

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

YEAR BEING REPORTED: 2025

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 the quantities of water used and the estimated discharge of waste. The water consumption volume is considered equal to the sewage discharge volume since there is no meter at the end of the discharge pipe.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (Estimated, m³)
January	3,325.56	Same
February	2,951.37	Same
March	3,424.38	Same
April	3,345.79	Same
May	3,288.20	Same
June	3,355.82	Same
July	3,327.03	Same
August	3,489.91	Same
September	3,616.63	Same
October	3,436.74	Same
November	3,550.36	Same
December	3,357.25	Same
ANNUAL TOTAL	40,469.04	Same

2025 ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

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

As per generation rates in the O & M Plan.

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

There were no unauthorized discharges associated with license infrastructure in 2025.

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;

There are no studies, reports, or plans requested by the Board related to waste disposal, water use or reclamation. There are no future studies planned, including any revisions to the management plans submitted in the form of an Addendum.

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

The results of the Monitoring Program are summarized in Appendix E.

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 License and an outline of any work anticipated for the next year;

A “bubble” in the lagoon liner was identified and the Department of Transportation and Infrastructure contracted consultants to investigate the issue and evaluate repair options. Site visits occurred in summer 2025. Resulting cost estimates indicate further funding is required.

a) Any update on the Compliance Plan and progress made on specific requirements therein;

There were no updates made to the Compliance Plan in 2025. The licensee does not have a copy of any Compliance Plan and cannot locate it on the NWB FTP site.

2025 ANNUAL REPORT FOR THE MUNICIPALITY OF KUGAARUK

b) 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 the Water or Waste deposit requested by the Board by November 1 of 2025.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

An early decant of the sewage lagoon was needed to comply with the minimum 1.0 m freeboard requirement of Part D, Item 4 of the Licence, and prevent overflowing or potential damage to the sewage lagoon berms due to high effluent levels during thaw which are expected to exceed the capacity of the lagoon without decanting. Notification and photos included in Appendix C. Lab results from samples taken prior to the early decant show effluent quality within parameters. See Appendix A.

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 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.

PEL-3-1 and PEL-3-2 are both located within the same body of water - the pond between the lagoon and the wetland treatment area.

Unlike recent years, there was substantial run-off from the metal site, through a removed monitoring site PEL-8. Photos of flow in Appendix D. Sampling results in Appendix E.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

CIRNAC Inspection did not take place in 2025.

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

LIST OF APPENDICES:

Appendix A: Effluent Quality Limits 2025

Appendix B: Laboratory Certificate of Analyses 2025

- *Certificate of Analysis, 06/03/2025, 4 pages.*
- *Certificate of Analysis, 07/03/2025, 7 pages.*
- *Certificate of Analysis, 07/16/2025, 6 pages.*

Appendix C: Notification to the Board 2025

Appendix D: Photos

Appendix E: Kugaaruk 2025 Sampling Summary 2025

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

APPENDIX A: Effluent Quality Limits 2025

Tabular Summary of Monitoring Data for PEL-4

Parameter	Maximum Concentration of any Grab Sample for PEL-4	Units	03-Jul-25 PEL-4
BOD ₅	45	mg/L	41
Total Suspended Solids	45	mg/L	12
Fecal Coliform	1x10 ⁴	CFU/100 mL	6x10 ³
Oil and Grease	No visible sheen	N/A	Non-visible
pH	Between 6 and 9	N/A	7.46

Tabular Summary of Monitoring Data for PEL-3-2

Parameter	Maximum Concentration of any Grab Sample for PEL-3-2	Units	03-Jun-25 PEL-3-2
BOD ₅	80	mg/L	17
Total Suspended Solids	100	mg/L	8
Fecal Coliform	1x10 ⁴	CFU/100 mL	810
Oil and Grease	No visible sheen	N/A	Non-visible
pH	Between 6 and 9	N/A	6.40

All samples measured at sampling locations PEL-3-2 and PEL-4 in June and July of 2025 are compliant with the maximum concentration requirements for parameters listed in the water license 3BM-PEL1929

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

APPENDIX B: Laboratory Certificate of Analyses 2025



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

Taiga Batch No.:
250690

- FINAL REPORT -

Prepared For: Hamlet of Kugaaruk

Address: Box 205
Kugaaruk, NU, X0B 1K0

Attn: SAO

Facsimile: 867-769-6069

Final report has been reviewed and approved by:

A handwritten signature in black ink, appearing to read 'Bradley Koswan', written over a horizontal line.

Bradley Koswan
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: Thursday, June 19, 2025

Print Date: *Thursday, June 19, 2025*

Page 1 of 4



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

Taiga Batch No.:
250690

- CERTIFICATE OF ANALYSIS -

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

Taiga Sample ID: **001**

Client Project:

Sample Type: Sewage
Received Date: 04-Jun-25
Sampling Date: 03-Jun-25
Sampling Time: 10:00

Location: Kugaaruk Sewage System

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	5.0	0.1	mg/L	05-Jun-25	TEL035	
Hardness	18.6	0.7	mg/L	05-Jun-25	TEL035	
Magnesium	1.5	0.1	mg/L	05-Jun-25	TEL035	
Potassium	2.2	0.1	mg/L	05-Jun-25	TEL035	
Sodium	5.8	0.1	mg/L	05-Jun-25	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	3.86	0.01	mg/L	09-Jun-25	TEL068	210
Biochemical Oxygen Demand	17	2	mg/L	04-Jun-25	TEL019	
CBOD	15	2	mg/L	04-Jun-25	TEL019	
Organic Carbon, Total	6.7	0.5	mg/L	17-Jun-25	TEL033	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO3)	28.3	0.4	mg/L	04-Jun-25	TEL060	
Conductivity, Specific (@25C)	101	0.4	µS/cm	04-Jun-25	TEL059	
pH	6.40		pH units	04-Jun-25	TEL058	
Solids, Total Suspended	8	3	mg/L	10-Jun-25	TEL008	
<u>Major Ions</u>						
Chloride	8.3	0.7	mg/L	05-Jun-25	TEL055	
Nitrate+Nitrite as Nitrogen	0.23	0.01	mg/L	05-Jun-25	TEL055	

ReportDate: Thursday, June 19, 2025

Print Date: *Thursday, June 19, 2025*



Taiga Environmental Laboratory

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

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

Taiga Batch No.:
250690

- CERTIFICATE OF ANALYSIS -

Client Sample ID: PEL-3-2

Taiga Sample ID: 001

Sulphate	4	1	mg/L	05-Jun-25	TEL055
----------	---	---	------	-----------	--------

Microbiology

Coliforms, Fecal	810	10	CFU/100mL	04-Jun-25	TEL017	210	3
------------------	-----	----	-----------	-----------	--------	-----	---

Organics

Oil and Grease, visible	Non-visible			04-Jun-25	Visual Exam
-------------------------	-------------	--	--	-----------	-------------

Subcontracted Organics

Phenols, Total	0.0080	0.001	mg/L	12-Jun-25	AB ENV.06537
----------------	--------	-------	------	-----------	--------------

Trace Metals

Mercury, Total	6.9	1	ng/L	06-Jun-25	TEL062
----------------	-----	---	------	-----------	--------

Trace Metals, Total

Aluminum	166	0.6	µg/L	10-Jun-25	TEL035
----------	-----	-----	------	-----------	--------

Arsenic	0.2	0.2	µg/L	10-Jun-25	TEL035
---------	-----	-----	------	-----------	--------

Cadmium	< 0.04	0.04	µg/L	10-Jun-25	TEL035
---------	--------	------	------	-----------	--------

Chromium	0.3	0.1	µg/L	10-Jun-25	TEL035
----------	-----	-----	------	-----------	--------

Cobalt	0.2	0.1	µg/L	10-Jun-25	TEL035
--------	-----	-----	------	-----------	--------

Copper	8.8	0.2	µg/L	10-Jun-25	TEL035
--------	-----	-----	------	-----------	--------

Iron	182	5	µg/L	10-Jun-25	TEL035
------	-----	---	------	-----------	--------

Lead	0.2	0.1	µg/L	10-Jun-25	TEL035
------	-----	-----	------	-----------	--------

Manganese	15.6	0.1	µg/L	10-Jun-25	TEL035
-----------	------	-----	------	-----------	--------

Nickel	0.5	0.1	µg/L	10-Jun-25	TEL035
--------	-----	-----	------	-----------	--------

Zinc	13.6	0.4	µg/L	10-Jun-25	TEL035
------	------	-----	------	-----------	--------



Taiga Environmental Laboratory

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

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

Taiga Batch No.:

250690

- CERTIFICATE OF ANALYSIS -

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

Taiga Sample ID: **001**

- DATA QUALIFIERS -

Data Qualifier Descriptions:

- 210 *Detection limit adjusted for required dilution.*
- 3 *Holding time exceeded before receipt of sample*

*** 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



Taiga Environmental Laboratory

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

Taiga Batch No.:
250887

- FINAL REPORT -

Prepared For: Hamlet of Kugaaruk

Address: Box 205
Kugaaruk, NU, X0B 1K0

Attn: SAO

Facsimile: 867-769-6069

Final report has been reviewed and approved by:

Bradley Koswan
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.
- All data provided by the customer will be represented by the blue colour used in this statement.



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-4**

Taiga Sample ID: 001

Client Project:

Sample Type: **Sewage Effluent**

Received Date: 04-Jul-25

Sampling Date: **03-Jul-25**

Sampling Time:

Location: **Kugaaruk Water Systems**

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	29.0	0.1	mg/L	10-Jul-25	TEL035	
Hardness	115	0.7	mg/L	10-Jul-25	TEL035	
Magnesium	10.4	0.1	mg/L	10-Jul-25	TEL035	
Potassium	16.1	0.1	mg/L	10-Jul-25	TEL035	
Sodium	46.4	0.1	mg/L	10-Jul-25	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	29.7	0.105	mg/L	07-Jul-25	TEL068	210
Biochemical Oxygen Demand	41	2	mg/L	04-Jul-25	TEL019	81
CBOD	35	2	mg/L	04-Jul-25	TEL019	81
Organic Carbon, Total	33.2	0.5	mg/L	13-Jul-25	TEL033	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO3)	214	0.4	mg/L	04-Jul-25	TEL060	
Conductivity, Specific (@25C)	693	0.4	µS/cm	04-Jul-25	TEL059	
pH	7.46		pH units	04-Jul-25	TEL058	
Solids, Total Suspended	12	3	mg/L	11-Jul-25	TEL008	

Major Ions

ReportDate: Tuesday, July 29, 2025

Print Date: Tuesday, July 29, 2025



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-4**

Taiga Sample ID: **001**

Chloride	58.2	0.7	mg/L	05-Jul-25	TEL055
Nitrate+Nitrite as Nitrogen	0.14	0.01	mg/L	05-Jul-25	TEL055
Sulphate	16	1	mg/L	05-Jul-25	TEL055
<u>Microbiology</u>					
Coliforms, Fecal	6000	1000	CFU/100mL	04-Jul-25	TEL017
<u>Organics</u>					
Oil and Grease, visible	non-visible			08-Jul-25	Visual Exam
<u>Subcontracted Organics</u>					
Phenols, Total	0.0019	0.001	mg/L	10-Jul-25	AB ENV.06537
<u>Trace Metals</u>					
Mercury, Total	8.8	1	ng/L	09-Jul-25	TEL062
<u>Trace Metals, Total</u>					
Aluminum	40.5	0.6	µg/L	16-Jul-25	TEL035
Arsenic	1.7	0.2	µg/L	16-Jul-25	TEL035
Cadmium	< 0.04	0.04	µg/L	16-Jul-25	TEL035
Chromium	0.3	0.1	µg/L	16-Jul-25	TEL035
Cobalt	1.0	0.1	µg/L	16-Jul-25	TEL035
Copper	21.8	0.2	µg/L	16-Jul-25	TEL035
Iron	1090	5	µg/L	16-Jul-25	TEL035
Lead	0.9	0.1	µg/L	16-Jul-25	TEL035
Manganese	253	0.1	µg/L	16-Jul-25	TEL035
Nickel	2.6	0.1	µg/L	16-Jul-25	TEL035
Zinc	10.0	0.4	µg/L	16-Jul-25	TEL035



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-6**

Taiga Sample ID: **002**

Client Project:

Sample Type: **Solid Waste Run-Off**

Received Date: **04-Jul-25**

Sampling Date: **03-Jul-25**

Sampling Time:

Location: **Kugaaruk Water Systems**

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	171	0.1	mg/L	10-Jul-25	TEL035	
Hardness	471	0.7	mg/L	10-Jul-25	TEL035	
Magnesium	10.3	0.1	mg/L	10-Jul-25	TEL035	
Potassium	15.0	0.1	mg/L	10-Jul-25	TEL035	
Sodium	49.4	0.1	mg/L	10-Jul-25	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	1.84	0.005	mg/L	07-Jul-25	TEL068	
Biochemical Oxygen Demand	10	2	mg/L	04-Jul-25	TEL019	
CBOD	9	2	mg/L	04-Jul-25	TEL019	
Organic Carbon, Total	22.6	0.5	mg/L	13-Jul-25	TEL033	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO3)	194	0.4	mg/L	04-Jul-25	TEL060	
Conductivity, Specific (@25C)	1090	0.4	µS/cm	04-Jul-25	TEL059	
pH	7.07		pH units	04-Jul-25	TEL058	
Solids, Total Suspended	10	3	mg/L	11-Jul-25	TEL008	
<u>Major Ions</u>						
Chloride	43.7	0.7	mg/L	05-Jul-25	TEL055	

ReportDate: **Tuesday, July 29, 2025**

Print Date: **Tuesday, July 29, 2025**



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-6**

Taiga Sample ID: **002**

Nitrate+Nitrite as Nitrogen	0.10	0.01	mg/L	05-Jul-25	TEL055	
Sulphate	322	11	mg/L	05-Jul-25	TEL055	210

Microbiology

Coliforms, Fecal	400	10	CFU/100mL	04-Jul-25	TEL017	
------------------	-----	----	-----------	-----------	--------	--

Organics

Benzene	< 2.00	2	µg/L	03-Jul-25	TEL037	
Ethylbenzene	< 2.00	2	µg/L	03-Jul-25	TEL037	
F2: C10-C16	< 0.2	0.2	mg/L	08-Jul-25	TEL077	
F3: C16-C34	< 0.2	0.2	mg/L	08-Jul-25	TEL077	
F4: C34-C50	< 0.2	0.2	mg/L	08-Jul-25	TEL077	
Hydrocarbons, Total Extractable	0.2	0.2	mg/L	08-Jul-25	TEL077	
Hydrocarbons, Total Purgeable	< 0.3	0.3	mg/L	03-Jul-25	TEL044	
Oil and Grease, visible	non-visible			08-Jul-25	Visual Exam	
Toluene	< 2.00	2	µg/L	03-Jul-25	TEL037	
Xylenes	< 2.00	2	µg/L	03-Jul-25	TEL037	

Subcontracted Organics

Phenols, Total	< 0.0010	0.001	mg/L	10-Jul-25	AB ENV.06537	
----------------	----------	-------	------	-----------	--------------	--

Trace Metals

Mercury, Total	10.6	1	ng/L	09-Jul-25	TEL062	
----------------	------	---	------	-----------	--------	--

Trace Metals, Total

Aluminum	24.9	0.6	µg/L	16-Jul-25	TEL035	
Arsenic	0.9	0.2	µg/L	16-Jul-25	TEL035	
Cadmium	0.22	0.04	µg/L	16-Jul-25	TEL035	
Chromium	0.6	0.1	µg/L	16-Jul-25	TEL035	
Cobalt	2.4	0.1	µg/L	16-Jul-25	TEL035	
Copper	21.9	0.2	µg/L	16-Jul-25	TEL035	

ReportDate: Tuesday, July 29, 2025

Print Date: Tuesday, July 29, 2025



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-6**

Taiga Sample ID: 002

Iron	4240	5	µg/L	16-Jul-25	TEL035
Lead	3.2	0.1	µg/L	16-Jul-25	TEL035
Manganese	947	0.1	µg/L	16-Jul-25	TEL035
Nickel	8.7	0.1	µg/L	16-Jul-25	TEL035
Zinc	177	0.4	µg/L	16-Jul-25	TEL035



Taiga Batch No.:
250887

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-6**

Taiga Sample ID: 002

- DATA QUALIFIERS -

Data Qualifier Descriptions:

- 210 *Detection limit adjusted for required dilution.*
- 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



Taiga Environmental Laboratory

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

Taiga Batch No.:
250989

- FINAL REPORT -

Prepared For: Hamlet of Kugaaruk

Address: Box 205
Kugaaruk, NU, X0B 1K0

Attn: SAO

Facsimile: 867-769-6069

Final report has been reviewed and approved by:

Bradley Koswan
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.
- All data provided by the customer will be represented by the blue colour used in this statement.



Taiga Batch No.:
250989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-8**

Taiga Sample ID: 001

Client Project:

Sample Type: **Metal Waste Site Run-off**

Received Date: 17-Jul-25

Sampling Date: **16-Jul-25**

Sampling Time:

Location: **Kugaaruk Waste Water System**

Report Status: **Final**

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	12.9	0.1	mg/L	22-Jul-25	TEL035	
Hardness	43.3	0.7	mg/L	22-Jul-25	TEL035	
Magnesium	2.7	0.1	mg/L	22-Jul-25	TEL035	
Potassium	1.2	0.1	mg/L	22-Jul-25	TEL035	
Sodium	19.6	0.1	mg/L	22-Jul-25	TEL035	
<u>Inorganics - Nutrients</u>						
Ammonia as Nitrogen	< 0.005	0.005	mg/L	21-Jul-25	TEL068	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO3)	37.7	0.4	mg/L	17-Jul-25	TEL060	
Conductivity, Specific (@25C)	189	0.4	µS/cm	17-Jul-25	TEL059	
pH	6.45		pH units	17-Jul-25	TEL058	
Solids, Total Suspended	< 3	3	mg/L	23-Jul-25	TEL008	
<u>Major Ions</u>						
Chloride	29.1	0.7	mg/L	18-Jul-25	TEL055	
Nitrate+Nitrite as Nitrogen	0.02	0.01	mg/L	18-Jul-25	TEL055	
Sulphate	11	1	mg/L	18-Jul-25	TEL055	

ReportDate: Thursday, August 14, 2025

Print Date: *Thursday, August 14, 2025*



Taiga Batch No.:
250989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-8**

Taiga Sample ID: 001

Organics

Benzene	< 2.00	2	µg/L	21-Jul-25	TEL037
Ethylbenzene	< 2.00	2	µg/L	21-Jul-25	TEL037
F2: C10-C16	< 0.2	0.2	mg/L	16-Jul-25	TEL077
F3: C16-C34	< 0.2	0.2	mg/L	16-Jul-25	TEL077
F4: C34-C50	< 0.2	0.2	mg/L	16-Jul-25	TEL077
Hexane Extractable Material	< 2.0	2	mg/L	23-Jul-25	TEL072
Hydrocarbons, Total Extractable	< 0.2	0.2	mg/L	16-Jul-25	TEL077
Hydrocarbons, Total Purgeable	< 0.3	0.3	mg/L	21-Jul-25	TEL044
Oil and Grease, visible	Non-visible			17-Jul-25	Visual Exam
Toluene	< 2.00	2	µg/L	21-Jul-25	TEL037
Xylenes	< 2.00	2	µg/L	21-Jul-25	TEL037

Subcontracted Organics

1-methylnaphthalene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
2-methylnaphthalene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
Acenaphthene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Acenaphthylene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Acridine	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Anthracene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Benzo(a)anthracene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
Benzo(a)pyrene	< 0.0050	0.005	ug/L	19-Jul-25	EPA3510
Benzo(b+j+k)fluoranthene	< 0.015	0.015	µg/L	19-Jul-25	EPA3510
Benzo(bj)fluoranthene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Benzo(g,h,i)perylene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Benzo(k)fluoranthene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Chrysene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510

ReportDate: Thursday, August 14, 2025

Print Date: Thursday, August 14, 2025



Taiga Batch No.:
250989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-8**

Taiga Sample ID: 001

Dibenzo(a,h)anthracene	< 0.0050	0.005	µg/L	19-Jul-25	EPA3510
Fluoranthene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
Fluorene	< 0.010	0.01	ug/L	19-Jul-25	EPA3510
Indeno(1,2,3-cd)pyrene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
Naphthalene	< 0.050	0.05	µg/L	19-Jul-25	EPA3510
Phenanthrene	< 0.020	0.02	µg/L	19-Jul-25	EPA3510
Phenols, Total	< 0.0010	0.001	mg/L	18-Jul-25	AB ENV.06537
Pyrene	< 0.010	0.01	µg/L	19-Jul-25	EPA3510
Quinoline	< 0.050	0.05	µg/L	19-Jul-25	EPA3510
<u>Trace Metals, Total</u>					
Aluminum	19.4	0.6	µg/L	18-Jul-25	TEL035
Arsenic	< 0.2	0.2	µg/L	18-Jul-25	TEL035
Cadmium	< 0.04	0.04	µg/L	18-Jul-25	TEL035
Chromium	0.2	0.1	µg/L	18-Jul-25	TEL035
Cobalt	< 0.1	0.1	µg/L	18-Jul-25	TEL035
Copper	1.5	0.2	µg/L	18-Jul-25	TEL035
Iron	17	5	ug/L	18-Jul-25	TEL035
Lead	< 0.1	0.1	µg/L	18-Jul-25	TEL035
Manganese	0.4	0.1	µg/L	18-Jul-25	TEL035
Nickel	0.2	0.1	µg/L	18-Jul-25	TEL035
Zinc	13.1	0.4	µg/L	18-Jul-25	TEL035



Taiga Batch No.:
250989

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **PEL-8**

Taiga Sample ID: 001

*** 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

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

APPENDIX C: Notification to the Board

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

APPENDIX D: Photos



Photo A) July 16,2025 flow from metal site through removed monitoring site PEL-8

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**



Photo B) July 16,2025 flow from metal site through removed monitoring site PEL-8. View looking from monitoring sign towards the metal site.

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

Appendix E: Kugaaruk Sampling Summary 2025

Parameter	Unit	PEL-3-2	PEL-4
		June 3	July 3
Ammonia Nitrogen	mg/L	3.86	29.7
Calcium	mg/L	5.0	29.0
CBOD	mg/L	15	35
Chloride	mg/L	8.3	58.2
Conductivity	µS/cm	101	693
Fecal Coliforms	CFU/100mL	810	6000
Magnesium	mg/L	1.5	10.4
Nitrate-Nitrite	mg/L	0.23	0.14
Oil and Grease	Visibility	Non-Visible	Non- Visible
pH	pH	6.40	7.46
Potassium	mg/L	2.2	16.1
Sodium	mg/L	5.8	46.4
Sulphate	mg/L	4	16
Total Manganese	µg/L	15.6	253
Total Alkalinity	mg/L	28.3	214
Total Aluminum	µg/L	166	40.5
Total Arsenic	µg/L	0.2	1.7
Total Cadmium	µg/L	<0.04	<0.04
Total Chromium	µg/L	0.3	0.3
Total Cobalt	µg/L	0.2	1.0
Total Copper	µg/L	8.8	21.8
Total Hardness	mg/L	18.6	115
Total Iron	µg/L	182	1090
Total Lead	µg/L	0.2	0.9
Total Mercury	µg/L	6.9	8.8
Total Nickel	µg/L	0.5	2.6
Total Organic Carbon	mg/L	6.7	33.2
Total Phenols	mg/L	0.0080	0.0019
Total Zinc	µg/L	13.6	10.0
TSS	mg/L	8	12

**2025 ANNUAL REPORT
FOR THE MUNICIPALITY OF KUGAARUK**

Parameter	Unit	PEL-6	PEL-8
		July 3	July 16
Ammonia Nitrogen	mg/L	1.84	<0.005
Calcium	mg/L	171	12.9
Conductivity	µS/cm	1090	189
Magnesium	mg/L	10.3	2.7
Nitrate-Nitrite	mg/L	0.10	0.02
Oil and Grease	Visibility	Non-Visible	Non-Visible
pH	pH	7.07	6.45
Potassium	mg/L	15.0	1.2
Sodium	mg/L	49.4	19.6
Sulphate	mg/L	322	11
Total Alkalinity	mg/L	194	37.7
Total Arsenic	µg/L	0.9	<0.2
Total Cadmium	µg/L	0.22	<0.04
Total Chromium	µg/L	0.6	0.2
Total Copper	µg/L	21.9	1.5
Total Hardness	mg/L	471	43.3
Total Iron	µg/L	4240	17
Total Lead	µg/L	3.2	<0.1
Total Mercury	µg/L	10.6	-
Total Nickel	µg/L	8.7	0.2
Total Phenols	mg/L	<0.0010	<0.0010
TSS	mg/L	10	<3
F1:C6-10	mg/L	-	-
Benzene	µg/L	<2.00	<2.00
Toluene	µg/L	<2.00	<2.00
Ethylbenzene	µg/L	<2.00	<2.00
Xylene	µg/L	<2.00	<2.00