ANNUAL REPORT
FOR THE HAMLET OF GRISE FIORD

YEAR BEING REPORTED: 2023

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence #3BM-GRI2025 issued to the Hamlet of Grise Fiord.

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.

Our monitoring stations are as follows:

- GRI-1 – Raw water supply intake at the Water Supply Facility prior to treatment
- GRI-2 – Effluent discharge from the Final Discharge Point at the Solid Waste Facility
- GRI-3 – Raw sewage at the truck offload point
- GRI-4 – Effluent discharge from the Final Discharge Point at the Sewage Disposal Facility

These samples are sent to the Caduceon Lab in Ottawa.

Results of recent testing is attached at **Appendix "A"**

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (litres)
January	473,346	same
February	403,215	same
March	482,570	same
April	451,757	same
May	517,234	same
June	437,281	same
July	434,124	same
August	450,752	same

September	467,593	same
October	476,367	same
November	424,987	same
December	424,759	same
ANNUAL TOTAL	5,443,985	Same

Volumes have been provided in litres.

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;

There was no modifications/major maintenance work in 2023
All 3 water tanks were in full capacity by the middle of August
For 2024 we will have new water and sewage trucks arriving on sealift

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

There were no unauthorized discharges in 2023

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 or restoration work completed during 2023

For 2024 we anticipate lowering the intake pipe at the water reservoir to help increase the supply and gravity-flow of water from the reservoir to the water tanks

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;

No studies requested or planned in 2023

Important to note: We were recently advised by the Government of Nunavut (CGS) that the construction of the new Water Treatment Plant will be delayed, with completion 2027/28

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

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

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Appendix A

GRI-4 Effluent Quality Limits

Grise Fiord does not have Effluent Limits

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Appendix B

Certificate of Analysis

DRINKING WATER SUBMISSION FORM

CADUCEON

SAMPLES SUBMITTED TO:	
Kingston	
Ottawa	X
Richmond Hill	
Barrie	
London	
Windsor	

DRINKING WATER FACILITY CLASSIFICATION					
	Municipal		Non-Municipal		Reg. 170/03
	Large	X	Small		Reg. 319/08
	Residential		Non-Residential		Reg. 243/07
	Seasonal		Year-Round		Private Drinking Water
	Other:				Not in Service

REPORT NUMBER (Lab Use): 23/07/21 23-018496

Organization: Hamelt Of Grise Fiord
Contact: SAO
Tel: 867-980-9959
Fax:
After Hours Tel:
Public Health Unit:
Email: gfsao@qiniq.com, qikiqtaalukwatersamples@gov.nu.ca

Waterworks Address: Hamlet of Grise Fiord, PO Box 77, Grise Fiord, NU, X0A 0J0
Waterworks #:
Quote #: Q2654

Invoicing Address (if different):
Project Name or #: 235971
P.O. #:

TURNAROUND SERVICE REQUESTED (see back page)
* Must be arranged in advance

	Service	
	Platinum*	200% Surcharge
	Gold*	100% Surcharge
	Silver	50% Surcharge
	Bronze	25% Surcharge
✓	Standard	5-7 days
	Specific Date:	

*Sample Matrix Legend: TW = Treated Water, DW = Distribution Water, GW = Raw Groundwater, SW = Raw Surface Water, UGW = Untreated Groundwater (Drinking Water/Distribution)
GUDI = Groundwater under the influence of surface water, PR = Plumbing Residential, PNR = Plumbing Non-Residential

ANALYSES REQUESTED — Indicate Test For Each Sample By Using A Check Mark In The Box Provided

Lab No.	Sample Source and/or Sample Identification	S.P.L.	Sample Matrix*	Report Consumption (Y/N)	Date Collected (yy-mm-dd)	Time Collected	Adverse Resample	Total Coliform / E.coli	Background	Heterotrophic Plate Count	Sodium	Lead	Fluoride	Trihalomethanes	HAA's	Nitrite, Nitrate as N	Sch. 23 Inorganics	Sch. 24 Organics	Nunavut Raw Water Pkg	Nunavut Treated Water	Other	Chlorine Free	Chlorine Total	# Bottles/Sample
	~~Raw River (U/S Airport)~~		SW																	x				
	~~Raw River 2 (D/S Airport)~~		SW																	x				
	~~Settled River (time 0)~~		SW																	x				
	Settled River (time 24 hours)		SW		23-07-19	09:30													X	~~x~~	[illegible]			18
	Settled River (time 48 hours)		SW		23-07-19	14:30														x				17
	~~Treated Truck~~		TW																	x				
	~~Spare Set~~																			x				
	*Note: No field filtration for DOC or Dissolved Metals, please analyze from Gen Chem bottles																							

Has Lab Service Notification (LSN) Form been completed & submitted to the MECP/PHU? ☐ Yes ☐ No ☒ Not applicable
Laboratory Analysis will not commence until all Notification information is received and the Submission form is appropriately completed

SAMPLE SUBMISSION INFORMATION	Sampled by:	Submitted by:
Print:	M. Letman	M. Letman
Sign:	[signature]	[signature]
Date (yy-mm-dd)/Time:	23-07-19	23-07-19

SHIPPING INFORMATION	
Courier (Client account)	X
Courier (Caduceon account)	
Drop Off	
Caduceon (Pick-up)	

Invoice:
# of Pieces: 17

REPORTING / INVOICING	
Report by Fax	
Report by Email	x
Invoice by Email	x
Invoice by Mail	

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)
Received By (print): DerekF
Signature: [signature]
Date Received (yy-mm-dd): 23/07/21
Time Received: 1344
Laboratory Prepared Bottles: ☑ Yes ☐ No
Sample Temperature °C: 15.4
Labeled by:

Comments: ① Same as two without HAA, VOC. ② 1L Amber (Blunt), 500mL amber PHC, 2HG, 2HAA, 2DOC, 2Ret, 2N, P, 2 M, CN, Bub, DUC, pH<2

Page of
DW

CADUCEON
ENVIRONMENTAL LABORATORIES
Client committed, Quality assured. Canadian owned.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: -

REPORT No: 23-018496 - Rev. 0

Report To:
Hamlet of Grise Fiord
P.O. Box 77 Grise Fiord
Grise Fiord, NU X0X 0J0

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

Attention: Daryl Dibblee

DATE RECEIVED: 2023-Jul-21
DATE REPORTED: 2023-Jul-31
SAMPLE MATRIX: Drinking Water

CUSTOMER PROJECT: 235971
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	2	OTTAWA	PCURIEL	2023-Jul-24	A-IC-01	SM 4110B
Colour (Liquid)	2	OTTAWA	MDON	2023-Jul-24	A-COL-01	SM 2120C
Cond/pH/Alk Auto (Liquid)	2	OTTAWA	SBOUDREAU	2023-Jul-24	COND-02/PH-02/ALK-02	SM 2510B/4500H/2320B
Cyanide Total (Liquid)	2	KINGSTON	KWELCH	2023-Jul-26	CN-001	SM 4500-CN-E
DOC/DIC (Liquid)	2	OTTAWA	VKASYAN	2023-Jul-24	C-OC-01	EPA 415.2
HAA's (Liquid) (Subcontracted)	1	SGS_LAKEFIELD	SISLAM	2023-Jul-28	Subcontracted	Subcontracted
ICP/MS Total (Liquid)	2	OTTAWA	TPRICE	2023-Jul-28	D-ICPMS-01	EPA 6020
ICP/MS (Liquid)	2	OTTAWA	TPRICE	2023-Jul-26	D-ICPMS-01	EPA 200.8
ICP/OES Total (Liquid)	2	OTTAWA	NHOGAN	2023-Jul-25	D-ICP-01	SM 3120B
ICP/OES (Liquid)	2	OTTAWA	NHOGAN	2023-Jul-24	D-ICP-01	SM 3120B
Mercury (Liquid)	2	OTTAWA	TBENNETT	2023-Jul-25	D-HG-02	SM 3112B
Mercury (Liquid) Lab Filtered	2	OTTAWA	TBENNETT	2023-Jul-25	D-HG-02	SM 3112B
Ammonia (Liquid)	2	KINGSTON	AMANIYA	2023-Jul-28	NH3-001	SM 4500NH3
PHC F1 (Liquid)	1	RICHMOND_HILL	FLENA	2023-Jul-29	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	2	KINGSTON	STHOMPSON	2023-Jul-27	PHC-W-001	MECP E3421
SVOC - Semi-Volatiles (Liquid)	2	KINGSTON	EASIEDU	2023-Jul-27	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	2	OTTAWA	VKASYAN	2023-Jul-24	C-OC-01	EPA 415.2
TSS (Liquid)	2	KINGSTON	AMANIYA	2023-Jul-27	TSS-001	SM 2540D
Turbidity (Liquid)	2	OTTAWA	MDON	2023-Jul-24	A-TURB-01	SM 2130B
UV Trans. (Subcontracted)	2	TESTMARK	SISLAM	2023-Jul-26		Subcontracted
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	FLENA	2023-Jul-29	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.

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.

Shelly Lozo
Microbiology Supervisor

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Alkalinity(CaCO3) to pH4.5	mg/L	5		63	62
pH @25°C	pH units	-		7.16	7.18
Conductivity @25°C	uS/cm	1		114	114
TDS (Calc. from Cond.)	mg/L	3		58	58
Colour	TCU	2		<2	<2
Turbidity	NTU	0.1		1.2	1.2
Fluoride	mg/L	0.1		<0.1	<0.1
Chloride	mg/L	0.5		1.4	1.4
Nitrate (N)	mg/L	0.05		0.09	0.05
Sulphate	mg/L	1		2	2
Total Suspended Solids	mg/L	3		<3	<3
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05		<0.05	<0.05
Dissolved Organic Carbon	mg/L	0.2		0.8	<0.2
Total Organic Carbon	mg/L	0.2		0.8	<0.2
Cyanide (Total)	mg/L	0.005		<0.005	<0.005
Hardness (as CaCO3)	mg/L	0.02		56.7	
Hardness (as CaCO3)	mg/L as CaCO3	0.02			55.3
Aluminum	mg/L	0.01		0.03	0.04
Barium	mg/L	0.001		0.009	0.009
Boron	mg/L	0.005		<0.005	<0.005
Calcium	mg/L	0.02		17.9	17.4

Shelly Lozo
Microbiology Supervisor

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Copper	mg/L	0.002		<0.002	<0.002
Iron	mg/L	0.005		0.024	0.019
Magnesium	mg/L	0.02		2.90	2.87
Manganese	mg/L	0.001		<0.001	<0.001
Potassium	mg/L	0.1		0.1	<0.1
Sodium	mg/L	0.2		0.7	0.7
Zinc	mg/L	0.005		0.005	<0.005
Aluminum (Total)	mg/L	0.01		0.03	0.04
Barium (Total)	mg/L	0.001		0.009	0.009
Boron (Total)	mg/L	0.005		<0.005	<0.005
Calcium (Total)	mg/L	0.02		17.7	17.8
Copper (Total)	mg/L	0.002		<0.002	<0.002
Iron (Total)	mg/L	0.005		0.023	0.025
Manganese (Total)	mg/L	0.001		0.001	0.001
Potassium (Total)	mg/L	0.1		<0.1	<0.1
Sodium (Total)	mg/L	0.2		0.9	0.8
Zinc (Total)	mg/L	0.005		<0.005	<0.005
Arsenic	mg/L	0.0001		<0.0001	<0.0001
Cadmium	mg/L	0.000015		<0.000015	<0.000015
Chromium	mg/L	0.001		<0.001	<0.0010
Lead	mg/L	0.00002		0.00008	0.00004

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Microbiology Supervisor

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Selenium	mg/L	0.001		<0.001	<0.001
Uranium	mg/L	0.00005		<0.00005	<0.00005
Arsenic (Total)	mg/L	0.0001		<0.0001	<0.0001
Cadmium (Total)	mg/L	0.000015		<0.000015	<0.000015
Chromium (Total)	mg/L	0.001		<0.001	<0.001
Lead (Total)	mg/L	0.00002		0.00008	0.00006
Selenium (Total)	mg/L	0.001		<0.001	<0.001
Uranium (Total)	mg/L	0.00005		<0.00005	0.00005
Mercury	mg/L	0.00002		<0.00002	0.00002
Mercury (Filtered)	mg/L	0.00002		<0.00002	0.00002

Shelly Lozo

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Microbiology Supervisor

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Benzene	µg/L	0.5			<0.5
Bromodichloromethane	µg/L	2			<2
Bromoform	µg/L	5			<5
Chloroform	µg/L	1			2
Dibromochloromethane	µg/L	2			<2
Ethylbenzene	µg/L	0.5			<0.5
Total Trihalomethanes	µg/L	6			<6
Toluene	µg/L	0.5			0.6
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	<50
PHC F3 (>C16-C34)	µg/L	400		<400	<400
PHC F4 (>C34-C50)	µg/L	400		<400	<400

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Microbiology Supervisor

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Acenaphthene	µg/L	0.05		<0.05	<0.05
Acenaphthylene	µg/L	0.05		<0.05	<0.05
Anthracene	µg/L	0.05		<0.05	<0.05
Benzo[a]anthracene	µg/L	0.05		<0.05	<0.05
Benzo(a)pyrene	µg/L	0.01		<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.05		<0.05	<0.05
Benzo(b+k)fluoranthene	µg/L	0.1		<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	0.05		<0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.05		<0.05	<0.05
Chrysene	µg/L	0.05		<0.05	<0.05
Dibenzo(a,h)anthracene	µg/L	0.05		<0.05	<0.05
Fluoranthene	µg/L	0.05		<0.05	<0.05
Fluorene	µg/L	0.05		<0.05	<0.05
Indeno(1,2,3,-cd)Pyrene	µg/L	0.05		<0.05	<0.05
Methylnaphthalene,1-	µg/L	0.05		<0.05	<0.05
Methylnaphthalene,2-(1-)	µg/L	1		<1	<1
Methylnaphthalene,2-	µg/L	0.05		<0.05	<0.05
Naphthalene	µg/L	0.05		<0.05	<0.05
Phenanthrene	µg/L	0.05		<0.05	<0.05
Pyrene	µg/L	0.05		<0.05	<0.05
Total PAH	µg/L	0.1		<0.1	<0.1

Shelly Lozo

Microbiology Supervisor

Subcontracted Analyses

Parameter	Units	R.L.	Client I.D.	Settled River (time 24 hours)	Settled River (time 48 hours)
			Sample I.D.	23-018496-1	23-018496-2
			Date Collected	2023-07-19	2023-07-19
Total Haloacetic Acids (HAA5)	µg/L	-			<5.3
(Mono) Chloroacetic Acid	µg/L	-			<4.7
Bromoacetic Acid	µg/L	-			<2.9
Dichloroacetic Acid	µg/L	-			3
Dibromoacetic Acid	µg/L	-			<2.0
Trichloroacetic Acid	µg/L	-			<5.3
UV Transmittance	%	-		99.3	99.1

Shelly Lozo

Microbiology Supervisor

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FOR THE MUNICIPALITY OF GRISE FIORD, 2023

Appendix C

Hazardous Materials Spill Database, Grise Fiord, 2023

No unauthorized spills or discharges in 2023

ANNUAL REPORT
FOR THE MUNICIPALITY OF GRISE FIORD, 2023

Appendix D

Grise Fiord 2023 CIRNAC Inspection Report

Indigenous and Northern Affairs Canada | Affaires autochtones et du Nord Canada

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Grise Fiord	Meghan Lusty
Licence No. / Expiry	**Representative's Title**
3BM-GRI2025	
Land / Other Authorizations	**Land / Other Authorizations**
Date of Inspection	**Inspector**
July 10, 2023	Joseph Monteith

Activities Inspected

☐ Camp ☐ Drilling ☐ Mining ☐ Construction ☐ Reclamation ☐ Fuel Storage
☐ Roads/Hauling ☒ Other: Potable Water Source, Waste Treatment Facility, and Solid Waste Facility ☐ Other:

Conditions: A- Acceptable U-Unacceptable C-Concern NI-Not Inspected NA- Not applicable

PART:	Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT	NA	
B: GENERAL CONDITIONS	A	
C: CONDITIONS APPLYING TO SECURITY	NI	
D: CONDITIONS APPLYING TO WATER USE	A	1-10
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	C	11-20
F: CONDITIONS APPLYING TO MODIFICATIONS	NI	21-22
G: CONDITIONS APPLYING TO CONSTRUCTION	A	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	A	
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING	NI	
J: CONDITIONS APPLYING TO MONITORING	A	
SCHEDULES	A	

**The item number corresponds with specific conditions within the licence and the observation number corresponds with specific comments provided below.*

Samples taken by Inspector:	Location(s): N76 25 32.5 W82 54 31.
☐ Yes ☒ No	

SECTION 1 ☒ Comments (s.__) ☐ Non-Compliance with Act or Licence (s.__) ☐ Action Required (s.__)

BACKGROUND

The Hamlet of Grise Fiord is a small community located on the southern tip of Ellesmere Island at Latitude 76°25'N and Longitude 83° 01'W, within the Qikiqtani Region of Nunavut. The Community is located approximately 320 km NE of Resolute. The Community is situated on a narrow strip of beach near the mouth of Grise Fiord. Surface soils in the area consist of free-draining gravel deposits. The depth of the active layer of permafrost is approximately 0.6m.

The Hamlet is responsible for providing municipal services to its estimated 178 (2020) residents, including potable water supply, sewage treatment, and solid waste management, partly in the context of a water licence issued by the Nunavut Water Board (NWB or Board) to the Hamlet. The potable water source for the community is a stream of glacial runoff which lasts for about 45 to 50 days a year during the summer from mid-June to beginning of August, resupplying two storage tanks through gravity feed. These storage tanks were built in 1986 (Tank A) and 2002 (Tank B) and have a capacity of 4,000 m3 each. The Community has a secondary water source (Airport River) about 300 m away from these tanks.

The Hamlet of Grise Fiord is licenced to withdrawal 7,700 cubic metres per annum, and less than 300 cubic metres per

1. Water withdrawal is conducted from a glacier run-off stream that meanders down to the Hamlet of Grise Fiord from the mountain above Grise Fiord. A pond with walls that extend up approximately a metre and a half catches water run-off, and pools up. Fencing was being erected around the ponds at the time of the inspection. No sign of fish mesh screen (photo 1,3,4).
2. At the time of the inspection a yellow triangle sign was observed titled GRI-1. The monitoring station is listed in the water licence(photo 3).
3. The secondary water source at airport river was observed with a water pump and hose (photo 2). The hose from the water pump deposited the water in the water reservoir.
4. A 4 inch HDPE piping with a Fish Mesh Screen extends into the pond through the pond walls.
5. The single walled piping from the water source to the water storage tank has multiple holes in the piping, patched only by screwing in screws with the rubber washers built into the screws. At the time of the inspection no signs of leaks in the pipes were noted. The length of piping from the pond to the water treatment facility is approximately 173 metres. The pipe changes into a flexible hose before it goes into water treatment facility. A green hose was observed.
6. The Water Treatment Plant, and its inner pipes (photo 5 &6).
7. No working flow meter in the water treatment plant, truck was not available for observation of water meter readings.
8. Water Storage Tank damaged in 2018 was repaired in 2023. Equipment outside of tank (photo 8).
9. A bridge crossing was inspected within the community. No signs of erosion on the banks or sedimentation were observed in the fresh water. Buildup of sand was observed on the bridge. This buildup has the potential to spill over into the fresh water. A containment wall should be fixed onto the bridge, and maintained to prevent sedimentation into the river (photo 17).
10. 2022 annual report shows 5,201,326 m^3 withdrawn(photo 18).

Waste Water Treatment Facility

11. The amount of waste deposited at the sewage lagoon should match the amount withdrawn from the potable water source, but doesn't take into account the amount water use such as dust suppression, which cannot be calculated as the same amount discharged at the sewage lagoon waste water. At the time of the inspection no record of waste deposited at the lagoon was observed (photo 18).
12. The walls of the sewage lagoon appeared to be working as intended, with no signs of erosion or leaks. The freeboard was below the 1 metre freeboard (photo 10).
13. Two yellow triangle signs titled GRI-3 and GRI-4 was observed. GRI-3 was observed at the sewage lagoon. GRI-4 was observed down slope of the sewage lagoon indicating monitoring sites.
14. Notification of intention for decanting was emailed to WRO Monteith on June 29, 2023. Samples were taken, but no sample results were provided.

Solid Waste Facility

15. The Solid Waste Facility was loosely segregated into Woods, Metals, Hazardous Wastes and Burnable Wastes (photo 14).
16. The burnable waste is open pit burned, pushed off the end of that section then capped with soil. No fencing around the burnable waste.
17. The bulk metals contain white waste, and metal from construction. Hazardous Waste was observed at this site (photo 13).
18. Wood waste was segregated, probably for the purpose of allowing the community help themselves to the wood wastes (photo 11).
19. The Hazardous Waste sea can is mixed with the bulk metal waste. Lots of hazardous waste observed within the bulk metals (photo 14,15,16).
20. A yellow triangle sign titled GRI-2 was observed, which indicated a monitoring site. No Samples were taken on this inspection.

Spill Contingency

21. Spill observed in 2022, not reported and covered in gravel(photo 9).

(photo 8).

- Separate bulk metals, bulk wood, domestic waste, and hazardous waste to be in line with National Standards for the management of Solid Waste Facilities.
- Divert surface water run off away from Solid Waste Facility to mitigate the amount of wastes migrating to the receiving marine environment.
- Email joseph.monteith@rcaanc-cirnac.gc.ca notifying the inspector the intent to decant the sewage lagoon.
- Send WRO Monteith sample results ahead of a decant of the sewage lagoon.
- Maintain a 1 metre freeboard at the sewage lagoon.
- Verify whether there is Fish Mesh Screen on the intake hose at Airport River secondary water source, and the water source with the green hose.

SECTION 3 ☐ Comments ☒ Non-Compliance with Act or Licence ☐ Action Required

Part C: Conditions Applying to Water Use

Item 5. The Licensee shall implement sediment and erosion control measures, prior to and during operations, to prevent entry of sediment into Water.

Part D: Conditions Applying to Waste Disposal

Item 2. The Licensee shall provide a minimum of ten (10) days' notice to an Inspector prior to initiating any decant of the Sewage Disposal Facility.

Item 4. The Licensee shall maintain at all times, a Freeboard of at least 1.0 metre, or as recommended by a qualified Geotechnical Engineer and as approved by the Board in writing, for all dams, dykes or other structures intended to contain, withhold, divert or retain Water or Waste.

Item 6. The Licensee shall manage all solid Waste disposed of at the Solid Waste Disposal Facility in accordance with acceptable standard and practices.

Item 8. The Licensee shall segregate and store all hazardous materials and/or hazardous Waste within the Solid Waste Disposal Facility in such a manner as to prevent the deposit of deleterious substances into any Water, until such a time that the materials have been removed for proper disposal at an approved facility.

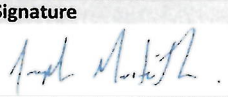
Part F: Conditions Applying Operation and Maintenance

Item 6. The Licensee shall, during the term of this Licence, undertake the following activities in addition to any other required action should an unauthorized discharge of waste occur or if such a discharge is foreseeable:

a. Employ the appropriate contingency measures as approved under the Spill Contingency Plan for the Hamlet of Grise Fiord;

b. Report the incident immediately via the NWT/NU 24-Hour Spill Reporting Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and

c. Submit to the Inspector, a detailed report on each occurrence, not later than thirty (30) days after initially reporting the event, that provides the necessary information on the location (including the GPS coordinates), initial response action, remediation/clean-up, status of response (ongoing, complete), proposed disposal options for dealing with contaminated materials and preventative measures to be implemented.

Licensee or Representative	Inspector's Name
Gord Marinic	Joseph Monteith
Signature	**Signature**
	
Date	**Date**
	December 5, 2023

CC: Licensing Department, NWB
Jeremy Fraser, Manager of Field Operations, CIRNAC

PHOTO LOG

Date	Camera	Inspector
July 10, 2023	Galaxy S9	Joseph Monteith

Photo Log #1	Location
Photo 1	Grise Fiord, NU

Description: Water run off from the mountain in the background historically provided all the water to the community.

Photo Log	Location
Photo 2	Grise Fiord, NU

Photo Log	Location
Photo 3	Grise Fiord, NU

Description: Sign Reads Hamlet of Grise Fiord, Water Supply . Monitoring station GRI1 observed.

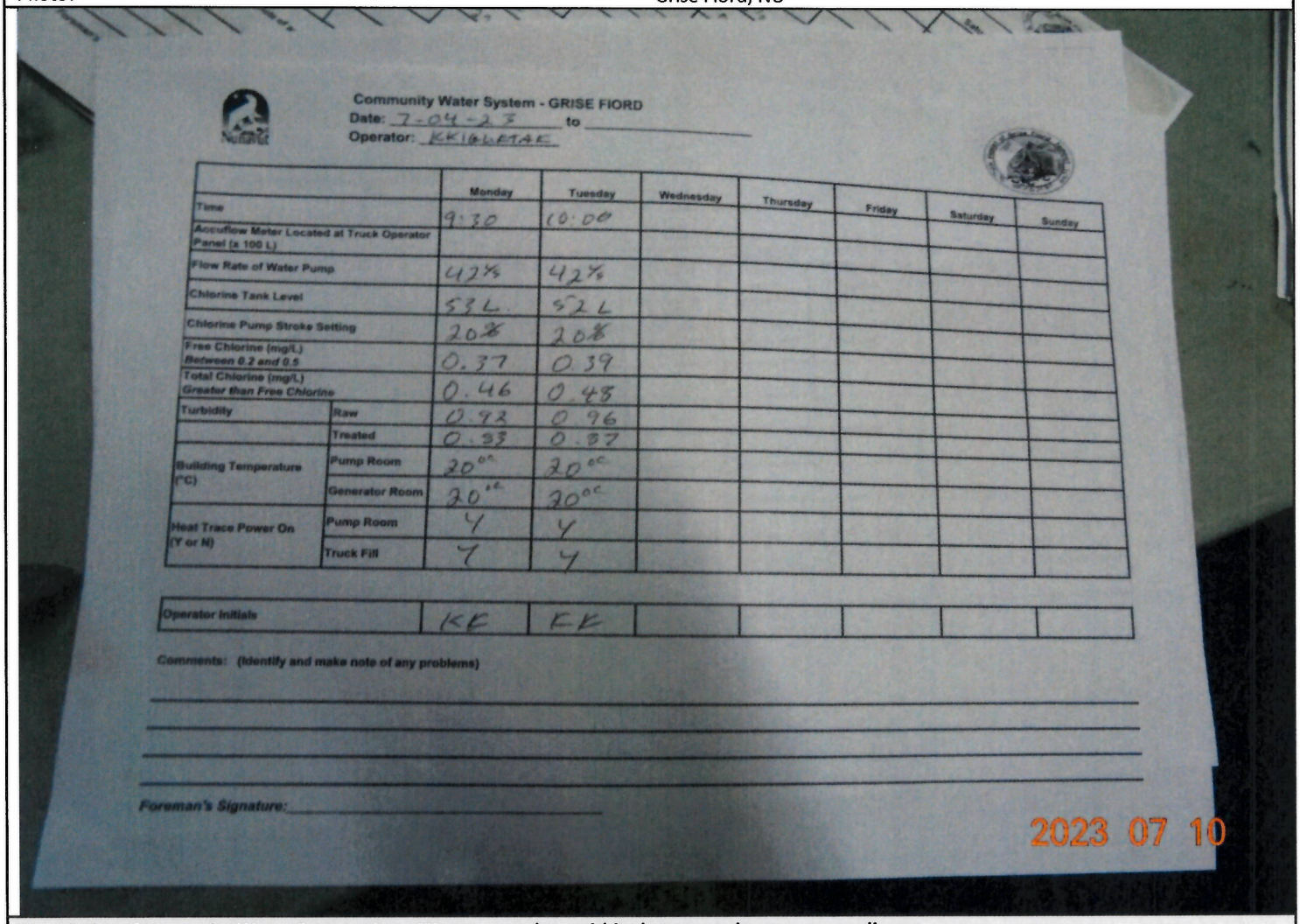
Photo Log	Location
Photo 4	Grise Fiord, NU

Photo Log	Location
Photo 5	Grise Fiord, NU

Description: 3x Water Storage Tanks. 1 of 3 Water Storage Tanks damaged, and decommissioned. Truck refill station.

Photo Log	Location
Photo 6	Grise Fiord, NU

Photo Log	Location
Photo7	Grise Fiord, NU



Community Water System - GRISE FIORD
Date: 7-04-23 to
Operator: KKIGLIAAK

		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time		9:30	10:00					
Accuflow Meter Located at Truck Operator Panel (x 100 L)								
Flow Rate of Water Pump		42%	42%					
Chlorine Tank Level		53L	52L					
Chlorine Pump Stroke Setting		20%	20%					
Free Chlorine (mg/L) Between 0.2 and 0.5		0.37	0.39					
Total Chlorine (mg/L) Greater than Free Chlorine		0.46	0.48					
Turbidity	Raw	0.93	0.96					
	Treated	0.33	0.37					
Building Temperature (°C)	Pump Room	20°C	20°C					
	Generator Room	20°C	20°C					
Heat Trace Power On (Y or N)	Pump Room	Y	Y					
	Truck Fill	Y	Y					
Operator Initials		KK	KK					

Comments: (Identify and make note of any problems)

Foreman's Signature:

2023 07 10

Description: Community Water Systems Log. Water usage logs within document shows no recordings.

Photo Log	Location
Photo 8	Grise Fiord, NU

Photo Log	Location
Photo 9	Grise Fiord, NU

Description: Spill observed in 2021, covered with gravel.

Photo Log	Location
Photo 10	Grise Fiord, NU

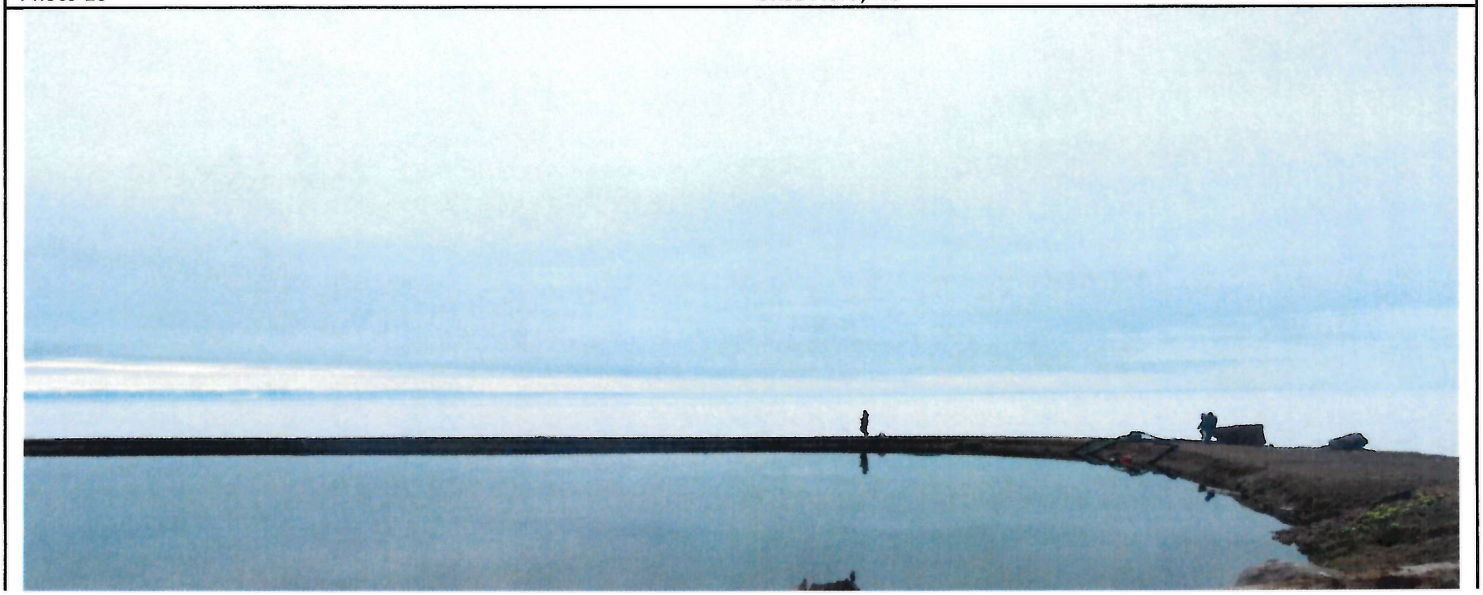


Photo Log	Location
Photo 11	Grise Fiord, NU

Description: Pile of bulk wood, in the Bulk Woods Section of the Solid Waste Facility

Photo Log	Location
Photo 12	Grise Fiord, NU

Photo Log # 1	Location
Photo 13	Grise Fiord, NU

Description: Bulk Metal waste. White waste includes freezers, fridges, washers and dryers. Segregated from other wastes.

Photo Log # 1	Location
Photo 14	Grise Fiord, NU

Photo Log # 1	Location
Photo 15	Grise Fiord, NU

Description: empty fuel test containers. Signs of spills from larger drums.

Photo Log # 1	Location
Photo 16	Grise Fiord, NU

Photo Log	Location
Photo 17	Grise Fiord, NU

Description: Soil build up on bridge. No walls on bridge to prevent soil from falling into fresh water.

Photo Log	Location
Photo 18	Grise Fiord, NU

ANNUAL REPORT
FOR THE MUNICIPALITY OF GRISE FIORD, 2022

YEAR BEING REPORTED: 2022

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License # 3BM-GRI2025 issued to the Municipality of Grise Fiord.

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 (m^3)	Quantity of Sewage Waste Discharged (Estimated)
January	480,628	Same
February	416,732	Same
March	460,233	Same
April	470,910	Same
May	453,718	Same
June	385,958	Same
July	366,799	Same
August	464,775	Same
September	426,054	Same
October	417,637	Same
November	436,221	Same