

2024 ANNUAL REPORT FOR THE MUNICIPALITY OF SANIRAJAK

YEAR BEING REPORTED: 2024

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. **3BM-HAL2025** issued to the **Municipality of Sanirajak**.

**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.

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FOR THE MUNICIPALITY OF SANIRAJAK**

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (m³)	Quantity of Hazardous Waste Accepted (m³)	Quantity of Non-Hazardous Waste Accepted (m³)
January	3,489.80	Same	1.10	997.11
February	3,205.00	Same	1.10	997.11
March	3,403.01	Same	1.10	997.11
April	3,232.61	Same	1.10	997.11
May	3,476.57	Same	1.10	997.11
June	3,167.19	Same	1.10	997.11
July	3,473.30	Same	1.10	997.11
August	3,242.55	Same	1.10	997.11
September	3,594.86	Same	1.10	997.11
October	3,492.35	Same	1.10	997.11
November	3,158.58	Same	1.10	997.11
December	3,248.55	Same	1.10	997.11
ANNUAL TOTAL	40,184.38	Same	13.24	11,965.34

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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:

No modifications or major maintenance work carried out in 2024.

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

No spills to report in 2024.

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:

Wastewater

Contractor and consultant were on site during summer 2021 to determine the issue of the leaking lagoon, which is a deficient issue from construction. Data analysis and a report is ongoing.

Solid Waste

The initial planning study for a new solid waste facility was completed in 2020/21. The cost estimates have indicated that the current funding cannot support the construction of a new state-of-the-art 20-year landfill. The focus of the project has shifted to making improvements to the current site. A second planning contract to assess and prioritize the improvements to the current site is expected to be complete in 2025.

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 Sewage Disposal Facility, and updated Environmental Emergency Spill Contingency and Environmental Monitoring and QA/QC Plans will be provided within the 2025 Application

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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:

- Reservoir refill took place September 19-26, 2024
- No sludge has been removed from the Wastewater Treatment Facility
- No modifications to the Monitoring Program

XI. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

A CIRNAC Inspection took place on June 28, 2024. The Inspection Report has not been received yet.

An updated Compliance Plan will be submitted with the 2025 Application for Water Licence Amendment and Renewal.

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FOR THE MUNICIPALITY OF SANIRAJAK**

APPENDICES:

Appendix A: Summary and Interpretation of Monitoring Data

Appendix B: Certificate of Analyses

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Appendix A

Tabular Summary of Monitoring Data

Parameter	Maximum Concentration of any Grab Sample for HAL-4	Units	July 17, 2024 HAL-4	July 24 2024 HAL-5	July 24 2024 HAL-5	July 31, 2024 HAL-4	Sep. 11, 2024 HAL-4	Sep. 11, 2024 HAL-5
BOD ₅	120	mg/L	<3	17	3	<3	<3	<3
Total Suspended Solids	180	mg/L	<3	40	40	<3	5	3
Fecal Coliform	1x10 ⁶	CFU / 100 mL	4	0	0	0	0	0
Oil and Grease	No visible sheen	N/A	1.1 mg/L	<1.0 mg/L	<1.0 mg/L	1.2 mg/L	2.9 mg/L	1.9 mg/L
pH	Between 6 and 9	N/A	7.52	8.01	7.93	6.99	8.09	7.78

Based on the results, compliance with the effluent quality limits at HAL-4 was achieved. However, the sampling locations may not have been representative of the intended effluent, and the locations will be reviewed ahead of the upcoming year's monitoring program.

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Appendix B

C.O.C.: G 111260

REPORT No: 24-021891 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Jul-18
DATE REPORTED: 2024-Jul-30
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-24	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	NHOGAN	2024-Jul-22	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-22	O&G-001	SM 5520
Phenols (Liquid)	2	KINGSTON	JMACINNES	2024-Jul-24	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	2	OTTAWA	VKASYAN	2024-Jul-19	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	DCASSIDY	2024-Jul-22	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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



Michelle Dubien
Data Specialist

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 24-021891 - Rev. 0

			Client I.D.	HAL-2	HAL-2
			Sample I.D.	24-021891-1	24-021891-2
			Date Collected	2024-07-17	2024-07-17
Parameter	Units	R.L.		-	-
Fecal Coliform	CFU/100mL	1		4	4
Alkalinity(CaCO3) to pH4.5	mg/L	5		169	174
Conductivity @25°C	uS/cm	1		536	566
pH @25°C	pH units	-		7.83	7.92
Chloride	mg/L	0.5		32.9	34.8
Nitrate (N)	mg/L	0.05		<0.05	<0.05
Nitrite (N)	mg/L	0.05		<0.05	<0.05
Sulphate	mg/L	1		66	73
BOD5	mg/L	3		<3	<3
Total Suspended Solids	mg/L	3		<3	3
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		0.26	0.25
Total Organic Carbon	mg/L	0.2		7.8	6.8
Phenolics	mg/L	0.001		<0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02		202	195
Aluminum (Total)	mg/L	0.01		0.04	0.04
Cadmium (Total)	mg/L	0.005		<0.005	<0.005
Calcium (Total)	mg/L	0.02		62.5	60.1
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		<0.002	<0.002
Iron (Total)	mg/L	0.005		0.188	0.171



Michelle Dubien
Data Specialist

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

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Final Report
REPORT No: 24-021891 - Rev. 0

			Client I.D.	HAL-2	HAL-2
			Sample I.D.	24-021891-1	24-021891-2
			Date Collected	2024-07-17	2024-07-17
Parameter	Units	R.L.		-	-
Lead (Total)	mg/L	0.02		<0.02	<0.02
Magnesium (Total)	mg/L	0.02		11.2	10.9
Manganese (Total)	mg/L	0.001		0.015	0.015
Nickel (Total)	mg/L	0.01		<0.01	<0.01
Potassium (Total)	mg/L	0.1		5.9	6.0
Sodium (Total)	mg/L	0.2		23.6	23.3
Zinc (Total)	mg/L	0.005		0.010	0.008
Arsenic (Total)	mg/L	0.0005		<0.0005	0.0005
Mercury	mg/L	0.00002		<0.00002	<0.00002

			Client I.D.	HAL-2	HAL-2
			Sample I.D.	24-021891-1	24-021891-2
			Date Collected	2024-07-17	2024-07-17
Parameter	Units	R.L.		-	-
Oil & Grease (Total)	mg/L	1.0		1.1	<1.0



Michelle Dubien
Data Specialist

C.O.C.: G 111261

REPORT No: 24-021893 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Jul-18
DATE REPORTED: 2024-Jul-30
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-24	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2024-Jul-19	COND-02/PH-02/A LK-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-24	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	KYUILL	2024-Jul-22	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-22	PHC-W-001	MECP E3421
Phenols (Liquid)	1	KINGSTON	JMACINNES	2024-Jul-24	PHEN-01	MECP E3179
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	EASIEDU	2024-Jul-22	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	DCASSIDY	2024-Jul-22	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-naph 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
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Final Report
REPORT No: 24-021893 - Rev. 0

		Client I.D.	HAL-4 Leachate
		Sample I.D.	24-021893-1
		Date Collected	2024-07-17
Parameter	Units	R.L.	-
Fecal Coliform	CFU/100mL	1	4
Alkalinity(CaCO3) to pH4.5	mg/L	5	134
Conductivity @25°C	uS/cm	1	429
pH @25°C	pH units	-	7.52
Chloride	mg/L	0.5	35.1
Nitrate (N)	mg/L	0.05	0.45
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	34
BOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	<3
Phosphorus (Total)	mg/L	0.01	0.24
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.16
Total Organic Carbon	mg/L	0.2	6.2
Phenolics	mg/L	0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02	146
Aluminum (Total)	mg/L	0.01	0.04
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	45.6
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	<0.002



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		Client I.D.	HAL-4 Leachate
		Sample I.D.	24-021893-1
		Date Collected	2024-07-17
Parameter	Units	R.L.	-
Iron (Total)	mg/L	0.005	0.079
Lead (Total)	mg/L	0.02	<0.02
Manganese (Total)	mg/L	0.001	0.006
Nickel (Total)	mg/L	0.01	<0.01
Potassium (Total)	mg/L	0.1	4.0
Zinc (Total)	mg/L	0.005	<0.005
Arsenic (Total)	mg/L	0.0001	0.0016
Mercury	mg/L	0.00002	<0.00002



Michelle Dubien
Data Specialist

		Client I.D.	HAL-4 Leachate
		Sample I.D.	24-021893-1
		Date Collected	2024-07-17
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	1.1



Michelle Dubien
Data Specialist

		Client I.D.	HAL-4 Leachate
		Sample I.D.	24-021893-1
		Date Collected	2024-07-17
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	<0.05
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	<0.05
Phenanthrene	µg/L	0.05	<0.05
Pyrene	µg/L	0.05	<0.05



Michelle Dubien
Data Specialist

C.O.C.: G 107675

REPORT No: 24-022898 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Jul-29
DATE REPORTED: 2024-Aug-07
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	2	OTTAWA	LMACGREGOR	2024-Jul-30	A-IC-01	SM 4110B
BOD5 (Liquid)	2	KINGSTON	JWOLFE2	2024-Jul-31	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	2	OTTAWA	SBOUDREAU	2024-Jul-29	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	2	OTTAWA	HALIPDA	2024-Jul-29	FC-001	SM 9222D
ICP/MS Total (Liquid)	2	OTTAWA	AOZKAYMAK	2024-Jul-31	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	2	OTTAWA	NHOGAN	2024-Jul-31	D-ICP-01	SM 3120B
Mercury (Liquid)	2	OTTAWA	TBENNETT	2024-Jul-30	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	2	KINGSTON	JYEARWOOD	2024-Aug-01	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	2	KINGSTON	DCHAUDHARI	2024-Aug-01	O&G-001	SM 5520
Phenols (Liquid)	2	KINGSTON	JMACINNES	2024-Aug-01	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	2	OTTAWA	VKASYAN	2024-Jul-30	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	DCASSIDY	2024-Jul-31	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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



Michelle Dubien
Data Specialist

CADUCEON Environmental Laboratories Certificate of Analysis

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			Client I.D.	HAL-5 - 8:37	HAL-5 - 8:46
			Sample I.D.	24-022898-1	24-022898-2
			Date Collected	2024-07-24	2024-07-24
Parameter	Units	R.L.		-	-
Fecal Coliform	CFU/100mL	1		0	0
Alkalinity(CaCO3) to pH4.5	mg/L	5		123	124
Conductivity @25°C	uS/cm	1		31100	30700
pH @25°C	pH units	-		8.01	7.93
Chloride	mg/L	0.5		10600	10400
Nitrate (N)	mg/L	0.05		<4.00	<4.00
Nitrite (N)	mg/L	0.05		<4.00	<4.00
Sulphate	mg/L	1		1390	1360
BOD5	mg/L	3		17	3
Total Suspended Solids	mg/L	3		40	40
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		<0.05	<0.05
Total Organic Carbon	mg/L	0.2		<0.2	<0.2
Phenolics	mg/L	0.001		<0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02		3140	3270
Aluminum (Total)	mg/L	0.01		0.11	0.10
Cadmium (Total)	mg/L	0.005		<0.005	<0.005
Calcium (Total)	mg/L	0.02		227	235
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		<0.002	<0.002
Iron (Total)	mg/L	0.005		0.070	0.073



Michelle Dubien
Data Specialist

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			Client I.D.	HAL-5 - 8:37	HAL-5 - 8:46
			Sample I.D.	24-022898-1	24-022898-2
			Date Collected	2024-07-24	2024-07-24
Parameter	Units	R.L.		-	-
Lead (Total)	mg/L	0.02		<0.02	<0.02
Magnesium (Total)	mg/L	0.02		627	652
Manganese (Total)	mg/L	0.001		0.004	0.003
Nickel (Total)	mg/L	0.01		<0.01	<0.01
Potassium (Total)	mg/L	0.1		219	229
Sodium (Total)	mg/L	0.2		5940	6080
Zinc (Total)	mg/L	0.005		0.015	0.009
Arsenic (Total)	mg/L	0.0005		0.0012	0.0012
Mercury	mg/L	0.00002		<0.00002	<0.00002

			Client I.D.	HAL-5 - 8:37	HAL-5 - 8:46
			Sample I.D.	24-022898-1	24-022898-2
			Date Collected	2024-07-24	2024-07-24
Parameter	Units	R.L.		-	-
Oil & Grease (Total)	mg/L	1.0		<1.0	<1.0

Bacteria passed holding time.
 Elevated RLs due to sample matrix interferences



Michelle Dubien
Data Specialist

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C.O.C.: G 109712

REPORT No: 24-023564 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Aug-02
DATE REPORTED: 2024-Aug-12
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-Aug-07	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	DCASSIDY	2024-Aug-07	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2024-Aug-02	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	AHIRSI	2024-Aug-02	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2024-Aug-06	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2024-Aug-02	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2024-Aug-06	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	JYEARWOOD	2024-Aug-07	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	DCHAUDHARI	2024-Aug-06	O&G-001	SM 5520
PHC F1 (Liquid)	1	RICHMOND_HILL	JEVANS	2024-Aug-08	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	1	KINGSTON	STHOMPSON	2024-Aug-07	PHC-W-001	MECP E3421
Phenols (Liquid)	1	KINGSTON	JMACINNES	2024-Aug-06	PHEN-01	MECP E3179
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	EASIEDU	2024-Aug-07	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2024-Aug-07	C-OC-01	EPA 415.2
TP & TKN (Liquid)	1	KINGSTON	KDIBBITS	2024-Aug-07	TPTKN-001	MECP E3516.2
TSS (Liquid)	1	KINGSTON	DCASSIDY	2024-Aug-06	TSS-001	SM 2540D
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	JEVANS	2024-Aug-08	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-naph 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

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Final Report
REPORT No: 24-023564 - Rev. 0

		Client I.D.	HAL-3
		Sample I.D.	24-023564-1
		Date Collected	2024-07-31
Parameter	Units	R.L.	-
Fecal Coliform	CFU/100mL	1	1
Alkalinity(CaCO3) to pH4.5	mg/L	5	117
Conductivity @25°C	uS/cm	1	342
pH @25°C	pH units	-	8.25
Chloride	mg/L	0.5	26.9
Nitrate (N)	mg/L	0.05	<0.05
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	30
BOD5	mg/L	3	3
Total Suspended Solids	mg/L	3	6
Phosphorus (Total)	mg/L	0.01	0.11
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.19
Total Organic Carbon	mg/L	0.2	9.9
Phenolics	mg/L	0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02	140
Aluminum (Total)	mg/L	0.01	0.03
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	43.5
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	<0.002



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		Client I.D.	HAL-3
		Sample I.D.	24-023564-1
		Date Collected	2024-07-31
Parameter	Units	R.L.	-
Iron (Total)	mg/L	0.005	0.146
Lead (Total)	mg/L	0.02	<0.02
Manganese (Total)	mg/L	0.001	0.007
Nickel (Total)	mg/L	0.01	<0.01
Potassium (Total)	mg/L	0.1	2.6
Zinc (Total)	mg/L	0.005	<0.005
Arsenic (Total)	mg/L	0.0001	0.0008
Mercury	mg/L	0.00002	<0.00002



Michelle Dubien
Data Specialist

		Client I.D.	HAL-3
		Sample I.D.	24-023564-1
		Date Collected	2024-07-31
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.	HAL-3
		Sample I.D.	24-023564-1
		Date Collected	2024-07-31
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 (3.)
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

Comments:

3. Elevated RL due to sample matrix interferences/dilution



Michelle Dubien
Data Specialist

Bacteria passed holding time.



Michelle Dubien
Data Specialist

C.O.C.: G 109712

REPORT No: 24-023567 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Aug-02
DATE REPORTED: 2024-Aug-12
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-Aug-07	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	DCASSIDY	2024-Aug-07	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2024-Aug-02	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	AHIRSI	2024-Aug-02	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2024-Aug-06	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2024-Aug-02	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2024-Aug-06	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	JYEARWOOD	2024-Aug-07	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	DCHAUDHARI	2024-Aug-06	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	JMACINNES	2024-Aug-06	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2024-Aug-07	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	DCASSIDY	2024-Aug-06	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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



Michelle Dubien
Data Specialist

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Final Report
REPORT No: 24-023567 - Rev. 0

		Client I.D.	HAL-4
		Sample I.D.	24-023567-1
		Date Collected	2024-07-31
Parameter	Units	R.L.	-
Fecal Coliform	CFU/100mL	1	0
Alkalinity(CaCO3) to pH4.5	mg/L	5	151
Conductivity @25°C	uS/cm	1	432
pH @25°C	pH units	-	7.32
Chloride	mg/L	0.5	33.3
Nitrate (N)	mg/L	0.05	0.39
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	30
BOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	6
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.45
Total Organic Carbon	mg/L	0.2	6.5
Phenolics	mg/L	0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02	161
Aluminum (Total)	mg/L	0.01	0.04
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	50.3
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	<0.002
Iron (Total)	mg/L	0.005	0.113



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Final Report
REPORT No: 24-023567 - Rev. 0

			Client I.D.	HAL-4
			Sample I.D.	24-023567-1
			Date Collected	2024-07-31
Parameter	Units	R.L.	-	
Lead (Total)	mg/L	0.02	<0.02	
Magnesium (Total)	mg/L	0.02	8.69	
Manganese (Total)	mg/L	0.001	0.008	
Nickel (Total)	mg/L	0.01	<0.01	
Potassium (Total)	mg/L	0.1	3.5	
Sodium (Total)	mg/L	0.2	24.0	
Zinc (Total)	mg/L	0.005	<0.005	
Arsenic (Total)	mg/L	0.0005	0.0013	
Mercury	mg/L	0.00002	<0.00002	

			Client I.D.	HAL-4
			Sample I.D.	24-023567-1
			Date Collected	2024-07-31
Parameter	Units	R.L.	-	
Oil & Grease (Total)	mg/L	1.0	3.0	



Michelle Dubien
Data Specialist

C.O.C.: G 111378

REPORT No: 24-028402 - Rev. 0

Report To:

Hamlet of Sanirajak (Municipality of Hall Beach)
P.O. Box 198
Sanirajak, NU K0A 0K0

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Jeela Apak

DATE RECEIVED: 2024-Sep-13
DATE REPORTED: 2024-Sep-23
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	2	OTTAWA	LMACGREGOR	2024-Sep-13	A-IC-01	SM 4110B
BOD5 (Liquid)	2	KINGSTON	JWOLFE2	2024-Sep-16	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	2	OTTAWA	SBOUDREAU	2024-Sep-16	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	2	OTTAWA	AHIRSI	2024-Sep-13	FC-001	SM 9222D
ICP/MS Total (Liquid)	2	OTTAWA	AOZKAYMAK	2024-Sep-17	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	2	OTTAWA	NHOGAN	2024-Sep-16	D-ICP-01	SM 3120B
Mercury (Liquid)	2	OTTAWA	TBENNETT	2024-Sep-16	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	2	KINGSTON	JYEARWOOD	2024-Sep-18	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	2	KINGSTON	DCHAUDHARI	2024-Sep-16	O&G-001	SM 5520
Phenols (Liquid)	2	KINGSTON	MCLOSS	2024-Sep-17	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	2	OTTAWA	SLOZO	2024-Sep-16	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	DCASSIDY	2024-Sep-16	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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



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Data Specialist

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Final Report
REPORT No: 24-028402 - Rev. 0

			Client I.D.	HAL-4	HAL-5
			Sample I.D.	24-028402-1	24-028402-2
			Date Collected	2024-09-11	2024-09-11
Parameter	Units	R.L.		-	-
Fecal Coliform	CFU/100mL	1		0	0
Alkalinity(CaCO3) to pH4.5	mg/L	5		180	146
Conductivity @25°C	uS/cm	1		621	39400
pH @25°C	pH units	-		8.09	7.78
Chloride	mg/L	0.5		55.9	16000
Nitrate (N)	mg/L	0.05		0.32	<4.00
Nitrite (N)	mg/L	0.05		0.05	<4.00
Sulphate	mg/L	1		55	2130
BOD5	mg/L	3		<3	<3
Total Suspended Solids	mg/L	3		5	3
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		0.80	0.06
Total Organic Carbon	mg/L	0.2		8.6	0.2
Phenolics	mg/L	0.001		<0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02		233	4860
Aluminum (Total)	mg/L	0.01		0.04	0.15
Cadmium (Total)	mg/L	0.005		<0.005	<0.005
Calcium (Total)	mg/L	0.02		71.5	306
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		<0.002	<0.002
Iron (Total)	mg/L	0.005		0.346	0.108



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Final Report
REPORT No: 24-028402 - Rev. 0

			Client I.D.	HAL-4	HAL-5
			Sample I.D.	24-028402-1	24-028402-2
			Date Collected	2024-09-11	2024-09-11
Parameter	Units	R.L.		-	-
Lead (Total)	mg/L	0.02		<0.02	<0.02
Magnesium (Total)	mg/L	0.02		13.2	996
Manganese (Total)	mg/L	0.001		0.017	0.004
Nickel (Total)	mg/L	0.01		<0.01	<0.01
Potassium (Total)	mg/L	0.1		5.4	302
Sodium (Total)	mg/L	0.2		32.0	7970
Zinc (Total)	mg/L	0.005		<0.005	0.013
Arsenic (Total)	mg/L	0.0005		0.0015	0.0013
Mercury	mg/L	0.00002		<0.00002	<0.00002

			Client I.D.	HAL-4	HAL-5
			Sample I.D.	24-028402-1	24-028402-2
			Date Collected	2024-09-11	2024-09-11
Parameter	Units	R.L.		-	-
Oil & Grease (Total)	mg/L	1.0		2.9	1.9

Elevated RLs due to sample matrix interferences



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