ANNUAL REPORT
FOR THE MUNICIPALITY OF KINNGAIT, 2022

YEAR BEING REPORTED: 2022

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 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 quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste.

Month Reported	Quantity of Water Obtained from all sources (L)	Quantity of Sewage Waste Discharged (Estimated)
January	**2,776,471.40**	Same
February	**3,082,351.40**	Same
March	**4,241,905.60**	Same
April	**3,819,417.40**	Same
May	**4,249,843.10**	Same
June	**4,325,517.90**	Same
July	**3,878,546.80**	Same
August	**3,975,360.00**	Same
September	**3,973,300.40**	Same
October	**4,130,941.50**	Same
November	**3,902,536.30**	Same
December	**3,898,781.90**	Same
ANNUAL TOTAL	**46,254,973.70**	**Same**

Note: The water consumption volume is considered equal to the sewage discharge volume 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;

No changes in reporting

v. A list of unauthorized discharges and summary of follow-up action taken;

No unauthorized discharges for the infrastructure under licence 3BM-CAP1925 occurred in 2022

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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 future years;

No abandonment and restoration work was conducted during this reporting year and none is anticipated in the coming year.

A&R and closure plans for the 3-tier lagoon and emergency lagoon will be completed and submitted to the NWB during the detailed design phase of new mechanical wastewater treatment plant.

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;

Detailed design for new mechanical wastewater treatment plant is ongoing and anticipated to be complete in 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

None

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

None

x. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

CGS will work with the Municipality during summer 2023 to ensure all sampling requirements under the water licence are met.

xi. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

For the oncoming 2023 summer sampling season, CGS will work with Municipality to improve water licence compliance.

Appendix A: CAP-4, CAP-5 Effluent Quality Limits

Appendix B: Certificate of Analysis

Appendix C: Hazardous Materials Spill Database, Kinngait 2022

Appendix D: Kinngait 2022 CIRNAC Inspection Report

Appendix A

CAP-4 Effluent Quality Limits

Parameter	Maximum Concentration of any Grab Sample	DATE: July 25.2022
BOD_5	80 mg/L	**20 mg/L**
Total Suspended Solids	100 mg/L	**44 mg/L**
Fecal Coliform	$1x10^4$ CFU/100 mL	**100**
Oil and Grease	No visible sheen	**1mg/L**
pH	Between 6 and 9	**7.88**

CAP-5 Effluent Quality Limits

Parameter	Maximum Concentration of any Grab Sample	DATE: July 25.2022.
BOD_5	80 mg/L	**29 mg/L**
Total Suspended Solids	100 mg/L	**44 mg/L**
Fecal Coliform	$1x10^4$ CFU/100 mL	**4000**
Oil and Grease	No visible sheen	**7.5 mg/L**
pH	Between 6 and 9	**7.52 mg/L**

Appendix B

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-22370

Report To:

Municipality of Kinngait (Cape Dorset)
PO Box 30,
Cape Dorset NU X0A 0C0 Canada
Attention: George Luhowy

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

DATE RECEIVED: 15-Jul-22
DATE REPORTED: 26-Jul-22
SAMPLE MATRIX: Leachate

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

			Client I.D.		CAP-2			
			Sample I.D.		B22-22370-1			
			Date Collected		13-Jul-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Total Suspended Solids	mg/L	3	SM2540D	19-Jul-22/K	4			
pH @25°C	pH Units		SM 4500H	15-Jul-22/O	8.06			
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	15-Jul-22/O	151			
Conductivity @25°C	µmho/cm	1	SM 2510B	15-Jul-22/O	707			
Chloride	mg/L	0.5	SM4110C	18-Jul-22/O	65.2			
Nitrite (N)	mg/L	0.1	SM4110C	18-Jul-22/O	< 0.1			
Nitrate (N)	mg/L	0.1	SM4110C	18-Jul-22/O	< 0.1			
Sulphate	mg/L	1	SM4110C	18-Jul-22/O	109			
Hardness (as CaCO3)	mg/L	1	SM 3120	21-Jul-22/O	228			
Calcium	mg/L	0.02	SM 3120	21-Jul-22/O	71.1			
Potassium	mg/L	0.1	SM 3120	21-Jul-22/O	10.4			
Aluminum	mg/L	0.01	SM 3120	21-Jul-22/O	0.04			
Chromium	mg/L	0.002	SM 3120	21-Jul-22/O	< 0.002			
Cobalt	mg/L	0.005	SM 3120	21-Jul-22/O	< 0.005			
Copper	mg/L	0.002	SM 3120	21-Jul-22/O	< 0.002			
Iron	mg/L	0.005	SM 3120	21-Jul-22/O	0.983			
Manganese	mg/L	0.001	SM 3120	21-Jul-22/O	0.483			
Nickel	mg/L	0.01	SM 3120	21-Jul-22/O	< 0.01			
Zinc	mg/L	0.005	SM 3120	21-Jul-22/O	0.015			
Arsenic	mg/L	0.0005	EPA 200.8	19-Jul-22/O	0.0009			
Cadmium	mg/L	).000070	EPA 200.8	19-Jul-22/O	< 0.000070			
Lead	mg/L	0.0001	EPA 200.8	19-Jul-22/O	0.0004			
Mercury	mg/L	0.00002	SM 3112 B	20-Jul-22/O	< 0.00002			
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	19-Jul-22/K	0.18			
Phosphorus-Total	mg/L	0.01	E3516.2	22-Jul-22/K	0.06			
Phenolics	mg/L	0.001	MOEE 3179	20-Jul-22/K	0.010			
BOD(5 day)	mg/L	3	SM 5210B	18-Jul-22/K	5			

Tahir Yapici Ph.D
Lab Supervisor

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
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			Sample I.D.		B22-22370-1			
			Date Collected		13-Jul-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Total Organic Carbon	mg/L	0.2	EPA 415.2	17-Jul-22/O	10.6			
Fecal Coliform	cfu/100mL	1	MOE E3371	15-Jul-22/O	100			
Benzene	µg/L	0.5	EPA 8260	18-Jul-22/R	< 0.5			
Toluene	µg/L	0.5	EPA 8260	18-Jul-22/R	< 0.5			
Ethylbenzene	µg/L	0.5	EPA 8260	18-Jul-22/R	< 0.5			
Xylene, m,p-	µg/L	1.0	EPA 8260	18-Jul-22/R	< 1.0			
Xylene, o-	µg/L	0.5	EPA 8260	18-Jul-22/R	< 0.5			
Xylene, m,p,o-	µg/L	1.1	EPA 8260	18-Jul-22/R	< 1.1			
PHC F1 (C6-C10)	µg/L	25	MOE E3421	18-Jul-22/R	< 25			
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	18-Jul-22/K	< 50			
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	18-Jul-22/K	< 400			
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	18-Jul-22/K	< 400			
Oil & Grease-Total	mg/L	1.0	SM 5520	19-Jul-22/K	1.2			
Acenaphthene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Acenaphthylene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Anthracene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Benzo(a)anthracene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Benzo(a)pyrene	µg/L	0.01	EPA 8270	19-Jul-22/K	< 0.01			
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	19-Jul-22/K	< 0.1			
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Chrysene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Fluoranthene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Fluorene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			

Tahir Yapici Ph.D
Lab Supervisor

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Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 15-Jul-22
DATE REPORTED: 26-Jul-22
SAMPLE MATRIX: Leachate

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

			Client I.D.		CAP-2			
			Sample I.D.		B22-22370-1			
			Date Collected		13-Jul-22			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	19-Jul-22/K	0.08			
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	19-Jul-22/K	0.07			
Naphthalene	µg/L	0.05	EPA 8270	19-Jul-22/K	0.09			
Phenanthrene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			
Pyrene	µg/L	0.05	EPA 8270	19-Jul-22/K	< 0.05			

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Ottawa Ontario K1V 7P1
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Fax: 613-526-1244

DATE RECEIVED: 15-Jul-22
DATE REPORTED: 25-Jul-22
SAMPLE MATRIX: Waste Water

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

			Client I.D.		CAP-4	CAP-5		
			Sample I.D.		B22-22371-1	B22-22371-2		
			Date Collected		13-Jul-22	13-Jul-22		
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Conductivity @25°C	µmho/cm	1	SM 2510B	15-Jul-22/O	423	559		
Nitrite (N)	mg/L	0.1	SM4110C	19-Jul-22/O	< 0.1	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	19-Jul-22/O	0.2	< 0.1		
Chloride	mg/L	0.5	SM4110C	19-Jul-22/O	34.2	30.3		
Sulphate	mg/L	1	SM4110C	19-Jul-22/O	46	3		
Fecal Coliform	cfu/100mL	1	MOE E3371	15-Jul-22/O	100	4000		
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	15-Jul-22/O	97	212		
Aluminum	mg/L	0.01	SM 3120	21-Jul-22/O	0.09	0.06		
Arsenic	mg/L	0.0005	EPA 200.8	19-Jul-22/O	0.0040	0.0055		
Calcium	mg/L	0.02	SM 3120	21-Jul-22/O	25.8	20.9		
Cadmium	mg/L	0.005	SM 3120	21-Jul-22/O	< 0.005	< 0.005		
Cobalt	mg/L	0.005	SM 3120	21-Jul-22/O	< 0.005	< 0.005		
Copper	mg/L	0.002	SM 3120	21-Jul-22/O	0.009	0.018		
Chromium	mg/L	0.002	SM 3120	21-Jul-22/O	< 0.002	< 0.002		
Iron	mg/L	0.005	SM 3120	21-Jul-22/O	2.97	4.25		
Magnesium	mg/L	0.02	SM 3120	21-Jul-22/O	5.42	3.97		
Manganese	mg/L	0.001	SM 3120	21-Jul-22/O	0.727	0.401		
Mercury	mg/L	0.00002	SM 3112 B	20-Jul-22/O	< 0.00002	< 0.00002		
Sodium	mg/L	0.2	SM 3120	21-Jul-22/O	30.5	23.6		
Nickel	mg/L	0.01	SM 3120	21-Jul-22/O	< 0.01	< 0.01		
Lead	mg/L	0.02	SM 3120	21-Jul-22/O	< 0.02	< 0.02		
Zinc	mg/L	0.005	SM 3120	21-Jul-22/O	0.030	0.033		
Hardness (as CaCO3)	mg/L	1	SM 3120	21-Jul-22/O	87	69		
Total Organic Carbon	mg/L	0.2	EPA 415.2	17-Jul-22/O	24.0	22.8		
pH @25°C	pH Units		SM 4500H	15-Jul-22/O	7.88	7.52		
Oil & Grease-Total	mg/L	1.0	SM 5520	19-Jul-22/K	1.0	7.5		
BOD(5 day)	mg/L	3	SM 5210B	18-Jul-22/K	20	29		

Tahir Yapici Ph.D
Lab Supervisor

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Ottawa Ontario K1V 7P1
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Fax: 613-526-1244

DATE RECEIVED: 15-Jul-22
DATE REPORTED: 25-Jul-22
SAMPLE MATRIX: Waste Water

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

			Client I.D.		CAP-4	CAP-5		
			Sample I.D.		B22-22371-1	B22-22371-2		
			Date Collected		13-Jul-22	13-Jul-22		
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	19-Jul-22/K	10.3	38.4		
Phenolics	mg/L	0.001	MOEE 3179	20-Jul-22/K	< 0.001	0.228		
Total Suspended Solids	mg/L	3	SM2540D	19-Jul-22/K	44	44		
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	18-Jul-22/K	< 50	< 50		
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	18-Jul-22/K	< 400	< 400		
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	18-Jul-22/K	< 400	< 400		
PHC F1 (C6-C10)	µg/L	25	MOE E3421	18-Jul-22/R	< 25	53		

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Appendix C

No spills in reporting year

Appendix D

No CIRNAC inspection report received for reporting year