

ANNUAL REPORT FOR THE MUNICIPALITY OF GJOA HAVEN

YEAR BEING REPORTED: 2024

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License No. 3BM-GJO1828 issued to the Municipality of Gjoa Haven.

- **tabular summaries of all data generated under the “Monitoring Program”;**
- **summary of modifications to the “Monitoring Program” in accordance with Part H, Item 13;**
- **the daily, monthly and annual quantities in cubic metres of freshwater obtained from all sources;**
- **the daily, monthly and annual quantities in cubic metres of each and all waste discharged; including the hazardous and non-hazardous waste accepted at the Solid Waste Facilities;**

Attached are quantities of water used as reported by the Municipality and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (Estimated, m³)
January	3,209,154.80	Same
February	3,209,154.80	Same
March	3,209,154.80	Same
April	4,479,230.20	Same
May	4,478,602.90	Same
June	4,478,602.90	Same
July	4,477,349.70	Same
August	4,477,349.70	Same
September	4,015,613.60	Same
October	4,226,519.10	Same
November	4,287,161.00	Same
December	2,955,383.30	Same
ANNUAL TOTAL	47,524,623.21	Same

Note: Monthly sewage discharge volume is considered as equal to the monthly water consumption volume.

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- **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;**
- There were no modifications and/or major maintenance work carried out on the Waste Disposal Facilities in 2024.
- **a list of unauthorized discharges and summary of follow-up action taken;**
- There were no spills associated with licensed infrastructure in 2024. See Appendix E.
- **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.
- **a summary of any studies, reports and plans (e.g., Operation and Maintenance, Abandonment and Restoration, QA/QC) requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;**
- The initial planning study 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 will shift 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 completed in 2025.
- **any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.**
- There were no other details on water use or waste disposal requested by the Board by November 1, 2024.

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ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- The Sewage Disposal Facility is an impermeable lagoon so there is no flow at GJO-2 or GJO-4 until decant pumping begins.
- No flow at GJO-5 – decanting solid waste site was not planned due to lack of leachate. No sample taken.
- Decant began early in the season to allow time to repair a tear in the liner. Subsequent damage to the footer valve on the decant pipeline resulted in decreased flow. The shipment for the replacement valve was delayed and the lagoon was not emptied in time for repairs to take place prior to freeze up. The tear in the lagoon liner is to be repaired upon thaw in 2025.
- August 6th Fecal Count is too numerous to count. Due to flight scheduling, the samples were held 24 hours past holding times resulting in exponential bacterial growth.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- The Solid Waste Improvement planning project report will be included with the 2025 Annual Report. When the site improvements are completed, as-builts and an updated O&M manual will be submitted.
- The 2024 CIRNAC inspection report was not received nor posted to the NWB Public Registry.

List of Appendices

Appendix A: GJO-4 Effluent Quality Limits – 1 page

Appendix B: Laboratory Certificate of Analysis

- **Certificate of Analysis 07/10/2024 - 10 pages**
- **Certificate of Analysis 08/06/2024 – 10 pages**

Appendix C: Gjoa Haven 2024 Sampling Summary – 1 page

Appendix D: CIRNAC Inspection Report - 1 page

Appendix E: Hazardous Materials Spill Database – 1 page

Appendix F: Receipts of submissions to NWB- 3 pages

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Appendix A: GJO-4 Effluent Quality Limits

3BM-GJO1828 Gjoa Haven Monitoring Program Results 2024 for Effluent Quality

Parameter	Maximum concentration	GJO-4	
		July 10	August 6
CBOD	100 mg/L	6	102
Total Suspended Solids	100 mg/L	<3	54
Fecal Coliforms	1x10 ⁴ CFU/dl	136	TNTC
Oil + Grease	No visible sheen	Non-visible	Non-visible
pH	between 6 and 9	8.19	7.99

**ANNUAL REPORT
FOR THE MUNICIPALITY OF GJOA HAVEN**

Appendix B: Laboratory Certificate of Analysis



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
240989

- FINAL REPORT -

Prepared For: Hamlet of Gjoa Haven

Address: P.O. Box 200
Gjoa Haven, NU
X0B 1J0

Attn: Adam Halluqtalik

Facsimile: (867) 360-6309

Final report has been reviewed and approved by:

Glen Hudy
Quality Assurance Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Results are based on the specific tests at the time of analysis, does not represent the conditions during sampling and relates only to the items tested.

ReportDate: July 23, 2024

Print Date: *July 23, 2024*



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
240989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-2**

Taiga Sample ID: **001**

Client Project:

Sample Type: Sewage
Received Date: 12-Jul-24
Sampling Date: 10-Jul-24
Sampling Time:

Location: Gjoa Haven Sewage System

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	37.8	0.1	mg/L	12-Jul-24	TEL035	
Magnesium	29.6	0.1	mg/L	12-Jul-24	TEL035	
Potassium	11.0	0.1	mg/L	12-Jul-24	TEL035	
Sodium	38.6	0.1	mg/L	12-Jul-24	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	15.5	0.105	mg/L	16-Jul-24	TEL068	210
Biochemical Oxygen Demand	59	2	mg/L	12-Jul-24	TEL019	
CBOD	68	2	mg/L	12-Jul-24	TEL019	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	209	0.4	mg/L	12-Jul-24	TEL060	

ReportDate: July 23, 2024

Print Date: *July 23, 2024*

Conductivity, Specific (@25C)	691	0.4	μS/cm	12-Jul-24	TEL059
pH	8.00		pH units	12-Jul-24	TEL058

Solids, Total Suspended	22	3	mg/L	16-Jul-24	TEL008
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Major Ions

Nitrate+Nitrite as Nitrogen	0.92	0.01	mg/L	13-Jul-24	TEL055
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Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

240989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-2**

Taiga Sample ID: **001**

Sulphate	48	1	mg/L	13-Jul-24	TEL055	
<u>Microbiology</u>						
Coliforms, Fecal	35000	1000	CFU/100mL	12-Jul-24	TEL017	210
<u>Organics</u>						
Oil and Grease, visible	Non-visible			12-Jul-24	Visual Exam	
<u>Subcontracted Organics</u>						
Phenols, Total	0.0014	0.001	mg/L	17-Jul-24	AB ENV.06537	
<u>Trace Metals, Total</u>						
Arsenic	2.7	0.2	µg/L	16-Jul-24	TEL035	
Cadmium	< 0.04	0.04	µg/L	16-Jul-24	TEL035	
Chromium	0.4	0.1	µg/L	16-Jul-24	TEL035	
Copper	34.8	0.2	µg/L	16-Jul-24	TEL035	
Iron	606	5	µg/L	16-Jul-24	TEL035	
Lead	0.4	0.1	µg/L	16-Jul-24	TEL035	
Mercury	0.07	0.01	µg/L	16-Jul-24	TEL035	
Nickel	1.9	0.1	µg/L	16-Jul-24	TEL035	
Zinc	24.3	0.4	µg/L	16-Jul-24	TEL035	

ReportDate: July 23, 2024

Print Date: **July 23, 2024**

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Taiga Environmental Laboratory

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:

240989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

Client Project:

Sample Type: Sewage

Received Date: 12-Jul-24

Sampling Date: 10-Jul-24

Sampling Time:

Location: Gjoa Haven Sewage System

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	35.7	0.1	mg/L	12-Jul-24	TEL035	
Magnesium	25.5	0.1	mg/L	12-Jul-24	TEL035	
Potassium	4.4	0.1	mg/L	12-Jul-24	TEL035	
Sodium	20.3	0.1	mg/L	12-Jul-24	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	0.701	0.005	mg/L	16-Jul-24	TEL068	
Biochemical Oxygen Demand	11	2	mg/L	12-Jul-24	TEL019	
CBOD	6	2	mg/L	12-Jul-24	TEL019	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	143	0.4	mg/L	12-Jul-24	TEL060	
Conductivity, Specific (@25C)	440	0.4	µS/cm	12-Jul-24	TEL059	
pH	8.19		pH units	12-Jul-24	TEL058	

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Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740 TEL008

Taiga Batch No.:
240989

Major Ions

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

ReportDate: July 23, 2024

Print Date: *July 23, 2024*



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867) 920-1874 Fax: (867) 920-1874

45 1 mg/L 13-Jul-24 TEL055

Taiga Batch No.:

240989

Sulphate

- CERTIFICATE OF ANALYSIS -

ReportDate: July 23, 2024

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
240989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

Microbiology

Coliforms, Fecal	136	4	CFU/100mL	12-Jul-24	TEL017	210
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Organics

Oil and Grease, visible	Non-visible			12-Jul-24	Visual Exam	
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Subcontracted Organics

Phenols, Total	< 0.0010	0.001	mg/L	17-Jul-24	AB ENV.06537	
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Trace Metals, Total

Arsenic	2.1	0.2	µg/L	16-Jul-24	TEL035	
Cadmium	< 0.04	0.04	µg/L	16-Jul-24	TEL035	
Chromium	0.2	0.1	µg/L	16-Jul-24	TEL035	
Copper	3.9	0.2	µg/L	16-Jul-24	TEL035	
Iron	405	5	µg/L	16-Jul-24	TEL035	
Lead	0.2	0.1	µg/L	16-Jul-24	TEL035	
Mercury	0.03	0.01	µg/L	16-Jul-24	TEL035	
Nickel	1.9	0.1	µg/L	16-Jul-24	TEL035	
Zinc	3.9	0.4	µg/L	16-Jul-24	TEL035	

ReportDate: July 23, 2024

Print Date: *July 23, 2024*

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Taiga Batch No.:
240989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

- DATA QUALIFIERS -

Data Qualifier Descriptions:

210 *Detection limit adjusted for required dilution.*

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency



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Taiga Batch No.:
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- FINAL REPORT -

Prepared For: Hamlet of Gjoa Haven

Address: P.O. Box 200
Gjoa Haven, NU
X0B 1J0

Attn: Adam Halluqtalik

Facsimile: (867) 360-6309

Final report has been reviewed and approved by:

Bradley Koswan
A/Lab Manager

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.



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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
241178

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-2**

Taiga Sample ID: **001**

Client Project:

Sample Type: Sewage Effluent

Received Date: 07-Aug-24

Sampling Date: 06-Aug-24

Sampling Time: 9:30

Location: Gjoa Haven Sewage System

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	34.8	0.1	mg/L	13-Aug-24	TEL035	
Magnesium	30.2	0.1	mg/L	13-Aug-24	TEL035	
Potassium	28.3	0.1	mg/L	13-Aug-24	TEL035	
Sodium	109	0.1	mg/L	13-Aug-24	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	81.7	0.21	mg/L	12-Aug-24	TEL068	210
Biochemical Oxygen Demand	162	2	mg/L	07-Aug-24	TEL019	
CBOD	174	2	mg/L	07-Aug-24	TEL019	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	433	0.4	mg/L	07-Aug-24	TEL060	

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Conductivity, Specific (@25C)	1520	0.4	μS/cm	07-Aug-24	TEL059
pH	8.03		pH units	07-Aug-24	TEL058

Solids, Total Suspended	38	3	mg/L	14-Aug-24	TEL008
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Major Ions

Nitrate+Nitrite as Nitrogen	0.04	0.01	mg/L	08-Aug-24	TEL055
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Taiga Batch No.:
241178

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-2**

Taiga Sample ID: **001**

Sulphate	20	1	mg/L	08-Aug-24	TEL055	
<u>Microbiology</u>						
Coliforms, Fecal	240000	10000	CFU/100mL	07-Aug-24	TEL017	3
<u>Organics</u>						
Oil and Grease, visible	Non-visible			07-Aug-24	Visual Exam	
<u>Subcontracted Organics</u>						
Phenols, Total	0.7780	0.001	mg/L	09-Aug-24	AB ENV.06537	
<u>Trace Metals, Total</u>						
Arsenic	1.4	1	µg/L	14-Aug-24	TEL035	210
Cadmium	< 0.20	0.2	µg/L	14-Aug-24	TEL035	210
Chromium	0.8	0.5	µg/L	14-Aug-24	TEL035	210
Copper	125	1	µg/L	14-Aug-24	TEL035	210
Iron	643	25	µg/L	14-Aug-24	TEL035	210
Lead	0.8	0.5	µg/L	14-Aug-24	TEL035	210
Mercury	0.07	0.05	µg/L	14-Aug-24	TEL035	210
Nickel	2.9	0.5	µg/L	14-Aug-24	TEL035	210
Zinc	79.8	2	µg/L	14-Aug-24	TEL035	210



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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
241178

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

Client Project:

Sample Type: Sewage Effluent

Received Date: 07-Aug-24

Sampling Date: 06-Aug-24

Sampling Time: 9:30

Location: Gjoa Haven Sewage System

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	37.3	0.1	mg/L	13-Aug-24	TEL035	
Magnesium	29.9	0.1	mg/L	13-Aug-24	TEL035	
Potassium	23.1	0.1	mg/L	13-Aug-24	TEL035	
Sodium	90.5	0.1	mg/L	13-Aug-24	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	61.7	0.21	mg/L	12-Aug-24	TEL068	210
Biochemical Oxygen Demand	88	2	mg/L	07-Aug-24	TEL019	
CBOD	102	2	mg/L	07-Aug-24	TEL019	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	385	0.4	mg/L	07-Aug-24	TEL060	
Conductivity, Specific (@25C)	1310	0.4	µS/cm	07-Aug-24	TEL059	
pH	7.99		pH units	07-Aug-24	TEL058	

ReportDate: 15-Aug-24

Print Date: 15-Aug-24



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867)-767-9235 Fax: (867)-920-8740 TEL008

Taiga Batch No.:

241178

Major Ions

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

ReportDate: 15-Aug-24

Print Date: *15-Aug-24*



Taiga Environmental Laboratory

4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9

Tel: (867) 767-9235 Fax: (867) 920-4018

Taiga Batch No.:

241178

Sulphate

25 1 mg/L 08-Aug-24 TEL055

- CERTIFICATE OF ANALYSIS -

ReportDate: 15-Aug-24

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
241178

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

Microbiology

Coliforms, Fecal	TNTC	100	CFU/100mL	08-Aug-24	TEL017	86
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Organics

Oil and Grease, visible	Non-visible			07-Aug-24	Visual Exam	
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Subcontracted Organics

Phenols, Total	0.5640	0.001	mg/L	09-Aug-24	AB ENV.06537	
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Trace Metals, Total

Arsenic	1.8	1	µg/L	14-Aug-24	TEL035	210
Cadmium	< 0.20	0.2	µg/L	14-Aug-24	TEL035	210
Chromium	0.7	0.5	µg/L	14-Aug-24	TEL035	210
Copper	91.1	1	µg/L	14-Aug-24	TEL035	210
Iron	771	25	µg/L	14-Aug-24	TEL035	210
Lead	0.7	0.5	µg/L	14-Aug-24	TEL035	210
Mercury	0.07	0.05	µg/L	14-Aug-24	TEL035	210
Nickel	2.9	0.5	µg/L	14-Aug-24	TEL035	210
Zinc	57.6	2	µg/L	14-Aug-24	TEL035	210

ReportDate: 15-Aug-24

Print Date: *15-Aug-24*

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4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
241178

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **GJO-4**

Taiga Sample ID: **002**

- DATA QUALIFIERS -

Data Qualifier Descriptions:

210	<i>Detection limit adjusted for required dilution.</i>
3	<i>Holding time exceeded before receipt of sample</i>
86	<i>Too numerous to count. Unable to repeat analysis at higher dilution. Holding time exceeded.</i>

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

ReportDate: 15-Aug-24

Print Date: *15-Aug-24*

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Appendix C: Gjoa Haven 2024 Sampling Summary

		July 10 2024		Aug 8 2024	
Parameter	Unit	GJO-2	GJO-4	GJO-2	GJO-4
BOD ₅	mg/L	-	-	-	-
BOD	mg/L	59	11	162	88
CBOD	mg/L	68	6	174	102
TSS	mg/L	22	<3	38	54
Faecal Coliforms	CFU/100mL	3.5 x 10 ⁴	136	24 x 10 ⁴	TNTC
pH	pH	8.00	8.19	8.03	7.99
Conductivity	µS/cm	691	440	1520	1310
Ammonia Nitrogen	mg/L	15.5	0.701	81.7	61.7
Nitrate-Nitrite	mg/L	0.92	1.29	0.04	0.02
Oil and Grease	Visibility	Non-visible	Non-Visible	Non-Visible	Non-Visible
Total Phenols	mg/L	0.0014	<0.0010	0.7780	0.5640
Sulphate	mg/L	48	45	20	25
Magnesium	mg/L	29.6	25.5	30.2	29.9
Calcium	mg/L	37.8	35.7	34.8	37.3
Sodium	mg/L	38.6	20.3	109	90.5
Potassium	mg/L	11.0	4.4	28.3	23.1
Total Arsenic	µg/L	2.7	2.1	1.4	1.8
Total Cadmium	µg/L	<0.04	<0.04	<0.20	<0.20
Total Copper	µg/L	34.8	3.9	125	91.1
Total Chromium	µg/L	0.4	0.2	0.8	0.7
Total Iron	µg/L	606	405	643	771
Total Lead	µg/L	0.4	0.2	0.8	0.7
Total Mercury	µg/L	0.07	0.03	0.07	0.07
Total Nickel	µg/L	1.9	1.9	2.9	2.9
Total Zinc	µg/L	24.3	3.9	79.8	57.6

ANNUAL REPORT FOR THE MUNICIPALITY OF GJOA HAVEN

Appendix D: CIRNAC Inspection Report

The CIRNAC Inspection took place August 21st, 2024. CIRNAC Inspector Jonathan Mesher and Hamlet Employee Adam Halluqtalik were in attendance. The inspection report was not received nor posted to the NWB Public Registry.

**ANNUAL REPORT
FOR THE MUNICIPALITY OF GJOA HAVEN**

Appendix E: Hazardous Materials Spill Database, Gjoa Haven 2024

There were no spills associated with licensed infrastructure in 2024.

**ANNUAL REPORT
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Appendix F: Receipt of Submissions to the NWB, Gjoa Haven 2024

Jonathan Mesher
Resource Management Officer
Crown-Indigenous Relations and Northern Affairs Canada
Ph: 867-222-0118
Email: jonathan.mesher@rcaanc-cirnac.gc.ca

June 18, 2024

RE: Gjoa Haven Sewage Lagoon Decant, Water Licence No. 3BM-GJO1828

Dear Jonathan Mesher,

As per Part D, Item 4 of the Hamlet of Gjoa Haven Water License No. 3BM-GJO1828, this is notification of plans to discharge waste from the sewage lagoon beginning June 27, 2024. An early decant of the sewage lagoon is needed to comply with the minimum 1.0 m freeboard requirement of Part D, Item 3 of the License, and prevent overflowing or potential damage to the sewage lagoon berms due to high effluent levels during thaw which are expected to exceed the capacity of the lagoon without decanting.

The Hamlet of Gjoa Haven's sewage lagoon consists of a single cell sewage lagoon which holds raw sewage for approximately 10 months before discharge into the designated wetland. Figure 1 shows a picture of the sewage lagoon.



Figure 1: Gjoa Haven Sewage Lagoon

Additionally, the sewage lagoon in Gjoa Haven has a tear in the liner resulting from an incident reported March 12 2024 where a vehicle drove into the lagoon. At that time, damage was not identified due to snow cover. There still are no signs of leakage nor damage to the structural integrity of the lagoon. To identify any potential further damage and for the Hamlet to repair the liner within the short time frame of the summer months, the lagoon requires decanting. Figures 2a,2b,3a, and 3b show the lagoon levels and the tear in the sewage lagoon liner as documented early June 2024.



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Building *Nunavut* Together
Nunavut iluqatigiingniq
Bâtir le *Nunavut* ensemble



Figure 2a: Gjoa Haven Lagoon Levels, June 2024



Figure 2b: Gjoa Haven Lagoon Levels, June 2024



Figure 3a: Gjoa Haven Liner Tear, June 2024



Figure 3b: Gjoa Haven Liner Tear, June 2024

The sewage lagoon is an impermeable lagoon utilizing a gravity fed decant during the ice-free summer period to the nearby wetland. To maintain the 1.0 m freeboard, decant is required and to begin on June 27, 2024. Effluent will be directed to the designated wetland where it would normally be discharged during the summer.



cc: Jennifer Wakegijig, Chief Administrative Officer, Hamlet of Gjoa Haven
Megan Lusty, Manager of Municipal Works
Katherine Hawthorne, Engineering Summer Student
NWB Licensing Department