

## YEAR BEING REPORTED: 2020

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. **3BM-ARC1924** issued to the **Municipality of Arctic Bay**.

- a) Quantity of freshwater obtained from all sources and wastewater discharged:

Month Reported	Quantity of Water Obtained from all sources (m <sup>3</sup> )	Quantity of Sewage Waste Discharged (m <sup>3</sup> )
January	2,136.5400	Same
February	1,910.7948	Same
March	2,413.5431	Same
April	2,279.0575	Same
May	2,287.4453	Same
June	2,179.9277	Same
July	2,379.2540	Same
August	2,336.4029	Same
September	2,558.5296	Same
October	2,331.6830	Same
November	2,503.3066	Same
December	2,406.5969	Same
ANNUAL TOTAL	27,723.0814	Same

**Note:** The quantities of water obtained are as reported in our On Tap Water Delivery System. The water consumption volume is considered equal to the sewage discharge volume because there is no meter at the end of the discharge pipe.

- b) Quantity of hazardous and non-hazardous Waste accepted at the Solid Waste Disposal Facility:

Type of Waste	Quantity Accepted
Hazardous Waste	0.62 cubic meters per capita
Household Solid Waste	6.15 cubic meters per capita
Bulky Items / Scrap Metal	3.16 cubic meters per capita

- c) Tabular summaries of all data generated under the “Monitoring Program”, including an interpretation and discussion of Wastewater treatment levels of the Wastewater Treatment Facility, as well as the treatment efficiency of the Vegetated Filter Strip Wetland Area;

See **Appendix A** for the tabular summaries. The samples taken for wastewater were from the sewage lagoon north berm ARC-4. All samples met the effluent quality limits under Part D. Item 3. The wastewater was discharged to the wetland treatment area for further treatment. The samples from the wetland were not taken, so an interpretation of the wetland treatment area efficiency cannot be made. No sewage sludge was removed the Wastewater Treatment Facility.

**I. 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:**

None.

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

See **Appendix C** and **Appendix D**. On February 9, 2020, there was a spill of about 5455 L of wastewater from a sewage truck at the Hamlet Repair Garage Parking Area. The spill was reported to the NWT/NU Spill Line and the Inspector, and a spill report was submitted. The wastewater froze and the spill was cleaned up by hauling the frozen wastewater to the Wastewater Treatment Facility. On February 17, 2020, the spill was inspected by a conservation officer and the spill was closed.

**III. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year:**

None.

**IV. 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:**

None.

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

None.

**VI. updates or revisions to the approved Operation and Maintenance Plans:**

None.

**VII. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:**

None.

**VIII. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:**

No 2020 CIRNAC Inspection.

- The quantities of water obtained are as reported in our On Tap Water Delivery System
- Seacan placed in Solid Waste Disposal Facility for hazardous materials storage such as batteries

**Appendix A: ARC-4 and ARC-6 Effluent Quality Limits**

**Appendix B: Certificate of Analysis**

**Appendix C: Hazardous Materials Spill Database, Arctic Bay 2020**

**Appendix D: Spill Report and Spill Closure**

**Appendix E: Arctic Bay 2020 CIRNAC Inspection Report**

# Appendix A

# Appendix B

**C.O.C.: ---**

**REPORT No. B20-28006**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 15-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 29-Sep-20

P.O. NUMBER: 16207

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	First Sample			
			Sample I.D.	B20-28006-1			
			Date Collected	12-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Hardness (as CaCO <sub>3</sub> )	mg/L	1	SM 3120	17-Sep-20/O	77		
Alkalinity(CaCO <sub>3</sub> ) to pH4.5	mg/L	5	SM 2320B	15-Sep-20/O	326		
pH @25°C	pH Units		SM 4500H	15-Sep-20/O	7.72		
Conductivity @25°C	µmho/cm	1	SM 2510B	15-Sep-20/O	957		
Total Suspended Solids	mg/L	3	SM2540D	16-Sep-20/K	24		
Chloride	mg/L	0.5	SM4110C	16-Sep-20/O	53.3		
Nitrite (N)	mg/L	0.1	SM4110C	16-Sep-20/O	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	16-Sep-20/O	< 0.1		
Sulphate	mg/L	1	SM4110C	16-Sep-20/O	2		
Aluminum	mg/L	0.01	SM 3120	17-Sep-20/O	0.14		
Arsenic	mg/L	0.001	EPA 200.8	22-Sep-20/O	< 0.001		
Cadmium	mg/L	0.005	SM 3120	17-Sep-20/O	< 0.005		
Calcium	mg/L	0.02	SM 3120	17-Sep-20/O	14.8		
Chromium	mg/L	0.002	SM 3120	17-Sep-20/O	< 0.002		
Cobalt	mg/L	0.005	SM 3120	17-Sep-20/O	< 0.005		
Copper	mg/L	0.002	SM 3120	17-Sep-20/O	0.047		
Iron	mg/L	0.005	SM 3120	17-Sep-20/O	1.12		
Lead	mg/L	0.02	SM 3120	17-Sep-20/O	< 0.02		
Magnesium	mg/L	0.02	SM 3120	17-Sep-20/O	9.63		
Manganese	mg/L	0.001	SM 3120	17-Sep-20/O	0.353		
Mercury	mg/L	0.00002	SM 3112 B	16-Sep-20/O	< 0.00002		
Nickel	mg/L	0.01	SM 3120	17-Sep-20/O	< 0.01		
Potassium	mg/L	0.1	SM 3120	17-Sep-20/O	23.2		
Sodium	mg/L	0.2	SM 3120	17-Sep-20/O	47.0		
Zinc	mg/L	0.005	SM 3120	17-Sep-20/O	0.056		
Ammonia (N)-Total	mg/L	0.01	SM4500-NH <sub>3</sub> -H	16-Sep-20/K	78.3		
Phenolics	mg/L	0.002	MOEE 3179	18-Sep-20/K	1.20		

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



Greg Clarkin, BSc., C. Chem  
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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-28006**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 15-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 29-Sep-20

P.O. NUMBER: 16207

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			<b>Client I.D.</b>	First Sample			
			<b>Sample I.D.</b>	B20-28006-1			
			<b>Date Collected</b>	12-Sep-20			
<b>Parameter</b>	<b>Units</b>	<b>R.L.</b>	<b>Reference Method</b>	<b>Date/Site Analyzed</b>			
BOD(5 day)	mg/L	3	SM 5210B	17-Sep-20/K	90		
Total Organic Carbon	mg/L	0.2	EPA 415.2	17-Sep-20/O	67.3		
Oil & Grease-Total	mg/L	1.0	SM 5520	22-Sep-20/K	12.6		
Fecal Coliform	cfu/100mL	1	MOE E3371	15-Sep-20/O	92000		

1 Subcontracted to Paracel Labs

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



R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an \*

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.



**C.O.C.: ---**

**REPORT No. B20-28902**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 22-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 29-Sep-20

P.O. NUMBER: 16221

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	Mid Decant			
			Sample I.D.	B20-28902-1			
			Date Collected	16-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Hardness (as CaCO <sub>3</sub> )	mg/L	1	SM 3120	24-Sep-20/O	76		
Alkalinity(CaCO <sub>3</sub> ) to pH4.5	mg/L	5	SM 2320B	22-Sep-20/O	333		
pH @25°C	pH Units		SM 4500H	22-Sep-20/O	7.66		
Conductivity @25°C	µmho/cm	1	SM 2510B	22-Sep-20/O	960		
Total Suspended Solids	mg/L	3	SM2540D	23-Sep-20/K	40		
Chloride	mg/L	0.5	SM4110C	23-Sep-20/O	52.8		
Nitrite (N)	mg/L	0.1	SM4110C	23-Sep-20/O	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	23-Sep-20/O	< 0.1		
Sulphate	mg/L	1	SM4110C	23-Sep-20/O	1		
Aluminum	mg/L	0.01	SM 3120	24-Sep-20/O	0.15		
Arsenic	mg/L	0.0005	EPA 200.8	24-Sep-20/O	0.0010		
Cadmium	mg/L	0.005	SM 3120	24-Sep-20/O	< 0.005		
Calcium	mg/L	0.02	SM 3120	24-Sep-20/O	13.9		
Chromium	mg/L	0.002	SM 3120	24-Sep-20/O	< 0.002		
Cobalt	mg/L	0.005	SM 3120	24-Sep-20/O	< 0.005		
Copper	mg/L	0.002	SM 3120	24-Sep-20/O	0.047		
Iron	mg/L	0.005	SM 3120	24-Sep-20/O	1.14		
Lead	mg/L	0.02	SM 3120	24-Sep-20/O	< 0.02		
Magnesium	mg/L	0.02	SM 3120	24-Sep-20/O	10.1		
Manganese	mg/L	0.001	SM 3120	24-Sep-20/O	0.348		
Mercury	mg/L	0.00002	SM 3112 B	24-Sep-20/O	0.00002		
Nickel	mg/L	0.01	SM 3120	24-Sep-20/O	< 0.01		
Potassium	mg/L	0.1	SM 3120	24-Sep-20/O	24.3		
Sodium	mg/L	0.2	SM 3120	24-Sep-20/O	49.2		
Zinc	mg/L	0.005	SM 3120	24-Sep-20/O	0.049		
Ammonia (N)-Total	mg/L	0.01	SM4500-NH <sub>3</sub> -H	24-Sep-20/K	81.2		
Phenolics	mg/L	0.002	MOEE 3179	23-Sep-20/K	1.00		

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



Greg Clarkin, BSc., C. Chem  
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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-28902**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 22-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 29-Sep-20

P.O. NUMBER: 16221

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			<b>Client I.D.</b>	Mid Decant			
			<b>Sample I.D.</b>	B20-28902-1			
			<b>Date Collected</b>	16-Sep-20			
<b>Parameter</b>	<b>Units</b>	<b>R.L.</b>	<b>Reference Method</b>	<b>Date/Site Analyzed</b>			
BOD(5 day)	mg/L	3	SM 5210B	23-Sep-20/K	89		
Total Organic Carbon	mg/L	0.2	EPA 415.2	22-Sep-20/O	59.9		
Oil & Grease-Total	mg/L	1.0	SM 5520	25-Sep-20/K	12.3		
Fecal Coliform	cfu/100mL	1	MOE E3371	23-Sep-20/O	300000		

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



R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an \*

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-29299**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 24-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 30-Sep-20

P.O. NUMBER: 16227

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			Client I.D.	End of Decant ARC-8			
			Sample I.D. Date Collected	B20-29299-1 21-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Hardness (as CaCO <sub>3</sub> )	mg/L	1	SM 3120	29-Sep-20/O	76		
Alkalinity(CaCO <sub>3</sub> ) to pH4.5	mg/L	5	SM 2320B	24-Sep-20/O	323		
pH @25°C	pH Units		SM 4500H	24-Sep-20/O	7.72		
Conductivity @25°C	µmho/cm	1	SM 2510B	24-Sep-20/O	958		
Total Suspended Solids	mg/L	3	SM2540D	25-Sep-20/K	34		
Chloride	mg/L	0.5	SM4110C	25-Sep-20/O	50.7		
Nitrite (N)	mg/L	0.1	SM4110C	25-Sep-20/O	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	25-Sep-20/O	< 0.1		
Sulphate	mg/L	1	SM4110C	25-Sep-20/O	2		
Aluminum	mg/L	0.01	SM 3120	29-Sep-20/O	0.19		
Arsenic	mg/L	0.0005	EPA 200.8	28-Sep-20/O	0.0010		
Cadmium	mg/L	0.005	SM 3120	29-Sep-20/O	< 0.005		
Calcium	mg/L	0.02	SM 3120	29-Sep-20/O	13.9		
Chromium	mg/L	0.002	SM 3120	29-Sep-20/O	< 0.002		
Cobalt	mg/L	0.005	SM 3120	29-Sep-20/O	< 0.005		
Copper	mg/L	0.002	SM 3120	29-Sep-20/O	0.052		
Iron	mg/L	0.005	SM 3120	29-Sep-20/O	1.33		
Lead	mg/L	0.02	SM 3120	29-Sep-20/O	< 0.02		
Magnesium	mg/L	0.02	SM 3120	29-Sep-20/O	9.94		
Manganese	mg/L	0.001	SM 3120	29-Sep-20/O	0.367		
Mercury	mg/L	0.00002	SM 3112 B	29-Sep-20/O	0.00004		
Nickel	mg/L	0.01	SM 3120	29-Sep-20/O	< 0.01		
Potassium	mg/L	0.1	SM 3120	29-Sep-20/O	23.3		
Sodium	mg/L	0.2	SM 3120	29-Sep-20/O	48.9		
Zinc	mg/L	0.005	SM 3120	29-Sep-20/O	0.048		

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



R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an \*

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-29299**

**Report To:**

**Hamlet of Arctic Bay**

Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 24-Sep-20

JOB/PROJECT NO.: 2020 Sewage Lagoon Decant

DATE REPORTED: 30-Sep-20

P.O. NUMBER: 16227

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

			<b>Client I.D.</b>		End of Decant ARC- 8			
			<b>Sample I.D.</b>		B20-29299-1			
			<b>Date Collected</b>		21-Sep-20			
<b>Parameter</b>	<b>Units</b>	<b>R.L.</b>	<b>Reference Method</b>	<b>Date/Site Analyzed</b>				
Ammonia (N)-Total	mg/L	0.01	SM4500-NH3-H	25-Sep-20/K	77.3			
Phenolics	mg/L	0.002	MOEE 3179	28-Sep-20/K	< 0.002			
BOD(5 day)	mg/L	3	SM 5210B	25-Sep-20/K	79			
Total Organic Carbon	mg/L	0.2	EPA 415.2	25-Sep-20/O	74.3			
Oil & Grease-Total	mg/L	1.0	SM 5520	26-Sep-20/K	10.5			
Fecal Coliform	cfu/100mL	1	MOE E3371	24-Sep-20/O	130000			

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



R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an \*

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-29678**

**Report To:**

**Hamlet of Arctic Bay**  
Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 28-Sep-20

JOB/PROJECT NO.: Summer 2020

DATE REPORTED: 08-Oct-20

P.O. NUMBER:

SAMPLE MATRIX: Leachate

WATERWORKS NO.

			Client I.D.	Kit. Leachate Landfill ARC- 6			
			Sample I.D.	B20-29678-1			
			Date Collected	22-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Hardness (as CaCO <sub>3</sub> )	mg/L	1	SM 3120	30-Sep-20/O	568		
Alkalinity(CaCO <sub>3</sub> ) to pH4.5	mg/L	5	SM 2320B	29-Sep-20/O	133		
pH @25°C	pH Units		SM 4500H	29-Sep-20/O	7.86		
Conductivity @25°C	µmho/cm	1	SM 2510B	29-Sep-20/O	1960		
Total Suspended Solids	mg/L	3	SM2540D	30-Sep-20/K	20		
Chloride	mg/L	0.5	SM4110C	01-Oct-20/O	314		
Nitrite (N)	mg/L	0.1	SM4110C	30-Sep-20/O	< 0.1		
Nitrate (N)	mg/L	0.1	SM4110C	30-Sep-20/O	< 0.1		
Sulphate	mg/L	1	SM4110C	01-Oct-20/O	491		
Aluminum	mg/L	0.01	SM 3120	30-Sep-20/O	0.09		
Arsenic	mg/L	0.0005	EPA 200.8	01-Oct-20/O	0.0008		
Cadmium	mg/L	0.000070	EPA 200.8	01-Oct-20/O	0.000070		
Calcium	mg/L	0.02	SM 3120	30-Sep-20/O	118		
Chromium	mg/L	0.002	SM 3120	30-Sep-20/O	< 0.002		
Cobalt	mg/L	0.005	SM 3120	30-Sep-20/O	< 0.005		
Copper	mg/L	0.002	SM 3120	30-Sep-20/O	0.004		
Iron	mg/L	0.005	SM 3120	01-Oct-20/O	3.08		
Lead	mg/L	0.0001	EPA 200.8	01-Oct-20/O	0.0002		
Manganese	mg/L	0.001	SM 3120	30-Sep-20/O	1.87		
Mercury	mg/L	0.00002	SM 3112 B	01-Oct-20/O	< 0.00002		
Nickel	mg/L	0.01	SM 3120	30-Sep-20/O	0.01		
Potassium	mg/L	0.1	SM 3120	30-Sep-20/O	30.8		
Zinc	mg/L	0.005	SM 3120	30-Sep-20/O	0.014		
Ammonia (N)-Total	mg/L	0.01	SM4500- NH <sub>3</sub> -H	30-Sep-20/K	0.06		

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



Greg Clarkin, BSc., C. Chem  
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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-29678**

**Report To:**

**Hamlet of Arctic Bay**  
Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 28-Sep-20

JOB/PROJECT NO.: Summer 2020

DATE REPORTED: 08-Oct-20

P.O. NUMBER:

SAMPLE MATRIX: Leachate

WATERWORKS NO.

			Client I.D.	Kit. Leachate Landfill ARC- 6			
			Sample I.D.	B20-29678-1			
			Date Collected	22-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Phosphorus-Total	mg/L	0.01	E3199A.1	30-Sep-20/K	0.13		
Phenolics	mg/L	0.002	MOEE 3179	01-Oct-20/K	< 0.002		
BOD(5 day)	mg/L	3	SM 5210B	30-Sep-20/K	8		
Total Organic Carbon	mg/L	0.2	EPA 415.2	29-Sep-20/O	21.0		
Oil & Grease-Total	mg/L	1.0	SM 5520	01-Oct-20/K	1.3		
Fecal Coliform	cfu/100mL	1	MOE E3371	29-Sep-20/O	0		
Benzene	µg/L	0.5	EPA 8260	01-Oct-20/R	< 0.5		
Toluene	µg/L	0.5	EPA 8260	01-Oct-20/R	< 0.5		
Ethylbenzene	µg/L	0.5	EPA 8260	01-Oct-20/R	< 0.5		
Xylene, m,p-	µg/L	1.0	EPA 8260	01-Oct-20/R	< 1.0		
Xylene, o-	µg/L	0.5	EPA 8260	01-Oct-20/R	< 0.5		
Xylene, m,p,o-	µg/L	1.1	EPA 8260	01-Oct-20/R	< 1.1		
Toluene-d8 (SS)	% rec.		EPA 8260	01-Oct-20/R	97.1		
PHC F1 (C6-C10)	µg/L	50	MOE E3421	01-Oct-20/R	< 50		
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	05-Oct-20/K	< 50		
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	05-Oct-20/K	< 400		
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	05-Oct-20/K	< 400		
Acenaphthene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.2	1	
Acenaphthylene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1		
Anthracene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1		
Benzo(a)anthracene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.3		
Benzo(a)pyrene	µg/L	0.01	EPA 8270	08-Oct-20/K	< 0.07		
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1		
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	08-Oct-20/K	< 0.2		
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1		

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



Greg Clarkin, BSc., C. Chem  
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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

**C.O.C.: ---**

**REPORT No. B20-29678**

**Report To:**

**Hamlet of Arctic Bay**  
Box 150,  
Arctic Bay NU X0A 0A0 Canada

**Attention:** Deborah Johnson

**Caduceon Environmental Laboratories**

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

DATE RECEIVED: 28-Sep-20

JOB/PROJECT NO.: Summer 2020

DATE REPORTED: 08-Oct-20

P.O. NUMBER:

SAMPLE MATRIX: Leachate

WATERWORKS NO.

			<b>Client I.D.</b>		Kit. Leachate Landfill ARC- 6			
			<b>Sample I.D.</b>		B20-29678-1			
			<b>Date Collected</b>		22-Sep-20			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.09			
Chrysene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1			
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1			
Fluoranthene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.09			
Fluorene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.09			
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1			
Methylnaphthalene, 1-	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1			
Methylnaphthalene, 2-	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.1			
Naphthalene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.3			
Phenanthrene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.2			
Pyrene	µg/L	0.05	EPA 8270	08-Oct-20/K	< 0.09			
Terphenyl-d14 (SS)	% rec.	10	EPA 8270	08-Oct-20/K	82.0			

1 Note: Elevated MDLs due to sample matrix.

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



Greg Clarkin, BSc., C. Chem  
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

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

# Appendix C



# spill-2020038

Monday, February 10, 2020 - 14:52

## Spill Status



**Lead Agency:** GN - Government of Nunavut

**Occurance Date/Time:** Sunday, February 9, 2020 - 18:15

**Received Method:** Fax

**Potential Spill:** No

---

## Spill Information



**Spill Region:** Baffin

**Spill Location:** Arctic Bay, Community, Nunavut

**Spill Location Description:** Hamlet Repair Shop Parking Area

**Geolocation:** Geolocation is 73.03757499999999, -85.1480309

**Land Sea Indicator:** Land

**Spill Source:** Truck

**Spill Cause:** Collision or Crash

**Product Spilled:** Wastewater (sewage, mine tailings)

**Spill Quantity:** 5455.00

**Measurement:** Liters

**Area of Contamination:** 30.00 sq m

---

## Supporting Information



**Water User Permit Number:** 3BM-ARC1419

---

## Reporter Information



**Reporting Date and Time:** Monday, February 10, 2020 - 14:45

# Appendix D



Canada

## 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

A	REPORT DATE: MONTH - DAY - YEAR 02.10.20	REPORT TIME 2:28 PM	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT		REPORT NUMBER _____
B	OCCURRENCE DATE: MONTH - DAY - YEAR 02 09 20	OCCURRENCE TIME 6:15 PM			
C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE) * 3BM-ARC1419			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Hamlet Repair Shop Parking Area		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES N 73° MINUTES 01' SECONDS 54.8"	LONGITUDE DEGREES W 085° MINUTES 07' SECONDS 08.1"			
F	RESPONSIBLE PARTY OR VESSEL NAME Sewage truck	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION PO Box 150, Hamlet of Arctic Bay			
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION			
H	PRODUCT SPILLED Waste water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 5,455 Liter Approx.	U.N. NUMBER		
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER		
I	SPILL SOURCE Sewage truck	SPILL CAUSE Accident.	AREA OF CONTAMINATION IN SQUARE METRES 30 + or -		
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED NIL	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT NIL		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS Sewage truck engine failed, truck was being towed with Front end Loader, with chain to rear bumper, as they got to the repair shop parking area, chain broke, Loader front boom end touched & snapped dump Valve air tube thereby opened the dump Valve and content of waste water spilled/clean up will take place once waste water freezes and will be taking contaminate snow to lagoon				
L	REPORTED TO SPILL LINE BY No	POSITION week end	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE
REPORT LINE USE ONLY					
N	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"/> CCG <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					





X?TOEP4F5

Department of Environment

Avatiliqiyikkut

Ministère de l' Environnement

## Occurrence Report

Wildlife Management Division

Occurrence #

AB-OR-016-1920

Report Type

Occurrence

Sequence #

016

Station

Arctic Bay

Officer Name

MATTHEW AKIKULU

Date

14-Feb-20

Time

17:30 PM

Name of Complainant or Person of Interest

Dept Of Environment

Full Address

Arctic Bay NU P O Box 99 X0A0A0

Date of Birth

NU ID Number

Drivers Licence Number

Beneficiary Number / Hunting Licence Number

Contact Phone # Work

Contact Phone # Home

+1 (867) 439-9945

Email Address

Date Complainant Advised

3-Dec-19

## Details of Occurrence

Recieved a call from EPO Daniel Inuarak regarding a spill. no info to go on. as he was not in his office and did not have access to a computer. He told me there was a spill at a undisclosed location. and the amount. I told him I will go and check the site. sure enough the spill occurred at the hamlet garage in the parking area. asked sam willie foreman of hamlet to clean it up. he replied both loaders are broken down right now and that once one of them is back on the road it will get cleaned up right away. we both decided that it would be better to wait for the product to freeze.

Feb 17 2020 product cleaned up and dumped at the sewage lagoon.

OR closed

Spill report 20-038

## Activity Details

Date:

Time

Description

14-Feb-20

17:30

call from EPO regarding sewage spill.

17-Feb-20

16:00

check site and confirm clean up. OR closed

X

# Appendix E

No CIRNAC Inspection undertaken in 2020.