ANNUAL REPORT
FOR THE MUNICIPALITY OF QIKIQTARJUAQ, 2022

YEAR BEING REPORTED: 2022

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License No. **3BM-QIK1924** issued to the **Municipality of Qikiqtarjuaq**.

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 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 (m^3)
January	2,048,671.70	Same
February	1,879,223.30	Same
March	2,166,638.00	Same
April	2,107,782.10	Same
May	2,253,637.30	Same
June	2,078,434.50	Same
July	2,013,612.00	Same
August	1,972,900.40	Same
September	2,039,421.40	Same
October	2,075,909.50	Same
November	2,032,646.20	Same
December	2,064,784.60	Same
ANNUAL TOTAL	24,733,661.00	Same

Note: The water consumption volume is considered equal to the sewage discharge volume 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:

During this reporting period, no modification and/or any major maintenance work was carried out.

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

No unauthorized discharges occurred in 2022.

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 works were conducted during this reporting year and none are anticipated for next 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:

No studies planned.

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 2023 to ensure all sampling requirements under the water licence are met.

QIK-12 BOD5 and TSS effluent quality limits correspond to mechanical wastewater treatment plants and are not appropriate for a lagoon-wetland system. The Nunavut based technology, based recommended limit at the end of wetland are 100/120 mg/L CBOD/TSS which these samples meet. Limits of 100/120 mg/L CBOD/TSS has been demonstrated to protect the receiving environment. An amendment will be submitted to change the limits at Qik-12 and remove the limits at QIK-6 since this represents only partially treated effluent.

XI. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

During the summer of 2023, the licensee will make an effort to address listed concerns in CIRNAC's 2022 year report.

ANNUAL REPORT
FOR THE MUNICIPALITY OF QIKIQTARJUAQ, 2022

Appendix A: QIK-6 Effluent Quality Limits

Appendix B: Certificate of Analysis

Appendix C: Hazardous Materials Spill Database, Qikiqtarjuaq 2022

Appendix D: Qikiqtarjuaq 2022 CIRNAC Inspection Report

Appendix A

QIK-6 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	August 19, 2022 QIK-6
BOD_5	120 mg/L	**61 mg/L**
Total Suspended Solids	180 mg/L	**75 mg/L**
Fecal Coliform	$1x10^4$ CFU/100 mL	**184000**
Oil and Grease	No visible sheen	**16.6**
pH	Between 6 and 9	**7.64**

QIK-12 Effluent Quality Limits

Parameter	Maximum Concentration of any Grab Sample	August 19, 2022 QIK-12
BOD_5	45 mg/L	**59 mg/L**
Total Suspended Solids	45 mg/L	**60 mg/L**
Fecal Coliform	$1x10^4$ CFU/100 mL	**430000**
Oil and Grease	No visible sheen	**16.4**
pH	Between 6 and 9	**7.59**

Appendix B

Appendix C

Hazardous Materials Spill Database, Qikiqtarjuaq 2022:

There were no spills associated with the infrastructure under this license.

Appendix D

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-26602

Report To:

Municipality of Qikiqtarjuaq
P.O. Box 4,
Qikiqtarjuaq Nunavut
Attention: Geela Koonlioosie

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

DATE RECEIVED: 19-Aug-22
DATE REPORTED: 30-Aug-22
SAMPLE MATRIX: Waste Water

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

			Client I.D.		QIK-6	QIK-12		
			Sample I.D.		B22-26602-1	B22-26602-2		
			Date Collected		17-Aug-22	17-Aug-22		
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Conductivity @25°C	µmho/cm	1	SM 2510B	19-Aug-22/O	493	491		
Nitrite (N)	mg/L	0.1	SM4110C	22-Aug-22/O	< 0.1	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	22-Aug-22/O	< 0.1	< 0.1		
Chloride	mg/L	0.5	SM4110C	22-Aug-22/O	29.9	30.0		
Sulphate	mg/L	1	SM4110C	22-Aug-22/O	3	2		
Alkalinity(CaCO3) to pH4.5	mg/L	5	SM 2320B	19-Aug-22/O	170	170		
Arsenic	mg/L	0.0005	EPA 200.8	24-Aug-22/O	0.0006	0.0005		
Total Organic Carbon	mg/L	0.2	EPA 415.2	19-Aug-22/O	23.5	41.4		
Mercury	mg/L	0.00002	SM 3112 B	24-Aug-22/O	0.00004	0.00004		
pH @25°C	pH Units		SM 4500H	19-Aug-22/O	7.64	7.59		
Oil & Grease-Total	mg/L	1.0	SM 5520	24-Aug-22/K	16.6	16.4		
Fecal Coliform	cfu/100mL	1	MOE E3371	19-Aug-22/O	184000	430000		
Calcium	mg/L	0.02	SM 3120	24-Aug-22/O	3.54	3.56		
Cadmium	mg/L	0.005	SM 3120	24-Aug-22/O	< 0.005	< 0.005		
Cobalt	mg/L	0.005	SM 3120	24-Aug-22/O	< 0.005	< 0.005		
Copper	mg/L	0.002	SM 3120	24-Aug-22/O	0.115	0.113		
Chromium	mg/L	0.002	SM 3120	24-Aug-22/O	< 0.002	< 0.002		
Magnesium	mg/L	0.02	SM 3120	24-Aug-22/O	1.71	1.68		
Sodium	mg/L	0.2	SM 3120	24-Aug-22/O	25.9	25.2		
Nickel	mg/L	0.01	SM 3120	24-Aug-22/O	< 0.01	< 0.01		
Lead	mg/L	0.02	SM 3120	24-Aug-22/O	< 0.02	< 0.02		
Zinc	mg/L	0.005	SM 3120	24-Aug-22/O	0.069	0.065		
Aluminum	mg/L	0.01	SM 3120	24-Aug-22/O	0.18	0.18		
Iron	mg/L	0.005	SM 3120	24-Aug-22/O	0.781	0.777		
Manganese	mg/L	0.001	SM 3120	24-Aug-22/O	0.026	0.026		
Potassium	mg/L	0.1	SM 3120	24-Aug-22/O	14.5	14.1		
Hardness (as CaCO3)	mg/L	1	SM 3120	24-Aug-22/O	16	16		

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B22-26602

Report To:

Municipality of Qikiqtarjuaq
P.O. Box 4,
Qikiqtarjuaq Nunavut
Attention: Geela Koonlioosie

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

DATE RECEIVED: 19-Aug-22
DATE REPORTED: 30-Aug-22
SAMPLE MATRIX: Waste Water

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

			Client I.D.		QIK-6	QIK-12		
			Sample I.D.		B22-26602-1	B22-26602-2		
			Date Collected		17-Aug-22	17-Aug-22		
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	25-Aug-22/K	33.9	39.8		
Phenolics	mg/L	0.001	MOEE 3179	29-Aug-22/K	0.410	0.427		
Total Suspended Solids	mg/L	3	SM2540D	23-Aug-22/K	75	60		
BOD(5 day)	mg/L	3	SM 5210B	19-Aug-22/K	61	59		

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

Tahir Yapici Ph.D
Lab Manager - Ottawa District

GENERAL SAMPLE SUBMISSION FORM

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured. Proudly Canadian.

SAMPLES SUBMITTED TO: Kingston ☐ Ottawa ■ Richmond Hill ☐ Barrie ☐ Windsor ☐

TESTING REQUIREMENTS

☐ O'Reg 153/04 Table (1 - 9) ____ Record of Site ____
☐ O'Reg 406/19 Table (1 - 9.1) ____ SPLP Table (1-9.1) ____
☐ RPI ☐ ICC ☐ Agricultural
☐ Coarse ☐ Medium/Fine ☐ O'Reg 558 TCLP
☐ MISA ☐ PWQO ☐ Landfill Monitoring
☐ Other: ____

REPORT NUMBER (Lab Use): Aug 19.22 B22.26602

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? ☐ Yes ■ No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization:	Address:	Invoicing Address (if different):
Hamlet of Qikiqtarjuaq	Hamlet of Qikiqtarjuaq PO Box 4 Qikiqtarjuaq, NU X0A 0B0	
Contact: Geela Kooneelusie		
Tel: 867-927-8832 **Fax:**		
Email: munqik@qiniq.com	**Quote #:** P22_NunavutREV2	**Project Name or #:**
Additional Info (email, cell, etc):	**P.O. #:**	**Additional Info:**

ANALYSES REQUESTED

Nunavut Wastewater Package; Nunavut Leachate Package; Total Petroleum Hydrocarbons; Polycyclic Aromatic Hydrocarbons; BTEX

TURNAROUND SERVICE REQUESTED (see back page)

*Must be arranged in advance

☐ Platinum* 200% Surcharge
☐ Gold* 100% Surcharge
☐ Silver 50% Surcharge
☐ Bronze 25% Surcharge
■ Standard 5-7 days
☐ Specific Date: ____

* Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	S.P.L. (Watertrax)	Sample Matrix *	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
1	QIK-6 ✓		WW	22/09/17		X			9	N
	QIK-8		WW	22/09/17		X			Ø	N
2	QIK-12 ✓		WW	22/09/17		X			9	N
	QIK-13		WW	22/09/17		x x x			Ø	N
	QIK-14		WW	22/09/17		x x x			Ø	N
	QIK-15		WW	22/09/17		x x x			Ø	N
						Only two wastewater received.				

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	SAMUEL NEQUANGAIQ	
Sign:		
	Date (yy-mm-dd)/Time:	Date (yy-mm-dd)/Time:

SHIPPING INFORMATION

Courier (Client account) ■ Invoice
Courier (Caduceon account) ☐
Drop Off ☐ # of Pieces
Caduceon (Pick-up) ☐

REPORTING / INVOICING

Report by Fax ☐
Report by Email ■
Invoice by Email ■
Invoice by Mail ☐

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received By (print): Jess Day Signature:
Date Received (yy-mm-dd): 22/08/19 Time Received: 10:30
Laboratory Prepared Bottles: ☒ Yes ☐ No
Sample Temperature °C: 10.1 Labeled by:

Comments: (1) 1030, 1Pet, 1R, 2NP, M, Hg, Phenol, bact x2

Page G of

CADUCEON™

ENVIRONMENTAL LABORATORIES

Client committed. Quality assured. Proudly Canadian

QUOTATION FOR ANALYTICAL SERVICES

Quote #:	**P22_NunavutREV2**
Organization:	**Government of Nunavut, Baffin Region**
Contact:	Kayla Clouter
Telephone:	867.975.5476
Cell:	
Email:	kclouter@gov.nu.ca
Project #:	11 communities in the Baffin region
Address:	P.O. Box 1000, Stn 700, Iqaluit, NU, X0A 0H0
Invoice To:	**QUOTE # ('S) MUST BE ON C OF C TO APPLY if not listed, General pricing will be applied.**
Additional Info:	
Date:	June 10, 2022 **Valid Until:** December 31, 2022

Item #	Quantity	Analysis Request	Matrix	Unit Cost, $	Amount, $
1	1	**LEACHATE ANALYSIS:** TPH/BTEX, PAH's, BOD, pH, TSS, N02/N03, Phenols (4AAP), Fecal Coliforms, Conductivity, Oil & Grease - Total, Ammonia Nitrogen, Alkalinity, Sulphate, Chloride, TOC, Total Phosphorus & Metals - As, Cu, Fe, Hg, Ca, K, Cd, Cr, Pb, Ni, Co, Al, Zn, Mn & Hardness	Leachate	545.00	$545.00
2	1	**RAW WATER/TREATED** - E. Coli, Alkalinity, Ammonia, Chloride, Colour, Conductivity, Fluoride, Nitrate, pH, Sulphate, TDS, TOC, Turbidity, UV Transmission & Metals - Al, Sn, Ba, B, Cd, Ca, Cr, Cu, Fe, Pb, Mn, Mg, Hg, K, Se, Na, U, Zn + Hardness	Drinking Water	327.20	$327.20
3	1	**WASTE WATER** - BOD, TSS, Conductivity, Alkalinity, Oil and Grease (Total), Chloride, Ammonia Nitrogen, Faecal Coliforms, pH, N02/N03, Phenols (4AAP), Sulphate, TOC & Metals - Mg, Na, Cd, Co, Cr, Cu, Al, Hg, Ca, K, Zn, Fe, Mn, Ni, Pb, As & Hardness	Waste Water	300.00	$300.00
4	3	**Sample Disposal Surcharge**	Surcharge	$2.00	$6.00
5	-	**Sample Supplies Surcharge**	Surcharge	5%	$58.61
				Subtotal	$1,236.81
				HST	$160.79
				Total Cost	**$1,397.60**

****NOTE** The Ottawa laboratory will keep track of the samples bottle sets sent to the communities. Nearing the end of the year Caduceon staff will compare what has been sent in supplies versus what has been submitted. Missing/unretunred supplies will be charged at the same rate as listed above. Far too many cooler sets/supplies have not been sent back leading Caduceon to implement this measure. Additionally, past reports can be retireved from Caduceon's CadConnect Web Portal. Should clients require Caduceon to retrieve them an adminstration charge may be appicable up to $100 for retrieval of historical reports. Should you require a CadConnect account, please contact it@caduceonlabs and Caduceon can provide you with an account setup.**

Kristine Cavanagh
Customer Service Representative
Caduceon Environmental Laboratories
kcavanagh@caduceonlabs.com
Cell: 819-230-9605
Office 613-526-0123

WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Qikiqtarjuaq	Gord Marinic
Licence No. / Expiry	**Representative's Title**
3BM-QIK1924	Regional Engineer
Land / Other Authorizations	**Land / Other Authorizations**
Date of Inspection	**Inspector**
June 22 ,2022	Joseph Monteith
Activities Inspected	

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

☐ Roads/Hauling ☒ Other: Potable Water Source, Waste Water Treatment Facility, 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	A	
B: GENERAL CONDITIONS	A	
C: CONDITIONS APPLYING TO SECURITY	NI	
D: CONDITIONS APPLYING TO WATER USE	A	1-5
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	C	6-19
F: CONDITIONS APPLYING TO MODIFICATIONS	NI	
G: CONDITIONS APPLYING TO CONSTRUCTION	NI	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	A	20
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING	NA	
J: CONDITIONS APPLYING TO MONITORING	A	
SCHEDULES	A	

**The observation number corresponds with specific comments provided below.*

Samples taken by Inspector:	Location(s): N67° 33' 00'',W64°02' 00''
☐ Yes ☒ No	

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

BACKGROUND

On August 2, 2019, The Nunavut Water Board emailed the proponent, and WRO Monteith acknowledging receipt of a Water Licence Renewal application. On September 20, 2019, The Nunavut Water Board approved the Hamlet a renewal licence 3BM-QIK1924 effective on September 20, 2019, and expires on September 19, 2024. The licence renewal authorizes the Hamlet to withdrawal 34,500m³ per annum or maximum of 299 m³ per day.

Community infrastructure includes:
- A Water Supply Facilities which draws water from Tulugak River. Water is transferred by gravity from the intake location to the Water Storage Reservoir, and is treated in the truck-fill station and is delivered by trucks to holding tanks in each building;
- A Sewage Disposal/Treatment Facilities (double celled lagoon system) which receives trucked sewage collected from holding tanks in each building and houses, with a wetland area between the lagoon and the ocean; and
- A Solid Waste Facility, which includes a Metals disposal area, and Hazardous Waste storage area. Segregation of waste needs to be approved.

Inspector Statement

On June 22, 2022**,** A water licence inspection was conducted by Water Resource Officer (WRO) Joseph Monteith at the Hamlet of Qikiqtarjuaq, Qikiqtani Region, Nunavut.

General Condition

On July 29, 2021, Richard Dwyer, Nunavut Water Board – Manager of Licencing, emailed WRO Monteith a copy of Qikiqtarjuaq's 2020 Annual Report, satisfying Part B: Subsection 1 of the general condition of the water licence.

Water Use and Related Structures

1. Water is being withdrawn from Tulugak River (photo 1). The water is transferred by gravity to the intake

location, which settles approximately 4-6 inches above the intake pipe. The activity of filling up the Water reservoir requires filling the pipe (photo 2) which recharges the reservoir as described above (photo 3) using underground pipe made out of HDPE approximately 8 inches in diameter transfers the water to the water reservoir, then into the treatment facility (photo 4). After filling up the reservoir the water is then transferred to the truck fill station and treated with liquid Chlorine, and filtered before being pumped into trucks for delivery (photo #5). At the time of the inspection the recharge pipe was closed, and the water level below the recharge pipe (photo 3).

2. An operating water flow meter was observed on site, and read Gallons (photo 6).
3. A log sheet for truck fill procedures undated showed a weekly total of 34954497 Litres was withdrawn at the time of the inspection (photo 7).
4. The water reservoir didn't appear to be working as intended as there is a suspected leak in the liner of the reservoir. The outer walls appeared to be slumping and leaking water from the reservoir on the North wall of the reservoir (Photo 8). Samuel Nuqingaq, Municipal Forman for Hamlet of Qikiqtarjuaq said that once the reservoir hits 22 metres full(measured diagonally from the top of the water table to the bottom of the lagoon on the opposite side of the water table measurement), the leak of the water reservoir begins.
5. On June 27, 2022 Samuel Nuqingaq, Qikiqtarjuaq foreman, Hamlet of Qikiqtarjuaq emailed WRO Monteith a copy of the Hamlet of Qikiqtarjuaq's Water Usage Records. Water Usage Records between January 2022, and May 2022 shows a total of 10,455,952.40 Litres withdrawn.

Waste Water Treatment Facility

6. The waste water treatment facility lagoon walls continue to appear to have a sign of a leak in the south east side of the lagoon (photo 9).
7. The freeboard was below the 1 metre mark in most parts of the lagoon (photo 10).
8. Windblown garbage was observed in the Waste Water Treatment Facility (photo 10).
9. The decanting pipe protruding up above the waste water table. With freeboard height, this pipe doesn't appear to be operating as intended (photo 10).
10. On September 20, 2022 Samuel Nuqingaq emailed WRO Monteith an email notifying me of the hamlet intent to decant.
11. On September 29, 2022, Samuel Nuqingaq, Qikiqtarjuaq foreman, Hamlet of Qikiqtarjuaq emailed WRO Monteith a copy of the sample results, and all parameters were compliant against the water license. In the same email Matthew Nuqingaq, Qikiqtarjuaq foreman, Hamlet of Qikiqtarjuaq notified me his intent to decant south side lagoon.
12. On October 14, 2022 Matthew Nuqingaq, Qikiqtarjuaq foreman, Hamlet of Qikiqtarjuaq notified WRO Monteith by email that they had completed the decanting of the sewage lagoons.

Solid Waste Facility

13. The licensee manages their solid waste by segregating the hazardous waste, burning and capping, and stocking bulk metals and woods separately. The licensee manages water by building dykes to limit the amount of water flowing in and out of the facility.
14. The Solid Waste Facility has good signage indicating where the metals dump, and land farm.
15. The hazardous Waste is within the fenced part of the burn and cap section of the Solid Waste Facility. Although there is sea can for the public to deposit waste in, it is full of batteries, paints, waste oil containers. Some signs of hazardous waste was observed in the burn and cap. Another sea can to deposit more hazardous waste was requested by Bhabesh Roy, P,Eng., Regional Engineer in 2021.
16. The fencing around the burn and cap facility requires maintenance on the East wall and repair on the North wall

Hazardous Materials and Waste/Soil Treatment Facility

17. Further to the Solid Waste Facility is a mix of historic metals waste home heating fuel tanks, white waste such as washers, dryers, fridges, freezers, and hazardous waste as oil drums, and propane tanks in bermed and no berm sections on the south side. Some of the bermed sections have lining, but are improperly installed or unmaintained (photo 16).
18. Hazardous Waste was observed throughout the Solid Waste Facility. Numerous signs of historic spills (photos 15).
19. A soil treatment facility lays uncommission. It was observed that the incomplete soil remediation project contained water (photo 13), and must be discharged appropriately as per the water licence discharge requirements. The plan to complete the soil treatment facility was authorized to be completed. At the time of the inspection, it was noted that the consulting engineer of the facility had visited the site, but did not say it was completed.

Spill Report 2019

20. On Friday March 1, 2019 the Hamlet submitted spill report 2019-081to the NT/NU Spill Line. The spill was for 38850.00 Litres of sewage, covering an area of 600 m^3.

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

- Part B: Item 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.

- Part D: Item 10

The Licensee shall segregate and store all hazardous waste material and/or hazardous waste within the Solid Waste Facility in a manner as to prevent the deposit of deleterious substances into any water until such a time as proper disposal arrangements are made;

- Part D: Item 11

The Licensee shall implement measures to prevent hazardous materials and/or leachate from the Solid Waste Disposal Facility from entering water.

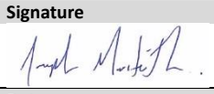
As such, to ensure the terms and conditions of your water license are met, your attention in this matter is required.

SECTION 3 ☐ **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. Please provide a response to the following Actions Required within 30 days of receiving this report proposing timelines to address the concerns noted.

- Provide an update for the completion of the Soil Remediation Structure.
- Investigate the cause of the leak, and slumping of the Water Treatment Facility Reservoir walls.
- Purchase the proper cap for the Water Treatment Facility Water Reservoir Recharge Pipe, to stop the leak of water into the reservoir.
- Consolidate all hazardous waste in the burn and cap, and bulk metals facilities and segregate
- The Licensee is reminded to remain diligent to prevent wastes from entering water, the environment, and adhere to the discharge requirements for waste disposal detailed in the water licence.
- Submit a spill report for the historical spills observed in the Hazardous Waste Facility.

As such, to ensure the terms and conditions of your water license are met, your attention in this matter is required.

Licensee or Representative	**Inspector's Name**
Gord Marinic	Joseph Monteith
Signature	**Signature**
	
Date	**Date**
	December 12, 2022

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

Photo Log

Date	Camera	Inspector

June 22, 2022	Galaxy S9	Joseph Monteith

Photo Log #1	**Location**
Photo 1	Qikiqtarjuaq

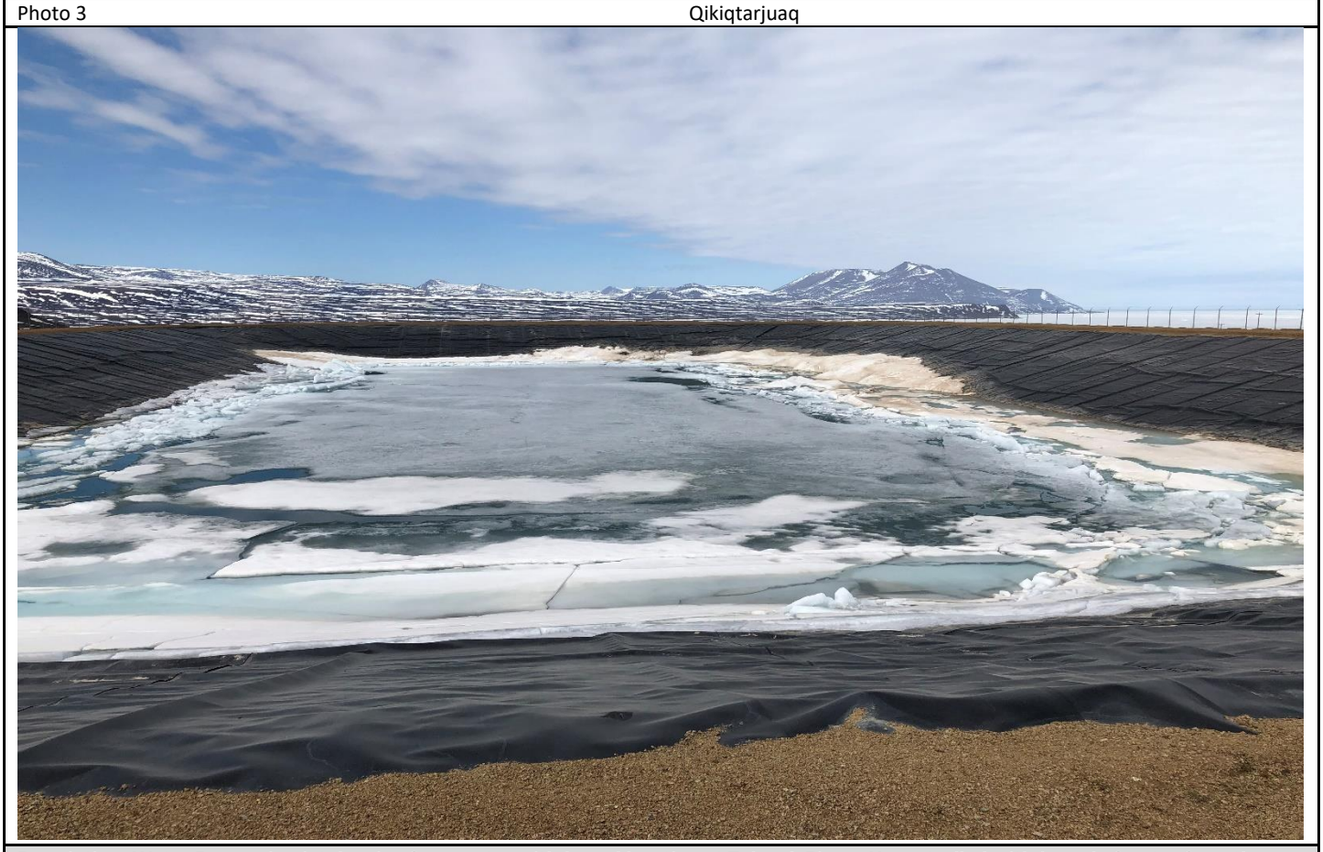
Description: Tulugak River: Water Withdrawal location. Ice froze the top portion of the ditch.

Photo Log #1	**Location**
Photo 2	Qikiqtarjuaq

Description: water intake pipe. More than 50% below the water table.

Photo Log #1	**Location**

Photo 3	Qikiqtarjuaq



Description: Water Reservoir – intake pipe from water withdrawal location at Tulugak River. Uncontrolled withdrawal of water from the water source

Photo Log #	**Location**
Photo 4	Qikiqtarjuaq

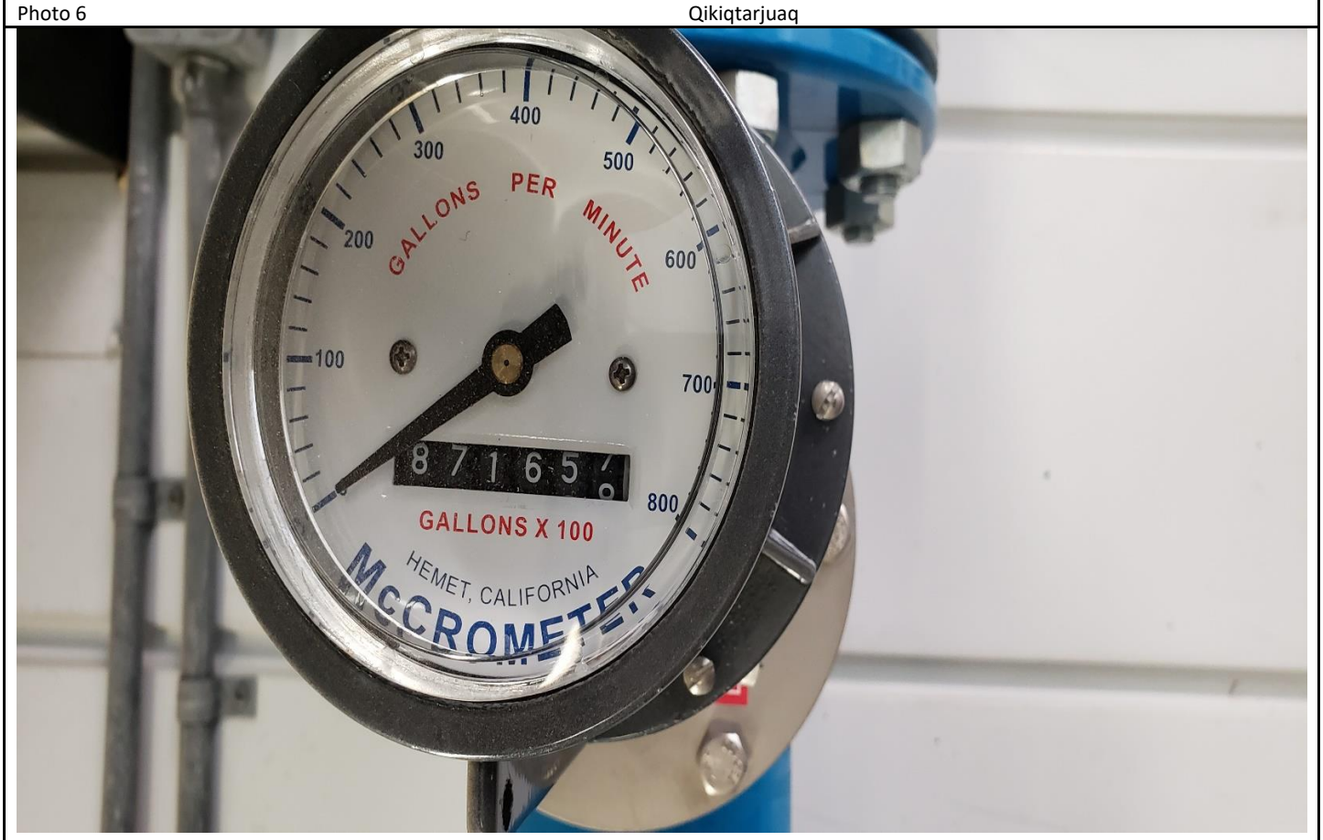
Description: Water Treatment Facility/Truck Pumping House. Samuel Nuqingaq

Photo Log #	**Location**

Photo 5	Qikiqtarjuaq

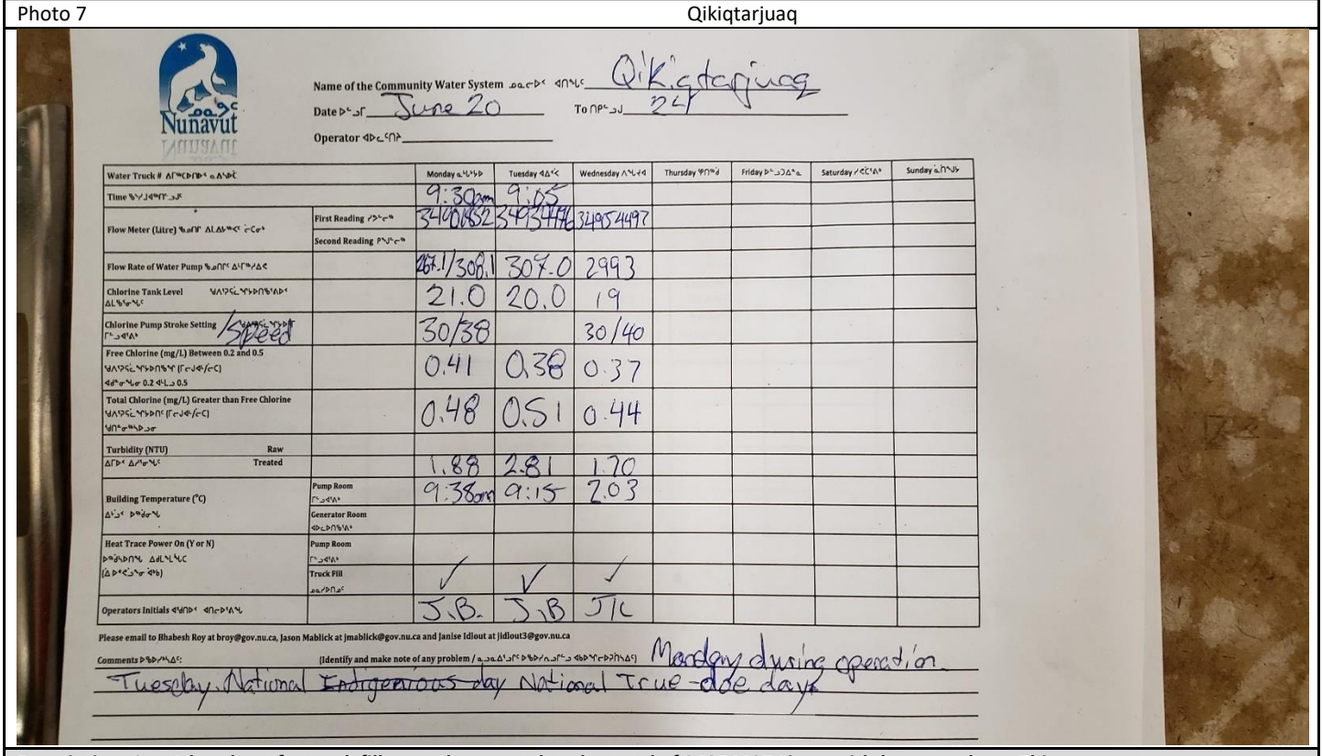
Description: Inside Water Treatment Plant. Mobile Water Pump with mesh screen behind auger drill.

Photo Log #1	**Location**
Photo 6	Qikiqtarjuaq



Description: McCrometer Water Meter reads 871658 Gallons x 100

Photo Log #1	Location
Photo 7	Qikiqtarjuaq



Name of the Community Water System: Qikiqtarjuaq
Date: June 20 To: 24
Operator:

Water Truck #		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time		9:30am	9:05					
Flow Meter (Litre)	First Reading	34000852	34953446	34954497				
	Second Reading							
Flow Rate of Water Pump		267.1/308.1	307.0	2993				
Chlorine Tank Level		21.0	20.0	19				
Chlorine Pump Stroke Setting / Speed		30/38		30/40				
Free Chlorine (mg/L) Between 0.2 and 0.5		0.41	0.38	0.37				
Total Chlorine (mg/L) Greater than Free Chlorine		0.48	0.51	0.44				
Turbidity (NTU) Raw / Treated		1.89	2.81	1.70				
Building Temperature (°C)	Pump Room	9.38am	9:15	2.03				
	Generator Room							
Heat Trace Power On (Y or N)	Pump Room							
	Truck Fill	✓	✓	✓				
Operators Initials		J.B.	J.B	JC				

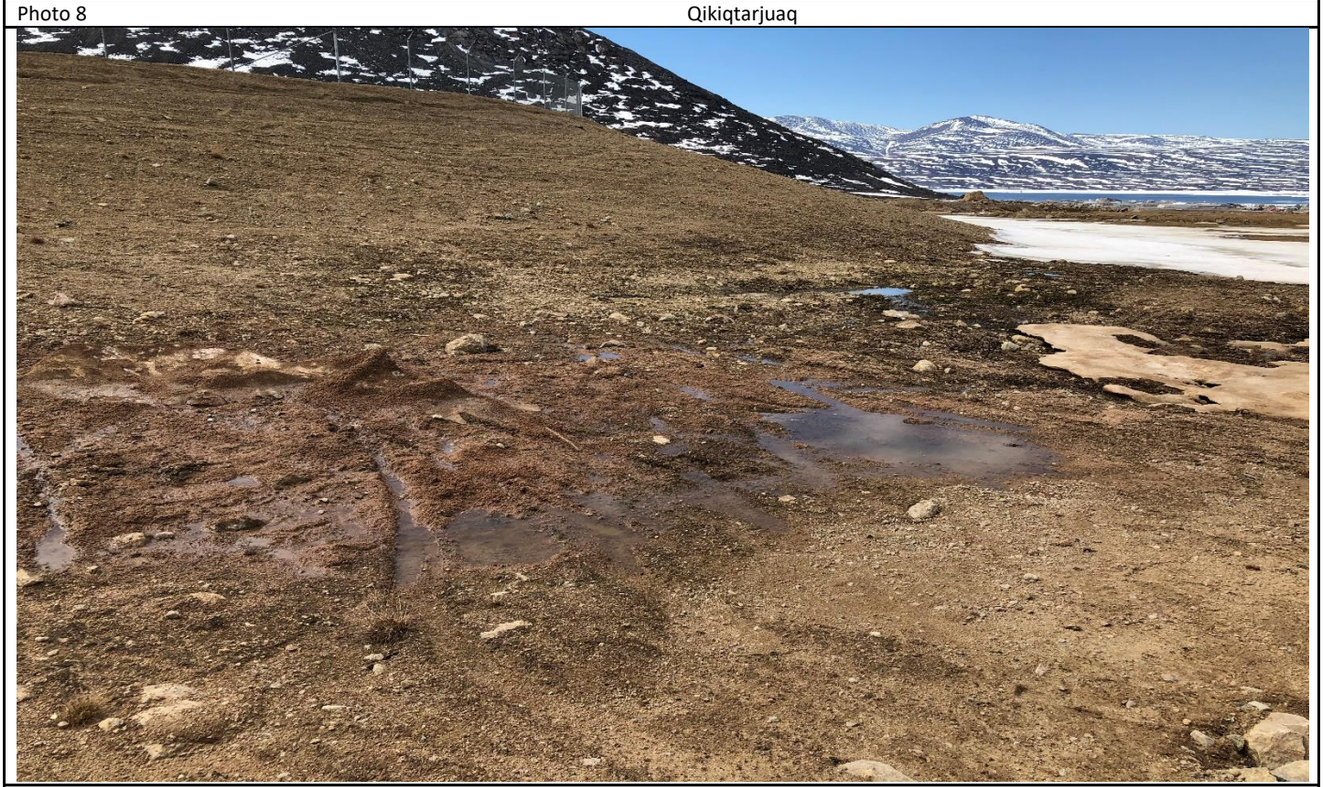
Please email to Bhabesh Roy at broy@gov.nu.ca, Jason Mablick at jmablick@gov.nu.ca and Janise Idlout at jidlout3@gov.nu.ca

Comments: (Identify and make note of any problem / Monday during operation

Tuesday, National ~~Indigenous~~ day National Inuit day

Description: 3. A log sheet for truck fill procedures not dated. a total of 34954497 Litres withdrawn to date. This appears to run contrast to whats been observed in the water meter. An articulation on how the community records water usage is required.

Photo Log #1	Location
Photo 8	Qikiqtarjuaq

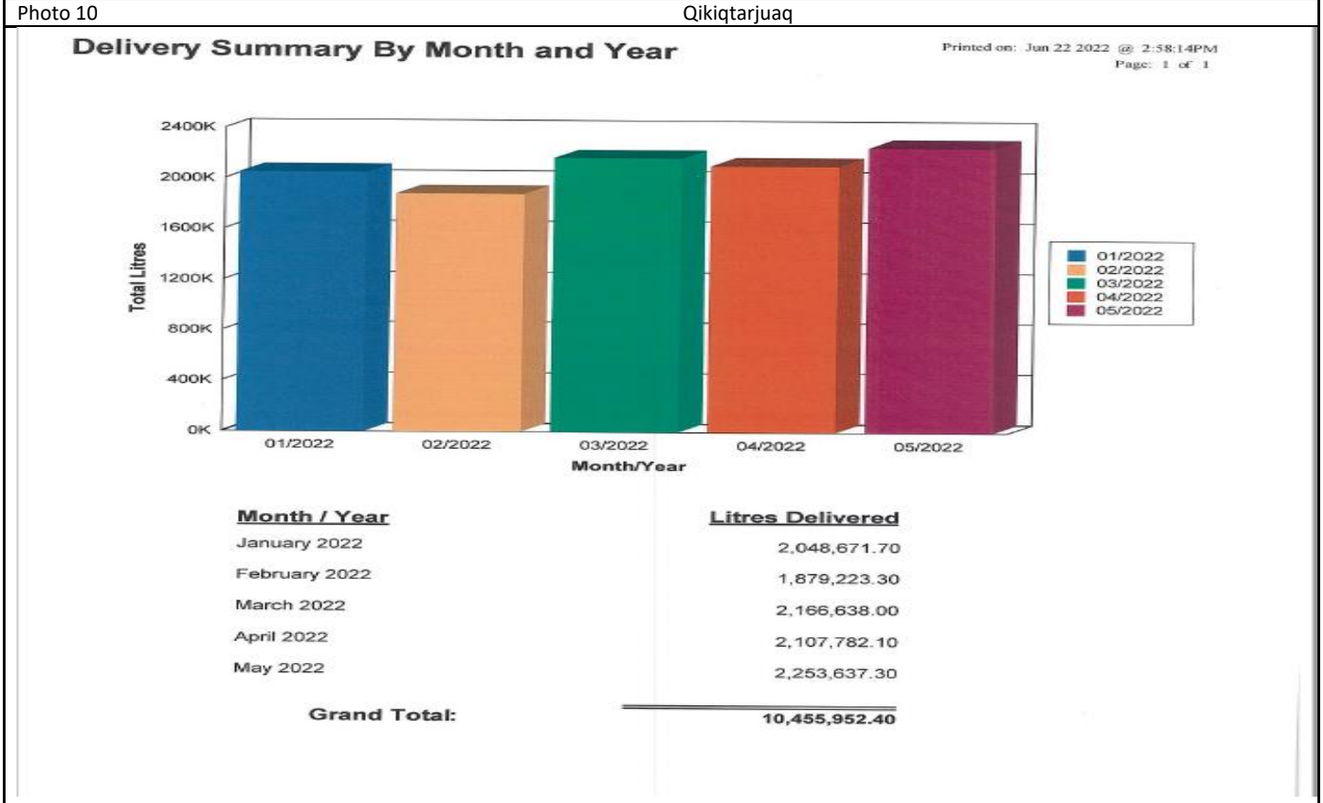


Description: signs of slumping on outer wall of Water Reservoir. Once the reservoir reaches 22 metre(measured diagonally) the reservoir leaks

Photo Log #1	Location
Photo 9	Qikiqtarjuaq

Description: Signs of slumping of the South side outer wall of Waste Water Treatment Facility.

Photo Log #1	Location
Photo 10	Qikiqtarjuaq



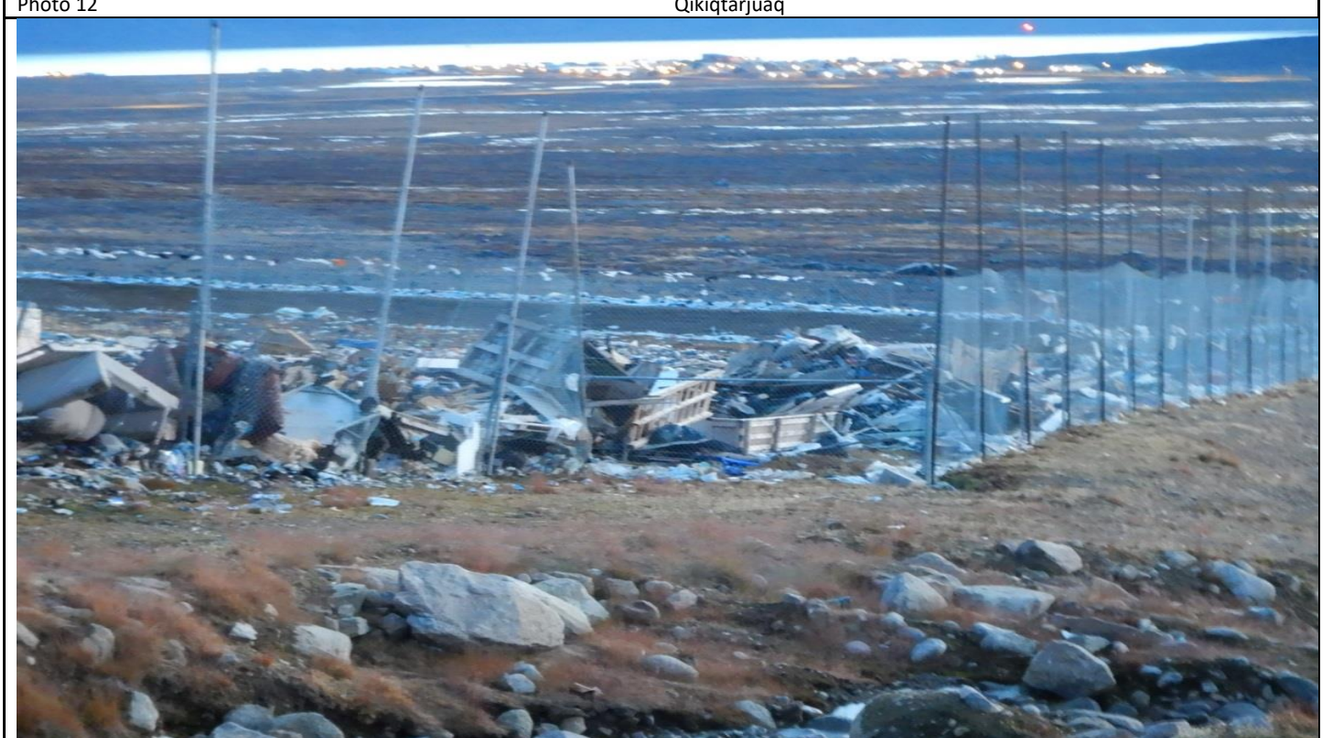
Month / Year	Litres Delivered
January 2022	2,048,671.70
February 2022	1,879,223.30
March 2022	2,166,638.00
April 2022	2,107,782.10
May 2022	2,253,637.30
Grand Total:	**10,455,952.40**

Description: Water Usage Records between January 2022, and May 2022 shows a total of 10,455,952.40 Litres withdrawn.

Photo Log #1	Location
Photo 11	Qikiqtarjuaq

Description: Fence requires repair on the North East side of burn and cap facility

Photo Log #1	Location
Photo 12	Qikiqtarjuaq



Description: Damaged fencing on North Side of Wall of burn and cap facility

Photo Log #1	Location
Photo 13	Qikiqtarjuaq

Description: Signs of windblown garbage in Waste Water Treatment Facility – Decanting Pipe appears above the lagoon waste water table. Freeboard appears to be above the 1 metre freeboard.

Photo Log #1	Location
Photo 14	Qikiqtarjuaq

Description: Below the lined, and unlined berms and mixed metals. Water exiting the bulk metals**.** Observed 2019, this area seems to be the natural drainage route of water.

Photo Log #1	Location

Photo 14	Qikiqtarjuaq

Description: Water in the soil remediation berm. No signs of activity in 2021, but the accumulation of water in the berm indicates the berm isn't damaged.

Photo Log #1	**Location**
Photo 15	Qikiqtarjuaq

Description: Hazardous waste in the bulk metals section of the solid waste facility. Batteries, paint cans, and propane tanks.

Photo Log #1	**Location**

Photo 15	Qikiqtarjuaq

Description: Hazardous Waste Facility. Multiple signs of spills. Signs of historic spills.