

## ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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**YEAR BEING REPORTED: 2022**

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License No. 3BM-PEL1929 issued to the Municipality of Kugaaruk.

- a) **A summary report of Water use and Waste disposal activities;**
- b) **Quantity of Water (in cubic metres per month and per year) obtained from all sources;**
- c) **Quantity of Waste disposed of at the Waste disposal facilities;**

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

<b>Month Reported</b>	<b>Quantity of Water Obtained from all sources (L)</b>	<b>Quantity of Sewage Waste Discharged (Estimated, m<sup>3</sup>)</b>
<b>January</b>	3,192,836.20	Same
<b>February</b>	2,834,063.90	Same
<b>March</b>	3,030,575.80	Same
<b>April</b>	2,709,734.50	Same
<b>May</b>	2,902,070.00	Same
<b>June</b>	2,552,725.30	Same
<b>July</b>	2,928,923.10	Same
<b>August</b>	2,863,876.60	Same
<b>September</b>	2,924,596.90	Same
<b>October</b>	3,221,732.80	Same
<b>November</b>	3,105,019.90	Same
<b>December</b>	3,112,585.20	Same
<b>ANNUAL TOTAL</b>	<b>35,378,743.20</b>	<b>Same</b>

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

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**d) Quantity of Waste backhauled to approved facility for disposal;**

- As per generation rates in O&M Plan

**e) A list of unauthorized discharges and a summary of follow-up actions taken;**

- 2021 The Lagoon decant did not fully complete due to early freeze up. As a result, July 20 2022, an emergency decant was commenced as the lagoon was exceeding the freeboard and the integrity of the lagoon needed to be ensured. As per Section G, Part 4 of the water license, a spill report was submitted. Sample results at PEL-3-2 prior July 20 resulted in a pH 10.2. Since, pH at PEL-4 was within compliance, there were no deleterious effect on the receiving environment and no remedial action required. The spill report is included in Appendix F.
- Seepage was observed from the toe of the southwest berm of the lagoon in Summer 2021 and September 2022 after the decant began, tears in the HDPE Liner were confirmed. Given the decant was still in process and freeze up was approaching, deposited sewage went directly into the settling pond during repairs from October 14-17th. As per CIRNAC Inspector Jonathan Mesher, a spill report was completed. As sewage was not deposited directly to the ocean, and sampling at PEL-4 showed pH still within acceptable parameters, there were no deleterious effect on the receiving environment and no remedial action was required.
- See Appendix C for entries to Spill database

**f) 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, including any revisions to the management plans submitted in the form of an Addendum;**

Sewage Lagoon. Seepage was observed from the toe of the southwest berm of the lagoon in Summer 2021 and later it was confirmed that there was tear in the HDPE liner. The liner was repaired by the Contractor on October 14-16, 2022. All warranty work is now complete.

**g) A summary of all information requested and results of the Monitoring Program;**

- The results of the Monitoring Program are summarized in Appendix D.

**h) A summary, including photographic records before, during and after any relevant construction activities or Modifications and/or major maintenance work carried out on facilities under this Licence and an outline of any work anticipated for the next year;**

- Pilitak repaired the damaged area of HDPE liner with Fusion welding during October 14-17, 2022. GN and Consultants (Dillon) were present during the repair work. Photos of the Sewage Lagoon Liner repairs are included in Appendix H.

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- i) An update on the Compliance Plan and progress made on specific requirements therein;**
  - There were no updates made to the Compliance Plan in 2022. The licensee does not have a copy of any Compliance Plan and could not locate it on the NWB FTP site.
  
- j) Any other details on Water or Waste deposit requested by the Board by November 1 of the year being reported.**
  - There were no other details on Water or Waste deposit requested by the Board by November 1 of 2022.

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## ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- No Flow at PEL-6
- No Flow at PEL-9-2
- PEL 3-2 is located at a pond between the lagoon and the wetland treatment area. This location for a compliance point is inconsistent with other municipal water licenses in Nunavut. PEL-4, which is at the outlet of the wetland treatment area should be the only compliance point and should be sampled only once decanting has begun since it represents fully treated effluent. The lagoon is not an exfiltration lagoon therefore sampling prior to decant gives no indication of the efficacy of effluent treatment.
- In October, the CBOD was in exceedance, repairs were being performed and during the repair the sewage trucks were bypassing the lagoon to discharge in the downstream settling pond directly which would have reduced the quality of the effluent reaching PEL-4.

## FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- Compliance concerns from the 2020 CIRNAC Inspection were addressed and reported in the 2021 Annual Water License Report. As the 2021 and 2022 CIRNAC inspections did not take place, there are no current compliance concerns for follow up.

## List of Appendices

**Appendix A: PEL-3-2 and PEL-4 Effluent Quality Limits – 1 page**

**Appendix B: Laboratory Certificate of Analysis**

- **Certificate of Analysis 06/28/2022 - 6 pages**
- **Certificate of Analysis 07/20/2022 - 6 pages**
- **Certificate of Analysis 09/13/2022 - 4 pages**
- **Certificate of Analysis 10/03/2022 – 4 pages**

**Appendix C: Hazardous Materials Spill Database, Kugaaruk 2022 – 1 page**

**Appendix D: Kugaaruk 2022 Sampling Summary – 1 page**

**Appendix E: CIRNAC Inspection Report - 1 page**

**Appendix F: Spill Report 09/13/2022 – 1 page**

**Appendix G: Receipt of Submissions to NWB – 1 page**

**Appendix H: Photos of incidents requiring maintenance – 7 pages**

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FOR THE MUNICIPALITY OF KUGAARUK**

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Appendix A: PEL-3-2 and PEL-4 Effluent Quality Limits

**3BM-PEL1929 Kugaaruk Monitoring Program Results 2022 for Effluent Quality**

Parameter	Maximum concentration of Any Grab Sample	PEL-3-2	
		June 28	July 20
CBOD	100 mg/L	9	11
Total Suspended Solids	120 mg/L	20	22
Faecal Coliforms	1x10 <sup>4</sup> CFU/dl	<1	-
Oil + Grease	No visible sheen	Non-Visible	Non-Visible
pH	between 6 and 9	10.2	9.65

Parameter	Maximum Concentration of Any Grab Sample	PEL-4			
		June 28	July 20	September 13	October 05
BOD <sup>5</sup>	45 mg/L	-	-	-	-
CBOD	100 mg/L	10	4	94	138
Total Suspended Solids	45 mg/L	6	<3	20	33
Faecal Coliforms	1x10 <sup>4</sup> CFU/dl	-	-	-	66400
Oil + Grease	No visible sheen	Non-Visible	Non-Visible	Non-Visible	Non-Visible
pH	between 6 and 9	7.76	7.72	7.58	7.53

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## zAppendix 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.:**  
**221255**

- AMENDED REPORT -

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**Prepared For:** Hamlet of Kugaaruk

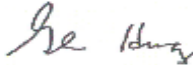
**Address:** Box 205  
Kugaaruk, NU, X0B 1K0

**Attn:** Chantal Dowden

**Facsimile:** 867-769-6069

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**Final report has been reviewed and approved by:**



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**Glen Hudy**  
Quality Assurance Officer

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**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.

**ReportDate:**  
**Print Date:** August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
 221255

## - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **PEL-3-2**

Taiga Sample ID: **001**

Client Project:  
 Sample Type: Sewage  
 Received Date: 29-Jun-22  
 Sampling Date: 28-Jun-22  
 Sampling Time:  
 Location: Kugaaruk Sewage & Waste  
 Report Status: Amended

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	8.3	0.1	mg/L	07-Jul-22	TEL035	
Hardness	29.7	0.7	mg/L	07-Jul-22	TEL035	
Magnesium	2.2	0.1	mg/L	07-Jul-22	TEL035	
Potassium	2.6	0.1	mg/L	07-Jul-22	TEL035	
Sodium	10.0	0.1	mg/L	07-Jul-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	1.46	0.005	mg/L	03-Aug-22	TEL068	
Biochemical Oxygen Demand	8	2	mg/L	29-Jun-22	TEL019	81
CBOD	9	2	mg/L	29-Jun-22	TEL019	81
Organic Carbon, Total	20.6	0.5	mg/L	05-Jul-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO3)	28.3	0.4	mg/L	29-Jun-22	TEL060	
Conductivity, Specific (@25C)	128	0.4	µS/cm	29-Jun-22	TEL059	
pH	10.2		pH units	29-Jun-22	TEL058	

ReportDate:  
 Print Date: August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
 221255

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-3-2**

Taiga Sample ID: **001**

Solids, Total Suspended	20	3	mg/L	30-Jun-22	TEL008
<b><u>Microbiology</u></b>					
Coliforms, Fecal	< 1	1	CFU/100mL	29-Jun-22	TEL017
<b><u>Organics</u></b>					
Oil and Grease, visible	Non-visible			29-Jun-22	Visual Exam
<b><u>Subcontracted Inorganics</u></b>					
Chloride	14.6	0.1	mg/L	11-Jul-22	EPA300.1
Nitrate as Nitrogen	1.03	0.005	mg/L	11-Jul-22	EPA300.1
Sulphate	5.08	0.05	mg/L	11-Jul-22	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	20-Jul-22	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	65.4	0.6	µg/L	05-Jul-22	TEL035
Arsenic	0.4	0.2	µg/L	05-Jul-22	TEL035
Cadmium	< 0.0	0.04	µg/L	05-Jul-22	TEL035
Chromium	0.1	0.1	µg/L	05-Jul-22	TEL035
Cobalt	0.2	0.1	µg/L	05-Jul-22	TEL035
Copper	6.1	0.2	µg/L	05-Jul-22	TEL035
Iron	151	5	µg/L	05-Jul-22	TEL035
Lead	0.2	0.1	µg/L	05-Jul-22	TEL035
Manganese	14.3	0.1	µg/L	05-Jul-22	TEL035
Mercury	0.04	0.01	µg/L	05-Jul-22	TEL035
Nickel	0.6	0.1	µg/L	05-Jul-22	TEL035
Zinc	7.5	0.4	µg/L	05-Jul-22	TEL035

ReportDate:  
 Print Date: *August-08-22*

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

Taiga Batch No.:  
221255

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-4**

Taiga Sample ID: **002**

**Client Project:**

Sample Type: Sewage Effluent

Received Date: 29-Jun-22

Sampling Date: 28-Jun-22

Sampling Time:

Location: Kugaaruk Sewage & Waste

Report Status: Amended

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	18.0	0.1	mg/L	07-Jul-22	TEL035	
Hardness	76.1	0.7	mg/L	07-Jul-22	TEL035	
Magnesium	7.6	0.1	mg/L	07-Jul-22	TEL035	
Potassium	13.6	0.1	mg/L	07-Jul-22	TEL035	
Sodium	43.8	0.1	mg/L	07-Jul-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	24.5	0.005	mg/L	03-Aug-22	TEL068	
Biochemical Oxygen Demand	10	2	mg/L	29-Jun-22	TEL019	81
CBOD	10	2	mg/L	29-Jun-22	TEL019	81
Organic Carbon, Total	32.4	0.5	mg/L	05-Jul-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	172	0.4	mg/L	29-Jun-22	TEL060	
Conductivity, Specific (@25C)	536	0.4	µS/cm	29-Jun-22	TEL059	
pH	7.76		pH units	29-Jun-22	TEL058	
Solids, Total Suspended	6	3	mg/L	30-Jun-22	TEL008	

**Microbiology**

ReportDate:

Print Date: August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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

Taiga Batch No.:  
 221255

## - CERTIFICATE OF ANALYSIS -

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Client Sample ID: **PEL-4**

Taiga Sample ID: **002**

Coliforms, Fecal	1		CFU/100mL	TEL017	16
<b><u>Organics</u></b>					
Oil and Grease, visible	Non-visible			29-Jun-22	Visual Exam
<b><u>Subcontracted Inorganics</u></b>					
Chloride	49.6	0.1	mg/L	11-Jul-22	EPA300.1
Nitrate as Nitrogen	0.168	0.005	mg/L	11-Jul-22	EPA300.1
Sulphate	6.57	0.05	mg/L	11-Jul-22	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	20-Jul-22	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	63.2	0.6	µg/L	05-Jul-22	TEL035
Arsenic	2.2	0.2	µg/L	05-Jul-22	TEL035
Cadmium	< 0.0	0.04	µg/L	05-Jul-22	TEL035
Chromium	0.4	0.1	µg/L	05-Jul-22	TEL035
Cobalt	1.5	0.1	µg/L	05-Jul-22	TEL035
Copper	6.4	0.2	µg/L	05-Jul-22	TEL035
Iron	1300	5	µg/L	05-Jul-22	TEL035
Lead	0.7	0.1	µg/L	05-Jul-22	TEL035
Manganese	249	0.1	µg/L	05-Jul-22	TEL035
Mercury	0.03	0.01	µg/L	05-Jul-22	TEL035
Nickel	4.3	0.1	µg/L	05-Jul-22	TEL035
Zinc	2.9	0.4	µg/L	05-Jul-22	TEL035

ReportDate:  
 Print Date: *August-08-22*

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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.:**  
**221255**

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## - CERTIFICATE OF ANALYSIS -

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**Client Sample ID: PEL-4**

**Taiga Sample ID: 002**

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## - DATA QUALIFIERS -

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*Data Qualifier Descriptions:*

- 16 *Test requested but no sample bottle received*
- 81 *Results are inconclusive due to insufficient depletion of sample, minimum 2 mg/L required over 5 days.*

**\* 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

**Comments** *Ammonia results were added.*

**ReportDate:**  
**Print Date:** *August-08-22*

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
**221442**

## - FINAL REPORT -

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**Prepared For:** Hamlet of Kugaaruk

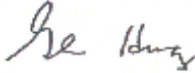
**Address:** Box 205  
Kugaaruk, NU, X0B 1K0

**Attn:** Chantal Dowden

**Facsimile:** 867-769-6069

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Final report has been reviewed and approved by:



**Glen Hudry**  
Quality Assurance Officer

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### 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.

**ReportDate:** August-08-22  
**Print Date:** August-08-22

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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.:  
221255

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-3-2**

Taiga Sample ID: **001**

Client Project:  
 Sample Type: Sewage  
 Received Date: 29-Jun-22  
 Sampling Date: 28-Jun-22  
 Sampling Time:  
 Location: Kugaaruk Sewage & Waste  
 Report Status: Amended

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	8.3	0.1	mg/L	07-Jul-22	TEL035	
Hardness	29.7	0.7	mg/L	07-Jul-22	TEL035	
Magnesium	2.2	0.1	mg/L	07-Jul-22	TEL035	
Potassium	2.6	0.1	mg/L	07-Jul-22	TEL035	
Sodium	10.0	0.1	mg/L	07-Jul-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	1.46	0.005	mg/L	03-Aug-22	TEL068	
Biochemical Oxygen Demand	8	2	mg/L	29-Jun-22	TEL019	SI
CBOD	9	2	mg/L	29-Jun-22	TEL019	SI
Organic Carbon, Total	20.6	0.5	mg/L	05-Jul-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	28.3	0.4	mg/L	29-Jun-22	TEL060	
Conductivity, Specific (@25C)	128	0.4	µS/cm	29-Jun-22	TEL059	
pH	10.2		pH units	29-Jun-22	TEL058	

Report Date:  
 Print Date: August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
221255

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-3-2**

Taiga Sample ID: **001**

Solids, Total Suspended	20	3	mg/L	30-Jun-22	TEL008
<b><u>Microbiology</u></b>					
Coliforms, Fecal	< 1	1	CFU/100mL	29-Jun-22	TEL017
<b><u>Organics</u></b>					
Oil and Grease, visible	Non-visible			29-Jun-22	Visual Exam
<b><u>Subcontracted Inorganics</u></b>					
Chloride	14.6	0.1	mg/L	11-Jul-22	EPA300.1
Nitrate as Nitrogen	1.03	0.005	mg/L	11-Jul-22	EPA300.1
Sulphate	5.08	0.05	mg/L	11-Jul-22	EPA300.1
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	< 0.0010	0.001	mg/L	20-Jul-22	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	65.4	0.6	µg/L	05-Jul-22	TEL035
Arsenic	0.4	0.2	µg/L	05-Jul-22	TEL035
Cadmium	< 0.0	0.04	µg/L	05-Jul-22	TEL035
Chromium	0.1	0.1	µg/L	05-Jul-22	TEL035
Cobalt	0.2	0.1	µg/L	05-Jul-22	TEL035
Copper	6.1	0.2	µg/L	05-Jul-22	TEL035
Iron	151	5	µg/L	05-Jul-22	TEL035
Lead	0.2	0.1	µg/L	05-Jul-22	TEL035
Manganese	14.3	0.1	µg/L	05-Jul-22	TEL035
Mercury	0.04	0.01	µg/L	05-Jul-22	TEL035
Nickel	0.6	0.1	µg/L	05-Jul-22	TEL035
Zinc	7.5	0.4	µg/L	05-Jul-22	TEL035

ReportDate:  
Print Date: *August-08-22*

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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

Taiga Batch No.:  
221255

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-4**

Taiga Sample ID: **002**

Client Project:

Sample Type: Sewage Effluent

Received Date: 29-Jun-22

Sampling Date: 28-Jun-22

Sampling Time:

Location: Kugaaruk Sewage & Waste

Report Status: Amended

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	18.0	0.1	mg/L	07-Jul-22	TEL035	
Hardness	76.1	0.7	mg/L	07-Jul-22	TEL035	
Magnesium	7.6	0.1	mg/L	07-Jul-22	TEL035	
Potassium	13.6	0.1	mg/L	07-Jul-22	TEL035	
Sodium	43.8	0.1	mg/L	07-Jul-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	24.5	0.005	mg/L	03-Aug-22	TEL068	
Biochemical Oxygen Demand	10	2	mg/L	29-Jun-22	TEL019	81
CBOD	10	2	mg/L	29-Jun-22	TEL019	81
Organic Carbon, Total	32.4	0.5	mg/L	05-Jul-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	172	0.4	mg/L	29-Jun-22	TEL060	
Conductivity, Specific (@25C)	536	0.4	µS/cm	29-Jun-22	TEL059	
pH	7.76		pH units	29-Jun-22	TEL058	
Solids, Total Suspended	6	3	mg/L	30-Jun-22	TEL008	

**Microbiology**

ReportDate:

Print Date: August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
**221442**

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-4**

Taiga Sample ID: **002**

Chloride	50.6	0.7	mg/L	27-Jul-22	TEL055	
Nitrate+Nitrite as Nitrogen	< 0.01	0.01	mg/L	27-Jul-22	TEL055	
Sulphate	36	1	mg/L	27-Jul-22	TEL055	
<b><u>Microbiology</u></b>						
Coliforms, Fecal	21	1	CFU/100mL	21-Jul-22	TEL017	208
<b><u>Organics</u></b>						
Oil and Grease, visible	Non-visible			21-Jul-22	Visual Exam	
<b><u>Subcontracted Organics</u></b>						
Phenols, Total	< 0.0010	0.001	mg/L	25-Jul-22	AB ENV.06537	
<b><u>Trace Metals, Total</u></b>						
Aluminum	31.4	0.6	µg/L	27-Jul-22	TEL035	
Arsenic	1.6	0.2	µg/L	27-Jul-22	TEL035	
Cadmium	< 0.0	0.04	µg/L	27-Jul-22	TEL035	
Chromium	0.2	0.1	µg/L	27-Jul-22	TEL035	
Cobalt	0.9	0.1	µg/L	27-Jul-22	TEL035	
Copper	2.4	0.2	µg/L	27-Jul-22	TEL035	
Iron	375	5	µg/L	27-Jul-22	TEL035	
Lead	0.2	0.1	µg/L	27-Jul-22	TEL035	
Manganese	311	0.1	µg/L	27-Jul-22	TEL035	
Mercury	0.01	0.01	µg/L	27-Jul-22	TEL035	
Nickel	3.3	0.1	µg/L	27-Jul-22	TEL035	
Zinc	1.8	0.4	µg/L	27-Jul-22	TEL035	

ReportDate: August-08-22  
 Print Date: August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:**  
**221442**

---

- CERTIFICATE OF ANALYSIS -

---

**Client Sample ID: PEL-4**

**Taiga Sample ID: 002**

---

- DATA QUALIFIERS -

---

*Data Qualifier Descriptions:*

**208**     *Unreliable: Matrix interference*

\* 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:** August-08-22  
**Print Date:** August-08-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:**  
221899

## - FINAL REPORT -

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**Prepared For:** Hamlet of Kugaaruk

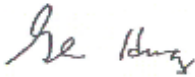
**Address:** Box 205  
Kugaaruk, NU, X0B 1K0

**Attn:** Chantal Dowden

**Facsimile:** 867-769-6069

---

**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.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

**ReportDate:** October-18-22  
**Print Date:** October-18-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
221899

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-4**

Taiga Sample ID: **001**

Client Project:  
 Sample Type: Wastewater  
 Received Date: 13-Sep-22  
 Sampling Date: 13-Sep-22  
 Sampling Time: 8:30  
 Location: Kugaaruk Sewage Systems  
 Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	35.5	0.1	mg/L	20-Sep-22	TEL035	
Hardness	154	0.7	mg/L	20-Sep-22	TEL035	
Magnesium	16.0	0.1	mg/L	20-Sep-22	TEL035	
Potassium	28.2	0.1	mg/L	20-Sep-22	TEL035	
Sodium	68.6	0.1	mg/L	20-Sep-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	96.0	0.005	mg/L	15-Sep-22	TEL068	
Biochemical Oxygen Demand	98	2	mg/L	14-Sep-22	TEL019	SS
CBOD	94	2	mg/L	14-Sep-22	TEL019	SS
Organic Carbon, Total	124	0.5	mg/L	17-Sep-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO3)	427	0.4	mg/L	13-Sep-22	TEL060	
Conductivity, Specific (@25C)	1270	0.4	µS/cm	13-Sep-22	TEL059	
pH	7.58		pH units	13-Sep-22	TEL058	

ReportDate: October-18-22  
 Print Date: October-18-22

Page 2 of 4

# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK



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

Taiga Batch No.:  
221899

## - CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-4**

Taiga Sample ID: **001**

Solids, Total Suspended	20	3	mg/L	15-Sep-22	TEL008
<b><u>Major Ions</u></b>					
Chloride	99.1	0.7	mg/L	14-Sep-22	TEL055
Nitrate+Nitrite as Nitrogen	< 0.01	0.01	mg/L	14-Sep-22	TEL055
Sulphate	3	1	mg/L	14-Sep-22	TEL055
<b><u>Microbiology</u></b>					
Coliforms, Fecal		1	CFU/100mL		TEL017
<b><u>Organics</u></b>					
Oil and Grease, visible	Non-visible			13-Sep-22	Visual Exam
<b><u>Subcontracted Organics</u></b>					
Phenols, Total	0.4460	0.01	mg/L	22-Sep-22	AB ENV.06537
<b><u>Trace Metals, Total</u></b>					
Aluminum	63.3	0.6	µg/L	21-Sep-22	TEL035
Arsenic	1.7	0.2	µg/L	21-Sep-22	TEL035
Cadmium	0.05	0.04	µg/L	21-Sep-22	TEL035
Chromium	0.6	0.1	µg/L	21-Sep-22	TEL035
Cobalt	1.5	0.1	µg/L	21-Sep-22	TEL035
Copper	57.0	0.2	µg/L	21-Sep-22	TEL035
Iron	1260	5	µg/L	21-Sep-22	TEL035
Lead	1.2	0.1	µg/L	21-Sep-22	TEL035
Manganese	315	0.1	µg/L	21-Sep-22	TEL035
Mercury	0.04	0.01	µg/L	21-Sep-22	TEL035
Nickel	3.6	0.1	µg/L	21-Sep-22	TEL035
Zinc	36.0	0.4	µg/L	21-Sep-22	TEL035

16

ReportDate: October-18-22  
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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:**  
**221899**

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## - CERTIFICATE OF ANALYSIS -

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**Client Sample ID: PEL-4**

**Taiga Sample ID: 001**

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## - DATA QUALIFIERS -

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*Data Qualifier Descriptions:*

- 16 *Test requested but no sample bottle received*
- 55 *BOD result is inconclusive; residual DO was less than 1 mg/L. For evaluation purposes only.*

**\* 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:** October-18-22  
**Print Date:** October-18-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
222097

## - FINAL REPORT -

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**Prepared For:** Hamlet of Kugaaruk

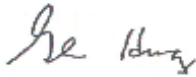
**Address:** Box 205  
Kugaaruk, NU, X0B 1K0

**Attn:** Chantal Dowden

**Facsimile:** 867-769-6069

---

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.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: October-19-22  
Print Date: October-19-22

Page 1 of 4

# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
 222097

## - CERTIFICATE OF ANALYSIS -

---

Client Sample ID: **PEL-4**

Taiga Sample ID: **001**

**Client Project:**

Sample Type: Wastewater

Received Date: 06-Oct-22

Sampling Date: 05-Oct-22

Sampling Time: 9:30

Location: Kugaaruk Sewage Systems

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<b><u>Cations by ICP-MS</u></b>						
Calcium	40.3	0.1	mg/L	06-Oct-22	TEL035	
Hardness	169	0.7	mg/L	06-Oct-22	TEL035	
Magnesium	16.6	0.1	mg/L	06-Oct-22	TEL035	
Potassium	28.5	0.1	mg/L	06-Oct-22	TEL035	
Sodium	73.2	0.1	mg/L	06-Oct-22	TEL035	
<b><u>Inorganics - Nutrients</u></b>						
Ammonia as Nitrogen	101	0.005	mg/L	17-Oct-22	TEL068	
Biochemical Oxygen Demand	127	2	mg/L	06-Oct-22	TEL019	
CBOD	138	2	mg/L	06-Oct-22	TEL019	
Organic Carbon, Total	78.9	0.5	mg/L	10-Oct-22	TEL033	
<b><u>Inorganics - Physicals</u></b>						
Alkalinity, Total (as CaCO <sub>3</sub> )	443	0.4	mg/L	06-Oct-22	TEL060	
Conductivity, Specific (@25C)	1250	0.4	µS/cm	06-Oct-22	TEL059	
pH	7.53		pH units	06-Oct-22	TEL058	

ReportDate: October-19-22

Print Date: October-19-22

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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:  
 222097

## - CERTIFICATE OF ANALYSIS -

---

<b>Client Sample ID: PEL-4</b>	<b>Taiga Sample ID: 001</b>				
Solids, Total Suspended	33	3	mg/L	11-Oct-22	TEL008
<b><u>Microbiology</u></b>					
Coliforms, Fecal	66400	100	CFU/100mL	06-Oct-22	TEL017
<b><u>Organics</u></b>					
Oil and Grease, visible	Non-visible			06-Oct-22	Visual Exam
<b><u>Subcontracted Inorganics</u></b>					
Chloride	90.1	0.5	mg/L	14-Oct-22	EPA300.1
NO2+NO3 - N	< 0.0255	0.0255	mg/L	14-Oct-22	EPA300.1
Sulphate	< 0.25	0.250	mg/L	14-Oct-22	EPA300.1 <span style="float: right; color: red;">220</span>
<b><u>Subcontracted Organics</u></b>					
Phenols, Total		0.001	mg/L		AB ENV.06537 <span style="float: right; color: red;">16</span>
<b><u>Trace Metals, Total</u></b>					
Aluminum	77.7	0.6	µg/L	12-Oct-22	TEL035
Arsenic	2.0	0.2	µg/L	12-Oct-22	TEL035
Cadmium	< 0.04	0.04	µg/L	12-Oct-22	TEL035
Chromium	0.5	0.1	µg/L	12-Oct-22	TEL035
Cobalt	2.3	0.1	µg/L	12-Oct-22	TEL035
Copper	23.3	0.2	µg/L	12-Oct-22	TEL035
Iron	2010	5	µg/L	12-Oct-22	TEL035
Lead	1.1	0.1	µg/L	12-Oct-22	TEL035
Manganese	521	0.1	µg/L	12-Oct-22	TEL035
Mercury	0.02	0.01	µg/L	12-Oct-22	TEL035
Nickel	4.4	0.1	µg/L	12-Oct-22	TEL035
Zinc	18.1	0.4	µg/L	12-Oct-22	TEL035

ReportDate: October-19-22  
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# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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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.:**  
**222097**

---

- CERTIFICATE OF ANALYSIS -

**Client Sample ID: PEL-4**

**Taiga Sample ID: 001**

---

- DATA QUALIFIERS -

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*Data Qualifier Descriptions:*

- 16 *Test requested but no sample bottle received*
- 220 *Detection Limit Raised: Dilution required due to high dissolved solids/electrical conductivity.*

**\* 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:** October-19-22  
**Print Date:** October-19-22

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**ANNUAL REPORT  
FOR THE MUNICIPALITY OF KUGAARUK**

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Appendix C: Hazardous Materials Spill Database, Kugaaruk 2022

Spill	Occurance Date	Spill Region	Location	Location Description	Product Spilled	Quantity	Measurement	Spill Cause	Lead Agency
spill-2022459	September 13, 2022	Kitikmeot	Kugaaruk	Kugaaruk Northwestern Passages Kugaaruk Sewage Lagoon	Wastewater (sewage, mine tailings)	Unknown Quantity		Other	GN - Government of Nunavut
spill-2022379	July 20, 2022	Kitikmeot	Kugaaruk, Community, Nunavut	Kugaaruk St. Peter Bay	Wastewater (sewage, mine tailings)	37000.00	Cubic Meters	Effluent Quality Criteria (EQC) Exceedance	CIRNAC - Crown-Indigenous Relations and Northern Affairs Canada

**ANNUAL REPORT  
FOR THE MUNICIPALITY OF KUGAARUK**

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Appendix D: Kugaaruk 2022 Sampling Summary

Parameter	Unit	PEL-3-2		PEL-4			
		June 28	July 20	June 28	July 20	Sept 13	Oct 05
CBOD	mg/L	9	11	10	4	94	138
TSS	mg/L	20	22	6	<3	20	33
Faecal Coliforms	CFU/100ml	<1	148	-	21		66400
pH	pH	10.2	9.65	7.76	7.72	7.58	7.53
Conductivity	µS/cm	128	455	536	697	1270	1250
Nitrate-Nitrite	mg/L						
Ammonia Nitrogen	mg/L	1.46	0.031	24.5	14.0	96.0	101
Oil and Grease	Visibility	Non-Visible	Non-Visible	Non-Visible	Non-Visible	Non-Visible	Non-Visible
Chloride	mg/L	14.6	38.5	49.6	50.6	99.1	90.1
Sulphate	mg/L	5.08	63	6.57	36	3	<0.25
Sodium	mg/L	10.0	63.0	43.8	63.0	68.6	73.2
Potassium	mg/L	2.6	14.5	13.6	14.5	28.2	28.5
Magnesium	mg/L	2.2	13.9	7.6	13.9	16.0	16.6
Calcium	mg/L	8.3	35.9	18.0	35.9	35.5	40.3
Total Hardness	mg/L	29.7	147	76.1	147	154	169
Total Alkalinity	mg/L	28.3	176	172	176	427	443
Total Phenols	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.4460	-
Total Manganese	µg/L	14.3	79.6	249	311	315	521
Total Arsenic	µg/L	0.4	0.7	2.2	1.6	1.7	2.0
Total Aluminum	µg/L	65.4	56.9	63.2	31.4	63.3	77.7
Total Cadmium	µg/L	<0.0	<0.0	<0.0	<0.0	0.05	<0.04
Total Cobalt	µg/L	0.2	0.6	1.5	0.9	1.5	2.3
Total Chromium	µg/L	0.1	0.1	0.4	0.2	0.6	0.5
Total Copper	µg/L	6.1	8.9	6.4	2.4	57.0	23.3
Total Iron	µg/L	151	144	1300	375	1260	2010
Total Lead	µg/L	0.2	0.1	0.7	0.2	1.2	1.1
Total Mercury	µg/L	0.04	0.01	0.03	0.01	0.04	0.02
Total Nickel	µg/L	0.6	1.7	4.3	3.3	3.6	4.4
Total Zinc	µg/L	7.5	3.7	2.9	1.8	36.0	18.1
Total Organic Carbon	mg/L	20.6	27.5	32.4	22.1	124	78.9

**ANNUAL REPORT  
FOR THE MUNICIPALITY OF KUGAARUK**

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**Appendix E: CIRNAC Inspection Report**

The CIRNAC inspection did not take place in 2022.

# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

## Appendix F: Spill Reports

### NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND  
OTHER HAZARDOUS MATERIALS



Canada



NT-NU 24-HOUR SPILL REPORT LINE  
Tel: (867) 920-6130 • Email: spill@go.n.ca

REPORT LINE USE ONLY

<b>A</b>	Report Date: 07   26   22	Report Time: 12:00	<input checked="" type="checkbox"/> Original Spill Report OR <input type="checkbox"/> Update # _____ to the Original Spill Report	Report Number:	
<b>B</b>	Occurrence Date: 07   20   22	Occurrence Time:			
<b>C</b>	Land Use Permit Number (if applicable): n/a	Water Licence Number (if applicable): 3BM-PEL1929			
<b>D</b>	Geographic Place Name or Distance and Direction from the Named Location: Kugaaruk Sewage Lagoon Discharge Point		Region: <input type="checkbox"/> NT <input checked="" type="checkbox"/> Nunavut <input type="checkbox"/> Adjacent Jurisdiction or Ocean		
<b>E</b>	Latitude: 68 Degrees 31 Minutes 21 Seconds		Longitude: 89 Degrees 50 Minutes 15 Seconds		
<b>F</b>	Responsible Party or Vessel Name: Hamlet of Kugaaruk		Responsible Party Address or Office Location: Kugaaruk Nunavut X0B 1K0		
<b>G</b>	Any Contractor Involved:		Contractor Address or Office Location:		
<b>H</b>	Product Spilled: <input type="checkbox"/> Potential Spill Waste Water	Quantity in Litres, Kilograms or Cubic Metres: 37,000 m3	U.N. Number:		
<b>I</b>	Spill Source: Sewage Lagoon	Spill Cause: Decanting the Lagoon	Area of Contamination in Square Metres:		
<b>J</b>	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:		
<b>K</b>	Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials: Decanting the Sewage Lagoon is required to maintain the integrity of the berm. As per CIRNAC inspector, Jonathon Mesher, a spill report is required as the pH at the monitoring program station PEL-3-2 is outside the license's required parameter of 6-9 at 10.2. However, PEL-4 is the end of the treatment process, at the discharge point at the ocean and the pH results sampled there are within the licenses' parameters. As such, there is no deleterious effect on the receiving environment and no remedial action required.				
<b>L</b>	Reported to Spill Line by: Madeline Cole	Position: Municipal Technical Officer	Employer: Government of Nunavut	Location Calling From: Cambridge Bay Nunavut	Telephone: 867-983-4134
<b>M</b>	Any Alternate Contact:	Position:	Employer:	Alternate Contact Location:	Alternate Telephone:

REPORT LINE USE ONLY

<b>N</b>	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:
Lead Agency: <input type="checkbox"/> EC <input type="checkbox"/> CCG/TCMSS <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA		Significance: <input type="checkbox"/> Minor		File Status: <input type="checkbox"/> Open	
<input type="checkbox"/> AANDC <input type="checkbox"/> NEB <input type="checkbox"/> Other: _____		<input type="checkbox"/> Major <input type="checkbox"/> Unknown		<input type="checkbox"/> Closed	
Agency:	Contact Name:	Contact Time:	Remarks:		
Lead Agency:					
First Support Agency:					
Second Support Agency:					
Third Support Agency:					

# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK



## NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE  
TEL: (867) 920-8130  
FAX: (867) 873-6924  
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

<b>A</b>	REPORT DATE: MONTH - DAY - YEAR <b>09 13 2022</b>	REPORT TIME <b>0900</b>	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR	REPORT NUMBER
<b>B</b>	OCURRENCE DATE: MONTH - DAY - YEAR <b>09 13 2022</b>	OCURRENCE TIME <b>10:00</b>	<input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT	-
<b>C</b>	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE) <b>3BMP-1929</b>		
<b>D</b>	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION <b>Kugaaruk Sewage Lagoon</b>		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
<b>E</b>	LATITUDE DEGREES <b>68</b> MINUTES <b>31</b> SECONDS <b>21</b>		LONGITUDE DEGREES <b>89</b> MINUTES <b>50</b> SECONDS <b>15</b>	
<b>F</b>	RESPONSIBLE PARTY OR VESSEL NAME <b>Hamlet of Kugaaruk</b>	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION <b>Kugaaruk</b>		
<b>G</b>	ANY CONTRACTOR INVOLVED <b>n/a</b>	CONTRACTOR ADDRESS OR OFFICE LOCATION		
<b>H</b>	PRODUCT SPILLED <b>Sewage</b>	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
<b>I</b>	SPILL SOURCE <b>Sewage Trucks</b>	SPILL CAUSE <b>Repairs to Lagoon</b>	AREA OF CONTAMINATION IN SQUARE METRES <b>Contained to exfiltration lagoon</b>	
<b>J</b>	FACTORS AFFECTING SPILL OR RECOVERY <b>Repairs to the Lagoon</b>	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT	
<b>K</b>	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS  <b>As per license 3BM-PEL-1929, Part G section 4b, the unauthorized discharge of sewage is being reported as a spill. Sewage is to be temporarily discharged directly from the trucks to the exfiltration lagoon at the north of the Sewage Lagoon. A tear in the lagoon liner has been discovered, the extent which is unknown until the lagoon is emptied. The lagoon repairs need to take place before freeze up or there is risk of further damage to the lagoon liner or even to the lagoon integrity. Dispensing waste directly to the lower lagoon is to divert additional waste material from preventing the lowering of the primary lagoon levels in time. The waste will be contained within the exfiltration lagoon and as the decant continues, the waste will mix with the waste from the primary lagoon as it exfiltrate through the wetland. The outlet of the wetland PEL-4 will be monitored to determine if the effluent is compliant with the water license. If it is, there is no environmental impact since it is meeting treatment parameters</b>			
<b>L</b>	REPORTED TO SPILL LINE BY <b>Madeline Cole</b>	POSITION <b>MTO</b>	EMPLOYER <b>GN</b>	LOCATION CALLING FROM <b>Cambridge Bay</b>
<b>M</b>	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION
REPORT LINE USE ONLY				
<b>N</b>	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> COG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

# ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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## Appendix G: Receipt of Submissions to NWB

**From:** [Sylvia Ekelik](#)  
**To:** [Chalmers, Flan](#)  
**Cc:** [san@kugaaruk.ca](mailto:san@kugaaruk.ca); [Cole, Madeline](#)  
**Subject:** 220331 Hamlet of Kugaaruk Submission for Water Licence No. 3BM-PEL1929  
**Date:** April 1, 2022 10:32:46 AM  
**Attachments:** [220331\\_3BM-PEL1929-Kugaaruk Environmental Spill Contingency Plan 2022-IAAE.pdf](#)  
[220331\\_3BM-PEL1929-Kugaaruk Water Supply OM Plan 2022-IAAE.pdf](#)  
[220331\\_3BM-PEL1929-Kugaaruk QAQC Plan 2022-IAAE.pdf](#)  
[220331\\_3BM-PEL1929-Municipality of Kugaaruk 2021 Annual Report-IAAE.pdf](#)

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**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning,

The Nunavut Water Board Acknowledges Receipt March 31, 2022 of 2021 Annual Report for Hamlet of Kugaaruk for Water Licence No. 3BM-PEL1929.

Submitted and attached with the Annual Report:

- **Kugaaruk Environmental Spill Contingency Plan 2022**
- **Kugaaruk QAQC Plan 2022**
- **Kugaaruk Water Supply OM Plan 2022**

This Submission is Distributed for information only

The Nunavut Water board is aware that a number of web browsers are no longer supporting File Transfer Protocol (ftp). If you are having difficulty accessing our FTP site, you may need to download an FTP application. We have been recommending the FileZilla Client below to access the files, which is a free and open source application. A link can be found below:

<https://filezilla-project.org/>

—  
Sylvia Ekelik  
Licensing Administrative Assistant



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Appendix F: Photos of incidents requiring Maintenance



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