ANNUAL REPORT FOR
THE HAMLET OF CLYDE RIVER, 2021

YEAR BEING REPORTED: 2021

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 3BM-CLY1924 issued to the Hamlet of Clyde River.

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	**3,679.1399**	Same
February	**3,128.6226**	Same
March	**3,264.8490**	Same
April	**3,502.6966**	Same
May	**4,193.2439**	Same
June	**3,685.6511**	Same
July	**2,806.7172**	Same
August	**3,744.3680**	Same
September	**3,615.3650**	Same
October	**3,536.9835**	Same
November	**2,750.9089**	Same
December	**3,794.2580**	Same
ANNUAL TOTAL	**41,702.8037**	**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.

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 modification or maintenance work was carried out during the reporting year.

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

No unauthorized discharges for the infrastructure under licence 3BM-CLY1924 occurred in 2021.

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 and restoration work was conducted during this reporting year and none is anticipated in the coming 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;

The initial planning study for a new solid was site was completed in Fiscal Year 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 with the available is expected to begin in 2022.

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

None

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

None

x. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

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

xi. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Location of a monitoring station in the area between the Bulky Metals Facility and Hazardous Waste Facility will be confirmed with CIRNAC during the summer 2022 inspection.

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

Appendix B: Certificate of Analysis October 4, 2021
Certificate of Analysis October 4, 2021

Appendix C: Hazardous Materials Spill Database, Clyde River 2021

Appendix D: Clyde River 2021 CIRNAC Inspection Report

Appendix A

3BM-CLY1924 Clyde River Monitoring Program Results 2021
CLY-4, CLY-5 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	Sampling Results CLY-4 04-Oct-21	Sampling Results CLY-5 04-Oct-21
BOD_5	120 mg/L	16mg/L	16mg/L
Total Suspended Solids	180 mg/L	34mg/L	28mg/L
Fecal Coliform	$1x10^6$ CFU/dl	19000 CFU/100 mL	21000 CFU/100 mL
Oil and Grease	No visible sheen	17.2mg/L	19.2mg/L
pH	Between 6 and 9	7.69	7.7

Appendix B

CADUCEON™ ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G 095963 **REPORT No. B21-32515**

Report To:

Municipality of Clyde River
Box 89,
Clyde River Nunavut X0A 0E0 Canada
Attention: Philip Sanguya

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

DATE RECEIVED: 06-Oct-21
DATE REPORTED: 14-Oct-21
SAMPLE MATRIX: Waste Water

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

			Client I.D.		3a Chemical WW Sample	3b Chemical WW Sample	4 Chemical WW Sample	5 Chemical WW Sample
			Sample I.D.		B21-32515-1	B21-32515-2	B21-32515-3	B21-32515-4
			Date Collected		04-Oct-21	04-Oct-21	04-Oct-21	04-Oct-21
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Hardness (as CaCO3)	mg/L	1	SM 3120	07-Oct-21/O	31	31	35	36
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	07-Oct-21/O	288	282	313	312
pH @25°C	pH Units		SM 4500H	07-Oct-21/O	7.65	7.60	7.69	7.70
Conductivity @25°C	µmho/cm	1	SM 2510B	07-Oct-21/O	831	828	895	896
Total Suspended Solids	mg/L	3	SM2540D	08-Oct-21/K	26	30	34	28
Chloride	mg/L	0.5	SM4110C	12-Oct-21/O	48.8	21.3	57.0	56.9
Nitrite (N)	mg/L	0.1	SM4110C	12-Oct-21/O	< 0.1	< 0.1	< 0.1	< 0.1
Nitrate (N)	mg/L	0.1	SM4110C	12-Oct-21/O	< 0.1	< 0.1	< 0.1	< 0.1
Sulphate	mg/L	1	SM4110C	12-Oct-21/O	2	35	2	1
Aluminum	mg/L	0.01	SM 3120	07-Oct-21/O	0.17	0.17	0.49	0.39
Arsenic	mg/L	0.0005	EPA 200.8	12-Oct-21/O	0.0007	0.0007	0.0010	0.0009
Cadmium	mg/L	0.005	SM 3120	07-Oct-21/O	< 0.005	< 0.005	< 0.005	< 0.005
Calcium	mg/L	0.02	SM 3120	07-Oct-21/O	6.06	5.99	6.02	6.19
Chromium	mg/L	0.002	SM 3120	07-Oct-21/O	0.002	< 0.002	0.002	0.002
Cobalt	mg/L	0.005	SM 3120	07-Oct-21/O	< 0.005	< 0.005	< 0.005	< 0.005
Copper	mg/L	0.002	SM 3120	07-Oct-21/O	0.131	0.128	0.103	0.110
Iron	mg/L	0.005	SM 3120	07-Oct-21/O	1.05	1.05	1.98	1.84
Lead	mg/L	0.02	SM 3120	07-Oct-21/O	< 0.02	< 0.02	< 0.02	< 0.02
Magnesium	mg/L	0.02	SM 3120	07-Oct-21/O	3.87	3.81	4.94	4.90
Manganese	mg/L	0.001	SM 3120	07-Oct-21/O	0.055	0.056	0.122	0.124
Mercury	mg/L	0.00002	SM 3112 B	08-Oct-21/O	0.00005	0.00004	0.00003	0.00003
Nickel	mg/L	0.01	SM 3120	07-Oct-21/O	< 0.01	< 0.01	< 0.01	< 0.01
Potassium	mg/L	0.1	SM 3120	07-Oct-21/O	19.9	19.5	21.0	21.2
Sodium	mg/L	0.2	SM 3120	07-Oct-21/O	46.1	45.0	49.5	50.1
Zinc	mg/L	0.005	SM 3120	07-Oct-21/O	0.103	0.105	0.075	0.080
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	08-Oct-21/K	75.7	94.5	84.4	87.7

NOTE: Fecal Coliform passed acceptable holding time of 48 hrs upon arrival at Lab.

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

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G 095963 **REPORT No. B21-32515**

Report To:

Municipality of Clyde River
Box 89,
Clyde River Nunavut X0A 0E0 Canada
Attention: Philip Sanguya

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

DATE RECEIVED: 06-Oct-21
DATE REPORTED: 14-Oct-21
SAMPLE MATRIX: Waste Water

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

			Client I.D.		3a Chemical WW Sample	3b Chemical WW Sample	4 Chemical WW Sample	5 Chemical WW Sample
			Sample I.D.		B21-32515-1	B21-32515-2	B21-32515-3	B21-32515-4
			Date Collected		04-Oct-21	04-Oct-21	04-Oct-21	04-Oct-21
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Phenolics	mg/L	0.002	MOEE 3179	12-Oct-21/K	0.432	0.438	1.27	1.32
BOD(5 day)	mg/L	3	SM 5210B	08-Oct-21/K	15	16	16	16
Total Organic Carbon	mg/L	0.2	EPA 415.2	07-Oct-21/O	77.1	83.0	81.2	80.5
Oil & Grease-Total	mg/L	1.0	SM 5520	13-Oct-21/K	29.7	63.4	17.2	19.2
Fecal Coliform	cfu/100mL	1	MOE E3371	06-Oct-21/O	22000	26000	19000	21000

NOTE: Fecal Coliform passed acceptable holding time of 48 hrs upon arrival at Lab.

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Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G096048 **REPORT No. B21-32531**

Report To:

Municipality of Clyde River
Box 89,
Clyde River Nunavut X0A 0E0 Canada
Attention: Philip Sanguya

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

DATE RECEIVED: 06-Oct-21
DATE REPORTED: 15-Oct-21
SAMPLE MATRIX: Leachate

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

			Client I.D.		Solid Waste	Metal Dump	Land Farm	
			Sample I.D.		B21-32531-1	B21-32531-2	B21-32531-3	
			Date Collected		04-Oct-21	04-Oct-21	04-Oct-21	
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Hardness (as CaCO3)	mg/L	1	SM 3120	07-Oct-21/O	58	48	56	
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	07-Oct-21/O	43	40	45	
pH @25°C	pH Units		SM 4500H	07-Oct-21/O	6.57	6.99	6.61	
Conductivity @25°C	µmho/cm	1	SM 2510B	07-Oct-21/O	177	90	153	
Total Suspended Solids	mg/L	3	SM2540D	08-Oct-21/K	52	130	96	
Chloride	mg/L	0.5	SM4110C	12-Oct-21/O	14.6	7.6	12.9	
Nitrite (N)	mg/L	0.1	SM4110C	12-Oct-21/O	< 0.1	< 0.1	< 0.1	
Nitrate (N)	mg/L	0.1	SM4110C	12-Oct-21/O	1.2	0.2	0.2	
Sulphate	mg/L	1	SM4110C	12-Oct-21/O	12	1	6	
Aluminum	mg/L	0.01	SM 3120	07-Oct-21/O	0.42	2.65	0.88	
Arsenic	mg/L	0.0005	EPA 200.8	12-Oct-21/O	0.0010	0.0019	0.0012	
Cadmium	mg/L	).000070	EPA 200.8	12-Oct-21/O	< 0.000070	0.000110	< 0.000070	
Calcium	mg/L	0.02	SM 3120	07-Oct-21/O	10.4	8.50	9.95	
Chromium	mg/L	0.002	SM 3120	07-Oct-21/O	0.023	0.005	0.006	
Cobalt	mg/L	0.005	SM 3120	07-Oct-21/O	< 0.005	0.005	< 0.005	
Copper	mg/L	0.002	SM 3120	07-Oct-21/O	0.003	0.008	0.003	
Iron	mg/L	0.005	SM 3120	07-Oct-21/O	3.90	8.43	4.88	
Lead	mg/L	0.0001	EPA 200.8	12-Oct-21/O	0.0017	0.0036	0.0017	
Manganese	mg/L	0.001	SM 3120	07-Oct-21/O	0.201	0.297	0.204	
Mercury	mg/L	0.00002	SM 3112 B	12-Oct-21/O	< 0.00002	< 0.00002	< 0.00002	
Nickel	mg/L	0.01	SM 3120	07-Oct-21/O	< 0.01	< 0.01	< 0.01	
Potassium	mg/L	0.1	SM 3120	07-Oct-21/O	5.6	4.2	5.0	
Zinc	mg/L	0.005	SM 3120	07-Oct-21/O	0.038	0.071	0.050	
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	08-Oct-21/K	0.05	0.06	0.03	
Phosphorus-Total	mg/L	0.01	E3199A.1	13-Oct-21/K	0.16	0.54	0.32	
Phenolics	mg/L	0.002	MOEE 3179	12-Oct-21/K	< 0.002	< 0.002	< 0.002	
BOD(5 day)	mg/L	3	SM 5210B	08-Oct-21/K	10	24	23	

NOTE: Fecal Coliform passed acceptable holding time of 48 hrs upon arrival at Lab.

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Lab Manager - Ottawa District

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DATE RECEIVED: 06-Oct-21
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SAMPLE MATRIX: Leachate

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

			Client I.D.		Solid Waste	Metal Dump	Land Farm	
			Sample I.D.		B21-32531-1	B21-32531-2	B21-32531-3	
			Date Collected		04-Oct-21	04-Oct-21	04-Oct-21	
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Total Organic Carbon	mg/L	0.2	EPA 415.2	07-Oct-21/O	17.5	8.9	13.7	
Oil & Grease-Total	mg/L	1.0	SM 5520	13-Oct-21/K	2.6	2.4	2.9	
Fecal Coliform	cfu/100mL	1	MOE E3371	06-Oct-21/O	2	< 2	< 2	
Benzene	µg/L	0.5	EPA 8260	14-Oct-21/R	< 0.5	< 0.5	< 0.5	
Toluene	µg/L	0.5	EPA 8260	14-Oct-21/R	< 0.5	< 0.5	< 0.5	
Ethylbenzene	µg/L	0.5	EPA 8260	14-Oct-21/R	< 0.5	< 0.5	< 0.5	
Xylene, m,p-	µg/L	1.0	EPA 8260	14-Oct-21/R	< 1.0	< 1.0	< 1.0	
Xylene, o-	µg/L	0.5	EPA 8260	14-Oct-21/R	< 0.5	< 0.5	< 0.5	
Xylene, m,p,o-	µg/L	1.1	EPA 8260	14-Oct-21/R	< 1.1	< 1.1	< 1.1	
Toluene-d8 (SS)	% rec.		EPA 8260	14-Oct-21/R	103	104	103	
PHC F1 (C6-C10)	µg/L	25	MOE E3421	14-Oct-21/R	< 25	< 25	< 25	
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	14-Oct-21/K	< 50	< 50	< 50	
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	14-Oct-21/K	< 400	500	< 400	
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	14-Oct-21/K	< 400	< 400	< 400	
Acenaphthene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Acenaphthylene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Anthracene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Benzo(a)anthracene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.06	< 0.06	< 0.06	
Benzo(a)pyrene	µg/L	0.01	EPA 8270	13-Oct-21/K	< 0.01	< 0.01	< 0.01	
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	13-Oct-21/K	< 0.1	< 0.1	< 0.1	
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Chrysene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Fluoranthene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Fluorene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	

NOTE: Fecal Coliform passed acceptable holding time of 48 hrs upon arrival at Lab.

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

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			Client I.D.		Solid Waste	Metal Dump	Land Farm	
			Sample I.D.		B21-32531-1	B21-32531-2	B21-32531-3	
			Date Collected		04-Oct-21	04-Oct-21	04-Oct-21	
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Naphthalene	µg/L	0.05	EPA 8270	13-Oct-21/K	0.08	< 0.06	< 0.06	
Phenanthrene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Pyrene	µg/L	0.05	EPA 8270	13-Oct-21/K	< 0.05	< 0.05	< 0.05	
Terphenyl-d14 (SS)	% rec.	10	EPA 8270	13-Oct-21/K	82.0	75.0	82.0	

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Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

Appendix C

List of spills reported to the NT-NU Spill Report Line and are listed on the Hazardous Materials Spills Database of Clyde River in 2021

Spill	Occurrence Date	Location Description	Product Spilled	Quantity
2021449	09-October-2021	Clyde River, NU There has been a reported spill in Clyde River, Heating fuel at the HTA office. Geolocation coordinates (70.47281320068264, -68.59973316623716) estimated by ECCC NEEC LTa from the information lifted from the report.	Petroleum - fuel oil (jet A, diesel, turbo A, heat)	400.00 L

Appendix D

WATER LICENCE INSPECTION FORM

☒ **Original**
☐ **Follow-Up Report**

Licensee	**Licensee Representative**
Hamlet of Clyde River	Bhabesh Roy
Licence No. / Expiry	**Representative's Title**
3BM-CLY1924	Regionals Engineer
Land / Other Authorizations	**Land / Other Authorizations**
Date of Inspection	**Inspector**
October 12, 2021	Joseph Monteith

Activities Inspected

☐ Camp ☐ Drilling ☐ Mining ☐ Construction ☐ Reclamation ☐ Fuel Storage

☐ Roads/Hauling ☐ Other: Potable Source, Waste Disposal Facility, Solid Waste Facility, General Conditions , ☐ 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	1,2
C: CONDITIONS APPLYING TO SECURITY	NI	
D: CONDITIONS APPLYING TO WATER USE	C	3-7
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	A	8-16
F: CONDITIONS APPLYING TO MODIFICATIONS	NI	
G: CONDITIONS APPLYING TO CONSTRUCTION	NI	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	C	
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING	NI	
J: CONDITIONS APPLYING TO MONITORING	A	
SCHEDULES	A	

**T he observation number corresponds with specific comments provided below.*

Samples taken by Inspector:	Location(s):
☐ Yes ☒ No	3BM-CLY1419 Renewal coordinates: N70° 27', W68° 33' is incorrect as the coordinate is in the old town part of Clyde River apart of 1BR-CLY1828

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

BACKGROUND

On August 20, 2019 The Nunavut Water Board issued the Hamlet of Clyde River a renewal Water License titled 3BM-CLY1924. The hamlet is authorized to withdraw 53,600m^3 water per annum or up to 299m^3 per day.

Relevant infrastructure include:
A Water Supply Facilities which draws water from Water Source Lake. Water is treated in the truck-fill station and stored for trucked water to holding tanks in each building;
- A Sewage Disposal/Treatment Facilities (Two Lagoon Cells) which receives trucked sewage collected from holding tanks in every building, with a wetland area between the lagoon and the ocean; and
- A Solid Waste Disposal/Management Facility, which includes a bulky metals disposal area, and hazardous waste/used oil storage area. Segregation of waste needs to be approved.

Inspector Statement

On October 12,2021 Water Resource Officer (WRO) Joseph Monteith conducted an inspection on water licences 3BM-CLY1419 to verify compliance with the act and the Water license.

General Conditions

1. On October 12, 2021 WRO Monteith inspected the required documents, and observed the licence posted up at the Hamlet.
2. On November 10, 2021 Bhabesh Roy emailed WRO Monteith a copy of the 2019, and 2020 Annual Reports.

Water Use and Related Structures

3. Water is withdrawn from Water Source Lake. GPS Coordinates: Lat: N70° 28’ 59.339” Long: W68° 36’ 48.744 (photo 1).
4. The condition of the piping is questionable. The pipe may have slumped over time, any attempt to withdrawal the internal pump may cause damage to the pipes, and pump. The design and equipment is the same as Pond Inlet and may encounter the same emergency situation. The length approximately 47 metres. Diameter 8 inches, with a 4 inch internal pump housed within the intake pipe. The pipe has a fish mesh screen (photo 2).
5. The pump house has a flow meter, and it measured less than 010537572 at the time of the inspection (photo 3).
6. WRO Monteith also photographed the Pump Meter Readings log for August 2020 with 3 entries for the day starting on August 1, 2020 - 933996m³ starting reading and on August 3, 2020 end reading 934343 m³ (photo 4). The date of the inspection and the dates of withdrawal recordings provides questions in record keeping, and difficult to verify total water usage for the year.
7. Water Consumption Rates for the Months of January to August, 2021. 16,038 cubic metres withdrawal and delivered (Photo 10).

Waste Water Treatment Facility

8. At the time of the inspection, the sewage lagoon was in-use. The walls were operating as intended, no signs of leakage, but some slumping or erosion were observed on the west side of the lagoon walls (photo 5).
9. The lagoon has two cells; the first is the original lagoon with a capacity of 11,600 cubic metres, the other cell forms as an extension from the original lagoon, with no listing for the amount of sewage it can store. No issues were observed during the course of the inspection.

Solid Waste Facility

10. Burnable solid waste is deposited in the fenced Open Pit Burning area of the solid waste facility. They burn the burnable garbage and push it into a pit, then cover the ash and burnt garbage with gravel.
11. The fencing approximately 1.5 metres high is damaged on some parts of the north side of the fire pit. The fencing only covers a portion of the fire pit which may have been incomplete in its construction and should have more fencing put in to mitigate any garbage from blowing across the environment (photo 5).
12. The metal dump, one pile a mix of vehicles, white waste, empty oil drums, boats, building material and engines has some hazardous waste paint cans, within that section. No observations of batteries, or waste oil barrels in the metal dump (photo 7).
13. There is no berm to contain any leachate coming from the hazardous waste facility, and the bulk metal section of the land farm. Contaminants may interact with external environmental elements, and migrate downslope and eventually the receiving marine environment. (photo 8).

Hazardous Waste Facility

14. Hazardous Waste section contains a few sea cans(full), a bermed area full of waste oil drums, some packaged ready for delivery, other waste oil drums litter the inside and outside of the berm, multiple signs of leaked contents on the ground and the surrounding the area. Some of the sea cans with various forms of hazardous waste are left open to the environment.
15. More hazardous waste was were observed by the hamlet garage. Also, numerous sea cans were by the hamlet garage, and some with signs of leak migrating towards the creek behind the garage (photo)
16. Between the bulk metal and the hazardous waste facility a puddle pooled with signs of hazardous waste. The puddle lays on the side of the road in the bulk metal section downgrade of the hazarded waste facility. It was discussed that one of the monitoring station should be moved to this site as it appears to be the natural migration of any liquids following the path of least resistance (photo 8).

Section 2	☒ **Comments**	☐ **Non-Compliance with Act or Licence**	☐ **Action Required**

The following information is a summary of the Actions required by the licensee to promote and ensure compliance.

-The Open Pit Burning Area has some damage to the fencing that could be fixed with maintenance. The fencing only covers a portion of the open pit burning, and could use some more fencing to ensure wind does not displace any loose garbage and deposit them onto the environment, any water bodies, and other parts to the Hamlet land farm.

-Make a plan to send out Hazardous Waste to approved Hazardous Waste Facility to make room for any future hazardous waste in the bermed section of the Hazardous Waste Facility.

-The bulk metals portion is not bermed, and has the potential of releasing hazardous waste directly onto the environment. Rain has the potential washing away any hazardous waste onto the environment, which may migrate to any water bodies.

-Limit the amount of water withdrawal to the authorized amount listed in the water licence, or apply to the Water Board for an amendment to increase water withdrawal amount.

-Record your Annual Reports and books and records in Metres Cubed as per the Nunavut Water Regulations.

-Make a plan to move or create a new monitoring station to the area observed between the Bulk Metal Facility, and the Hazardous Waste Facility.

-Submit to the spill line Spill Reports for any spills regardless of size within all the Hamlet services outlined as “Relevant Structures” in the background of this report.

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

Part B: General Conditions

7. The Licensee shall immediately report to the 24-Hour Spill Report Line at (867) 920-8130, any spills of Waste, which are reported to, or observed by the Licensee, within the municipal boundaries or in the areas of the Water Supply or Waste Disposal Facilities

A Freeboard limit of at least 1.0 metre, or as recommended by a qualified Geotechnical Engineer and as approved by the Board in writing, shall be maintained at all dams, dykes, or structures intended to contain, withhold, divert or retain water or wastes.

Nunavut Water Regulations - Books and Records

Section 13 (a) Books and Records

A licensee must

(*a*) maintain accurate and detailed books and record of

(i) the quantity of water, in cubic metres, used each day.

Licensee or Representative	Inspector’s Name
	Joseph Monteith
Signature	**Signature**
	
Date	**Date**
	October 9, 2021

CC: Licensing Department, NWB
Justin Hack, Manager of Field Operations, INAC

Photo Log

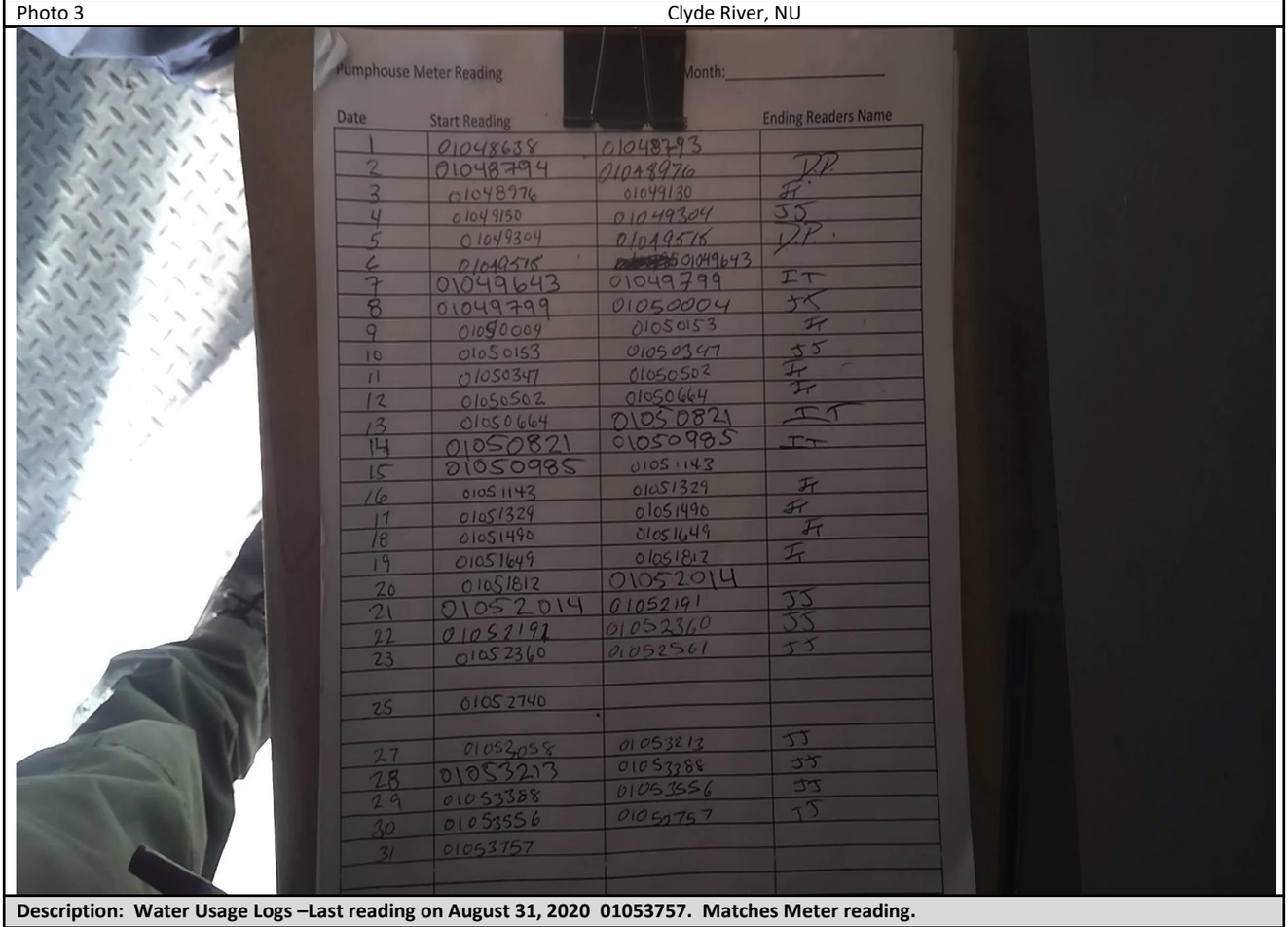
Date	Camera	Inspector	Authorization
October 12, 2021	Nikon Coolpix	Joseph Monteith	3BM-CLY1924
Photo Log #1		**Location**	
Photo 1		Clyde River, NU	

Description: Water Source Lake. Water Extraction pipe. Similar in design as the Pond Inlet Water Pump House

Photo Log #1	Location
Photo 2	Clyde River, NU

Description: Working Water Meter – 010537572 Litres withdrawn from potable water source

Photo Log #1	Location
Photo 3	Clyde River, NU



Pumphouse Meter Reading Month:_____

Date	Start Reading		Ending Readers Name
1	01048638	01048793	
2	01048794	01048976	JP
3	01048976	01049130	JJ
4	01049130	01049304	JJ
5	01049304	01049518	JP
6	01049518	01049643	
7	01049643	01049799	IT
8	01049799	01050004	JJ
9	01050004	01050153	JJ
10	01050153	01050347	JJ
11	01050347	01050502	JJ
12	01050502	01050664	JJ
13	01050664	01050821	IT
14	01050821	01050985	IT
15	01050985	01051143	
16	01051143	01051329	JJ
17	01051329	01051490	JJ
18	01051490	01051649	JJ
19	01051649	01051812	JJ
20	01051812	01052014	
21	01052014	01052191	JJ
22	01052191	01052360	JJ
23	01052360	01052561	JJ
25	01052740		
27	01053058	01053213	JJ
28	01053213	01053388	JJ
29	01053388	01053556	JJ
30	01053556	01053757	JJ
31	01053757		

Description: Water Usage Logs –Last reading on August 31, 2020 01053757. Matches Meter reading.

Photo Log #1	Location
Photo 4	Clyde River, NU

Description: The signs of slumping on base of sewage lagoon wall observed in previous years seems to have gotten deeper and wider.

Photo Log #1	Location
Photo 5	Clyde River, NU

Description: a non reported spill observed on the walls of the sewage lagoon.

Photo Log #1	Location

Photo 6	Clyde River, NU

Description: Hazardous Waste Disposal Facility. Berm is overfilled with waste oil drums. Waste oil drums deposited outside of bermed area.

Photo Log #1	**Location**
Photo 7	Clyde River, NU

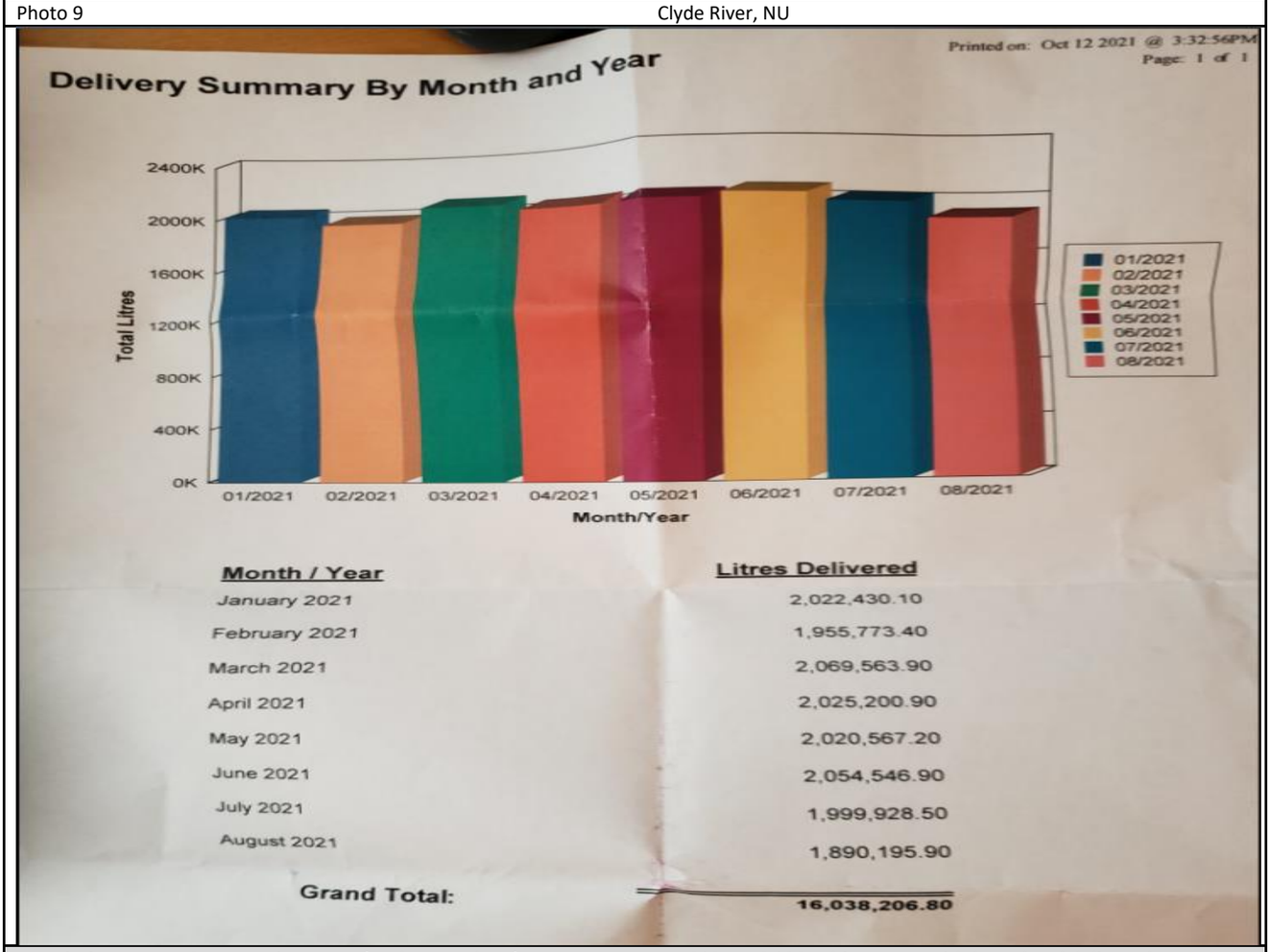
Description: the outer extent of bulk metal section of land farm, no berm to mitigate any interaction with external environmental elements, and migration of wastes outside the facilities. A monitoring station is observed in left hand side midground.

Photo Log #1	**Location**

Photo 8	Clyde River, NU

Description: What was observed as a puddle along the side of the road between the Bulk Metal and the Hazardous Waste Facility has turned into a seasonal surface water creek that takes water from the Hazardous Waste Facility to through the Bulk Metal section of the Solid Waste Facility.

Photo Log #1	**Location**
Photo 9	Clyde River, NU



Month / Year	Litres Delivered
January 2021	2,022,430.10
February 2021	1,955,773.40
March 2021	2,069,563.90
April 2021	2,025,200.90
May 2021	2,020,567.20
June 2021	2,054,546.90
July 2021	1,999,928.50
August 2021	1,890,195.90
Grand Total:	16,038,206.80

Description: Water Consumption Rates for the Months of January to August, 2021. 16,038 cubic metres withdrawal and delivered.