<0.05
Fluoranthene	µg/L	0.05	<0.05
Fluorene	µg/L	0.05	<0.05
Indeno(1,2,3,-cd)Pyrene	µg/L	0.05	<0.05
Methylnaphthalene,1-	µg/L	0.05	<0.05
Methylnaphthalene,2-(1-)	µg/L	1	<1
Methylnaphthalene,2-	µg/L	0.05	<0.05
Naphthalene	µg/L	0.05	<0.06
Phenanthrene	µg/L	0.05	<0.05
Pyrene	µg/L	0.05	<0.05

Michelle Dubien
Data Specialist

Appendix C

Please Note: The Spill Report lists Gregory Holitzki as the Alternate Contact for the Spill Report; however, Gregory acting for Kimberly Young, who is the full-time CAO of the Municipality of Kinngait.

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
Tel: (867) 920-8130
Email: spills@gov.nt.ca

A	Report Date: MM 8 DD 7 YY 24	Report Time:	☒ Original Spill Report OR ☐ Update # _____ to the Original Spill Report	**Report Number:**
B	Occurrence Date: Unknown MM DD YY	Occurrence Time:		
C	Land Use Permit Number (if applicable):		Water Licence Number (if applicable): 3BM-CAP1925	
D	Geographic Place Name or Distance and Direction from the Named Location: Old Lagoon/Emergency lagoon		Region: ☐ NT ☑ Nunavut ☐ Trans-boundary or Ocean	
E	Latitude: _____ Degrees _____ Minutes _____ Seconds		Longitude: _____ Degrees _____ Minutes _____ Seconds	
F	Responsible Party or Vessel Name: Municipality of Kinngait		Responsible Party Address or Office Location:	
G	Any Contractor Involved: No		Contractor Address or Office Location:	
H	Product Spilled: ☐ Potential Spill Hydraulic Fluid/Engine oil	Quantity in Litres, Kilograms or Cubic Metres: 20 liters	U.N. Number:	
I	Spill Source: Sewage truck side tank when full of sewage mixed a little with oil	Spill Cause: Emptying side tank of sewage truck that is connected to vacuum pump	Area of Contamination in Square Metres: 2ftx2ft at two different dumping areas for sewage truck	
J	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:	
K	Summary of the spill incident and efforts / description of the incident: The dumping areas of the sewage trucks were cleaned up with backhoe and shoveled into Quatrex bags			

L	Reported to Spill Line by: David Saila	Position:	Employer: Municipality of Kinngait	Location Calling From: Kinngait, Nunavut	Telephone:
M	Any Alternate Contact: Gregory Holitzki	Position:	Employer: Municipality of Kinngait	Alternate Contact Location:	Alternate Telephone:

REPORT LINE USE ONLY

N	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:

Lead Agency: ☐ ECCC ☐ CCG/TCMSS ☐ GNWT ☐ GN ☐ ILA ☐ CIRNAC ☐ CER ☐ Other: _____

File Status: ☐ Open ☐ Closed

Agency:	Contact Name:	Contact Time:	Remarks:
Lead Agency:			
First Support Agency:			
Second Support Agency:			
Third Support Agency:			