

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

YEAR BEING REPORTED: 2022

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License # 3BM-HAL2025 issued to the Municipality of Hall Beach, 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.

Month Reported	Quantity of Water Obtained from all sources (L)	Quantity of Sewage Waste Discharged (Estimated)
January	3,622,402.2	Same
February	3,163,093.5	Same
March	3,211,175.9	Same
April	3,180,977.3	Same
May	3,480,739.2	Same
June	3,368,028.2	Same
July	3,368,028.2	Same
August	3,586,751.8	Same
September	3,585,926	Same
October	3,279,730.9	Same
November	3,283,633.7	Same
December	3,391,366.6	Same
Annual Total	40,520,822.9	Same

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

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

- 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 during reporting year.

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

There was no unauthorized discharges reported during reporting year.

- 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 work completed during 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;**

Solid Waste study on improving conditions and waste disposal practices of the present solid waste site will be completed in 2023. Study will encompass several alternative solid waste disposal practices rather than landfills – waste transfer stations, hauling the waste to South, incineration.

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

According to the information received from Municipality, segregation of hazardous materials is their priority. Batteries are being stocked in sea cans.

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

There is no updates or revisions of the presently used O&M in place.

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

CGS will work with the Municipality during summer 2022 to ensure all sampling requirements under the water licence are met.

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

x. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

CIRNAC did not provide inspection report for the year 2022.

Appendix A: HAL-4 Effluent Quality Limits

Appendix B: Certificate of Analysis

Appendix C: Hazardous Materials Spill Database, Sanirajak 2022

Appendix D: Sanirajak 2022 CIRNAC Inspection Report

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

Appendix A

HAL-4 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	DATE: June 29.2022
BOD ₅	120 mg/L	5 mg/L
Total Suspended Solids	180 mg/L	Less than 3
Fecal Coliform	1x10 ⁶ CFU/100 mL	0
Oil and Grease	No visible sheen	Less than 1.0 mg/L
pH	Between 6 and 9	7.97 pH Units

HAL-5 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	Date : June 29. 2022.
BOD	120 mg/L	Less than 3
Total suspended Solids	180 mg/L	9
Fecal Coliform	1x10 ⁶ CFU/100 mL	0
Oil and Grise	No visible sheen 1mg/L	1
pH	Between 6 and 9	7.69

HAL-2 Runoff from Solid Waste Disposal Facility

Parameter	Maximum Concentration of any Grab Sample	Date : June 29. 2022.
BOD	120 mg/L	Less than 3
Total suspended Solids	180 mg/L	Less than 3
Fecal Coliform	1x10 ⁶ CFU/100 mL	9
Oil and Grise	No visible sheen 1mg/L	Less than 1 mg/L
pH	Between 6 and 9	8.04

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

Appendix B

Attached

C.O.C.: G 20340

REPORT No. B22-20340

Report To:

Hamlet of Sanirajak
P.O. Box 198,
Sanirajak NU K0A 0K0 Canada

Attention: Louis Primeau

Caduceon Environmental Laboratories

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

DATE RECEIVED: 29-Jun-22

JOB/PROJECT NO.:


DATE REPORTED: 14-Jul-22

P.O. NUMBER:

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	HAL-2	HAL-4	HAL-5	
			Sample I.D.	B22-20340-1	B22-20340-2	B22-20340-3	
			Date Collected	28-Jun-22	28-Jun-22	28-Jun-22	
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Fecal Coliform	cfu/100mL	1	MOE E3371	30-Jun-22/O	9	0	0
Alkalinity(CaCO ₃) to pH4.5	mg/L	5	SM 2320B	30-Jun-22/O	114	152	92
Conductivity @25°C	µmho/cm	1	SM 2510B	30-Jun-22/O	323	687	4340
pH @25°C	pH Units		SM 4500H	30-Jun-22/O	8.04	7.97	7.69
Chloride	mg/L	0.5	SM4110C	30-Jun-22/O	14.6	92.2	1020
Nitrate (N)	mg/L	0.1	SM4110C	30-Jun-22/O	< 0.1	1.3	< 0.1
Nitrite (N)	mg/L	0.1	SM4110C	30-Jun-22/O	< 0.1	< 0.1	< 0.1
Sulphate	mg/L	1	SM4110C	30-Jun-22/O	33	48	204
BOD(5 day)	mg/L	3	SM 5210B	30-Jun-22/K	< 3	5	< 3
Total Suspended Solids	mg/L	3	SM2540D	05-Jul-22/K	< 3	< 3	9
Ammonia (N)-Total	mg/L	0.01	SM4500-NH ₃ -H	06-Jul-22/K	0.34	0.28	0.05
Total Organic Carbon	mg/L	0.2	EPA 415.2	30-Jun-22/O	5.7	4.0	0.8
Phenolics	mg/L	0.001	MOEE 3179	07-Jul-22/K	< 0.001	< 0.001	< 0.001
Hardness (as CaCO ₃)	mg/L	1	SM 3120	05-Jul-22/O	129	183	429
Aluminum	mg/L	0.01	SM 3120	05-Jul-22/O	0.04	0.04	0.04
Calcium	mg/L	0.02	SM 3120	05-Jul-22/O	42.0	52.6	50.1
Cadmium	mg/L	0.005	SM 3120	05-Jul-22/O	< 0.005	< 0.005	< 0.005
Cobalt	mg/L	0.005	SM 3120	05-Jul-22/O	< 0.005	< 0.005	< 0.005
Copper	mg/L	0.002	SM 3120	05-Jul-22/O	0.002	< 0.002	< 0.002
Chromium	mg/L	0.002	SM 3120	05-Jul-22/O	< 0.002	< 0.002	0.002
Iron	mg/L	0.005	SM 3120	05-Jul-22/O	0.318	0.127	0.208
Magnesium	mg/L	0.02	SM 3120	05-Jul-22/O		12.5	74.0
Manganese	mg/L	0.001	SM 3120	05-Jul-22/O	0.032	0.010	0.006
Sodium	mg/L	0.2	SM 3120	05-Jul-22/O		55.9	694
Nickel	mg/L	0.01	SM 3120	05-Jul-22/O	< 0.01	< 0.01	< 0.01
Lead	mg/L	0.02	SM 3120	05-Jul-22/O	< 0.02	< 0.02	< 0.02
Zinc	mg/L	0.005	SM 3120	05-Jul-22/O	0.011	< 0.005	0.012



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

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

C.O.C.: G 20340

REPORT No. B22-20340

Report To:

Hamlet of Sanirajak
P.O. Box 198,
Sanirajak NU K0A 0K0 Canada

Attention: Louis Primeau

Caduceon Environmental Laboratories

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

DATE RECEIVED: 29-Jun-22

JOB/PROJECT NO.:

DATE REPORTED: 14-Jul-22

P.O. NUMBER:

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	HAL-2	HAL-4	HAL-5	
			Sample I.D.	B22-20340-1	B22-20340-2	B22-20340-3	
			Date Collected	28-Jun-22	28-Jun-22	28-Jun-22	
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Arsenic	mg/L	0.0005	EPA 200.8	08-Jul-22/O	< 0.0005	0.0019	0.0015
Mercury	mg/L	0.00002	SM 3112 B	05-Jul-22/O	< 0.00002	< 0.00002	< 0.00002
Oil & Grease-Total	mg/L	1.0	SM 5520	05-Jul-22/K	< 1.0	< 1.0	1.0
Acenaphthene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Acenaphthylene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Anthracene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Benzo(a)anthracene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Benzo(a)pyrene	µg/L	0.01	EPA 8270	06-Jul-22/K	< 0.01		
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	06-Jul-22/K	< 0.1		
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Chrysene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Fluoranthene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Fluorene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Methylnaphthalene 2-(1-)	µg/L	1	EPA 8270	06-Jul-22/K	< 1		
Naphthalene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Phenanthrene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
Pyrene	µg/L	0.05	EPA 8270	06-Jul-22/K	< 0.05		
2-Fluorobiphenyl (SS)	% rec.	10	EPA 8270	06-Jul-22/K	87.0		
Terphenyl-d14 (SS)	% rec.	10	EPA 8270	06-Jul-22/K	99.0		
Benzene	µg/L	0.5	EPA 8260	05-Jul-22/R	< 0.5		
Toluene	µg/L	0.5	EPA 8260	05-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

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

C.O.C.: G 20340

REPORT No. B22-20340

Report To:

Hamlet of Sanirajak
P.O. Box 198,
Sanirajak NU K0A 0K0 Canada

Attention: Louis Primeau

Caduceon Environmental Laboratories

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

DATE RECEIVED: 29-Jun-22

JOB/PROJECT NO.:

DATE REPORTED: 14-Jul-22

P.O. NUMBER:

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	HAL-2	HAL-4	HAL-5	
			Sample I.D.	B22-20340-1	B22-20340-2	B22-20340-3	
			Date Collected	28-Jun-22	28-Jun-22	28-Jun-22	
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Ethylbenzene	µg/L	0.5	EPA 8260	05-Jul-22/R	< 0.5		
Xylene, m,p-	µg/L	1.0	EPA 8260	05-Jul-22/R	< 1.0		
Xylene, o-	µg/L	0.5	EPA 8260	05-Jul-22/R	< 0.5		
Xylene, m,p,o-	µg/L	1.1	EPA 8260	05-Jul-22/R	< 1.1		
Dibromofluoromethane	% rec.		EPA 8260	05-Jul-22/R	95.0		
Toluene-d8 (SS)	% rec.		EPA 8260	05-Jul-22/R	110		
Bromofluorobenzene,4(SS)	% rec.		EPA 8260	05-Jul-22/R	101		
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	04-Jul-22/K	< 50		
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	04-Jul-22/K	< 400		
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	04-Jul-22/K	< 400		
Comment-extractable	-		-	04-Jul-22	-		



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

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

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

Appendix C

No spills reported during the reporting year.

**ANNUAL REPORT
FOR THE MUNICIPALITY OF SANIRAJAK, NUNAVUT, 2022**

Appendix D

No CIRNAC report received in 2022.