

ANNUAL REPORT FOR THE MUNICIPALITY OF ARCTIC BAY

YEAR BEING REPORTED: 2023

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**.

- i) - iii) tabular summaries of all data generated under the “Monitoring Program”; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are the quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste.

Month Reported	Quantity of Water Obtained from all sources (m ³)	Quantity of Sewage Waste Discharged (m ³)
January	2,217.11	Same
February	2,104.76	Same
March	2,421.98	Same
April	2,310.42	Same
May	2,266.78	Same
June	1,839.89	Same
July	1,626.02	Same
August	2,323.20	Same
September	2,204.26	Same
October	2,392.98	Same
November	2,377.20	Same
December	2,296.59	Same
ANNUAL TOTAL	26,381.22	Same

Note: The water consumption volume is considered equal to the sewage discharge volume because there is no meter at the end of the discharge pipe.

ANNUAL REPORT FOR THE MUNICIPALITY OF ARCTIC BAY

IV. A summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities:

Mushroom style control switch added to truck fill arm.

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

There were no spills associated with licensed infrastructure in 2023.

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

There was no abandonment and restoration work completed during 2023. There is no abandonment and restoration work anticipated for 2024.

VII. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned:

A detailed design is being developed for the water treatment plant upgrade with an anticipated completion date of March 31, 2025. Construction is anticipated to begin on site summer 2026. An application for amendment will be submitted in 2024.

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

No other details on water use or waste disposal requested by the Board by November 1st of 2023.

IX. Updates or revisions to the approved Operation and Maintenance Plans:

There were no updates or revisions to the approved Operation and Maintenance Plans in 2023.

X. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

No additional information to report that the licensee deems useful.

XI. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

The CIRNAC Inspection did not take place in 2023.

**ANNUAL REPORT
FOR THE MUNICIPALITY OF ARCTIC BAY**

Appendix A: ARC-4 Effluent Quality Limits

Appendix B: Certificate of Analysis

**ANNUAL REPORT
FOR THE MUNICIPALITY OF ARCTIC BAY**

Appendix A

ARC-4 Effluent Quality limits

Parameter	Maximum Concentration of any Grab Sample	July 31, 2023
BOD ₅	120 mg/L	108
Total Suspended Solids	180 mg/L	24
Fecal Coliform	1x10 ⁶ CFU/100 mL	1400000
Oil and Grease	No visible sheen	14.2
pH	Between 6 and 9	7.60

**ANNUAL REPORT
FOR THE MUNICIPALITY OF ARCTIC BAY**

Appendix B

C.O.C.: G 107357

REPORT No: 23-020030 - Rev. 0

Report To:

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

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Sam Willie

DATE RECEIVED: 2023-Aug-04
DATE REPORTED: 2023-Aug-16
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER: 19724

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	3	OTTAWA	PCURIEL	2023-Aug-09	A-IC-01	SM 4110B
BOD5 (Liquid)	3	KINGSTON	MDUBIEN	2023-Aug-10	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	3	OTTAWA	MDON	2023-Aug-08	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	3	OTTAWA	AHIRSI	2023-Aug-04	FC-001	SM 9222D
ICP/MS Total (Liquid)	3	OTTAWA	TPRICE	2023-Aug-09	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	3	OTTAWA	NHOGAN	2023-Aug-09	D-ICP-01	SM 3120B
Mercury (Liquid)	3	OTTAWA	TBENNETT	2023-Aug-09	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	3	KINGSTON	AMANIYA	2023-Aug-14	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	3	KINGSTON	TMCBRYDE	2023-Aug-09	O&G-001	SM 5520
PHC F1 (Liquid)	1	RICHMOND_HILL	FLENA	2023-Aug-10	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	1	KINGSTON	STHOMPSON	2023-Aug-11	PHC-W-001	MECP E3421
Phenols (Liquid)	3	KINGSTON	KWELCH	2023-Aug-10	PHEN-01	MECP E3179
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	EASIEDU	2023-Aug-10	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	3	OTTAWA	VKASYAN	2023-Aug-08	C-OC-01	EPA 415.2
TP & TKN (Liquid)	1	KINGSTON	KDIBBITS	2023-Aug-11	TPTKN-001	MECP E3516.2
TSS (Liquid)	3	KINGSTON	AMANIYA	2023-Aug-11	TSS-001	SM 2540D
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	FLENA	2023-Aug-10	C-VOC-02	EPA 8260

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg

F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)

F2 C10-C16 hydrocarbons in µg/g, (F2-naph if requested)

F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)

F4 C34-C50 hydrocarbons in µg/g

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

Any deviations from the method are noted and reported for any particular sample.

nC6 and nC10 response factor is within 30% of response factor for toluene:

nC10, nC16 and nC34 response factors within 10% of each other:

C50 response factors within 70% of nC10+nC16+nC34 average:

Linearity is within 15%:

All results expressed on a dry weight basis.

Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting Limit

NC = Not Calculated

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

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.

If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC

QC will be made available upon request.



Steve Garrett
Director of Laboratory Services

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 23-020030 - Rev. 0

Client I.D.			ARC-6b	ARC-4	ARC-9
Sample I.D.			23-020030-1	23-020030-2	23-020030-3
Date Collected			2023-08-02	2023-07-31	2023-07-31
Parameter	Units	R.L.	-	-	-
Fecal Coliform	CFU/100mL	1	140000	1400000	2
Alkalinity(CaCO3) to pH4.5	mg/L	5	329	353	159
pH @25°C	pH units	-	7.64	7.60	8.10
Conductivity @25°C	uS/cm	1	892	1010	1690
Chloride	mg/L	0.5	54.4	55.6	278
Nitrate (N)	mg/L	0.05	0.10	0.12	0.06
Nitrite (N)	mg/L	0.05	<0.05	<0.05	<0.05
Sulphate	mg/L	1	2	<1	332
BOD5	mg/L	3	29	108	6
Total Suspended Solids	mg/L	3	24	24	31
Phosphorus (Total)	mg/L	0.01			0.28
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	64.7	84.6	0.11
Total Organic Carbon	mg/L	0.2	49.5	91.1	5.4
Phenolics	mg/L	0.001	0.085	0.689	<0.001
Hardness (as CaCO3)	mg/L	-	70	60	
Aluminum (Total)	mg/L	0.01	0.08	0.13	0.07
Cadmium (Total)	mg/L	0.005	<0.005	<0.005	<0.005
Calcium (Total)	mg/L	0.02	12.9	10.8	77.4
Chromium (Total)	mg/L	0.002	<0.002	<0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005	<0.005	<0.005
Copper (Total)	mg/L	0.002	0.047	0.047	0.003




Steve Garrett
Director of Laboratory Services

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Final Report
REPORT No: 23-020030 - Rev. 0

			Client I.D.	ARC-6b	ARC-4	ARC-9
			Sample I.D.	23-020030-1	23-020030-2	23-020030-3
			Date Collected	2023-08-02	2023-07-31	2023-07-31
Parameter	Units	R.L.		-	-	-
Iron (Total)	mg/L	0.005		0.430	0.652	2.66
Lead (Total)	mg/L	0.02		<0.02	<0.02	<0.02
Magnesium (Total)	mg/L	0.02		8.21	7.45	47.4
Manganese (Total)	mg/L	0.001		0.454	0.249	0.702
Nickel (Total)	mg/L	0.01		<0.01	<0.01	<0.01
Potassium (Total)	mg/L	0.1		22.0	24.0	24.2
Sodium (Total)	mg/L	0.2		49.0	49.2	
Zinc (Total)	mg/L	0.005		0.029	0.068	0.008
Arsenic (Total)	mg/L	0.0001				0.0011
		0.0005		0.0016	0.0012	
Mercury	mg/L	0.00002		<0.00002	<0.00002	0.00009




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REPORT No: 23-020030 - Rev. 0

			Client I.D.	ARC-6b	ARC-4	ARC-9
			Sample I.D.	23-020030-1	23-020030-2	23-020030-3
			Date Collected	2023-08-02	2023-07-31	2023-07-31
Parameter	Units	R.L.		-	-	-
Benzene	µg/L	0.5				<0.5
Ethylbenzene	µg/L	0.5				<0.5
Toluene	µg/L	0.5				<0.5
Xylene, m,p-	µg/L	1				<1
Xylene, m,p,o-	µg/L	1.1				<1.1
Xylene, o-	µg/L	0.5				<0.5
PHC F1 (C6-C10)	µg/L	25				<25
PHC F2 (>C10-C16)	µg/L	50				<50
PHC F3 (>C16-C34)	µg/L	400				<400
PHC F4 (>C34-C50)	µg/L	400				<400
Oil & Grease (Total)	mg/L	1.0		6.6	14.2	5.7




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Final Report
REPORT No: 23-020030 - Rev. 0

			Client I.D.	ARC-9
			Sample I.D.	23-020030-3
			Date Collected	2023-07-31
Parameter	Units	R.L.		
Acenaphthene	µg/L	0.05	<0.05	
Acenaphthylene	µg/L	0.05	<0.05	
Anthracene	µg/L	0.05	<0.05	
Benzo[a]anthracene	µg/L	0.05	<0.06 (15)	
Benzo(a)pyrene	µg/L	0.01	<0.01	
Benzo(b)fluoranthene	µg/L	0.05	<0.05	
Benzo(b+k)fluoranthene	µg/L	0.1	<0.1	
Benzo(g,h,i)perylene	µg/L	0.05	<0.05	
Benzo(k)fluoranthene	µg/L	0.05	<0.05	
Chrysene	µg/L	0.05	<0.05	
Dibenzo(a,h)anthracene	µg/L	0.05	<0.05	
Fluoranthene	µg/L	0.05	<0.05	
Fluorene	µg/L	0.05	<0.05	
Indeno(1,2,3,-cd)Pyrene	µg/L	0.05	<0.05	
Methylnaphthalene,1-	µg/L	0.05	<0.05	
Methylnaphthalene,2-(1-)	µg/L	1	<1	
Methylnaphthalene,2-	µg/L	0.05	<0.05	
Naphthalene	µg/L	0.05	<0.06	
Phenanthrene	µg/L	0.05	<0.05	
Pyrene	µg/L	0.05	<0.05	
Total PAH	µg/L	0.1	<0.1	



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Comments:

15. Elevated MDL due to sample matrix



Steve Garrett
Director of Laboratory Services

C.O.C.: G 110786

REPORT No: 23-020872 - Rev. 0

Report To:

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

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Sam Willie

DATE RECEIVED: 2023-Aug-14
DATE REPORTED: 2023-Aug-24
SAMPLE MATRIX: Surface Water

CUSTOMER PROJECT:
P.O. NUMBER: 20217

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	VKASYAN	2023-Aug-14	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	MDUBIEN	2023-Aug-16	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	MDON	2023-Aug-15	COND-02/PH-02/A	SM 2510B/4500H/
					LK-02	2320B
Fecal Coliforms (Liquid)	1	OTTAWA	HALIPDA	2023-Aug-14	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	TPRICE	2023-Aug-16	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2023-Aug-17	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2023-Aug-16	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	KDIBBITS	2023-Aug-17	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	TMCBRYDE	2023-Aug-16	O&G-001	SM 5520
PHC F1 (Liquid)	1	RICHMOND_HILL	FLENA	2023-Aug-15	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	1	KINGSTON	STHOMPSON	2023-Aug-15	PHC-W-001	MECP E3421
Phenols (Liquid)	1	KINGSTON	JMACINNES	2023-Aug-16	PHEN-01	MECP E3179
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	EASIEDU	2023-Aug-16	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2023-Aug-15	C-OC-01	EPA 415.2
TP & TKN (Liquid)	1	KINGSTON	KDIBBITS	2023-Aug-17	TPTKN-001	MECP E3516.2
TSS (Liquid)	1	KINGSTON	AMANIYA	2023-Aug-22	TSS-001	SM 2540D
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	FLENA	2023-Aug-15	C-VOC-02	EPA 8260

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg

F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)

F2 C10-C16 hydrocarbons in µg/g, (F2-naph if requested)

F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)

F4 C34-C50 hydrocarbons in µg/g

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

Any deviations from the method are noted and reported for any particular sample.

nC6 and nC10 response factor is within 30% of response factor for toluene:

nC10, nC16 and nC34 response factors within 10% of each other:

C50 response factors within 70% of nC10+nC16+nC34 average:

Linearity is within 15%:

All results expressed on a dry weight basis.

Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting Limit

NC = Not Calculated

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

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.

If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC

QC will be made available upon request.




Steve Garrett

Director of Laboratory Services

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 23-020872 - Rev. 0

		Client I.D.	Leachate from scrap_
		Sample I.D.	yard ditch next to
		Date Collected	Land Fill (West)
			23-020872-1
			2023-08-10
Parameter	Units	R.L.	-
Fecal Coliform	CFU/100mL	1	8
Alkalinity(CaCO3) to pH4.5	mg/L	5	119
pH @25°C	pH units	-	7.03
Conductivity @25°C	uS/cm	1	608
Chloride	mg/L	0.5	32.3
Nitrate (N)	mg/L	0.05	0.98
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	143
BOD5	mg/L	3	5
Total Suspended Solids	mg/L	3	<3
Phosphorus (Total)	mg/L	0.01	<0.01
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.13
Total Organic Carbon	mg/L	0.2	10.2
Phenolics	mg/L	0.001	0.008
Aluminum (Total)	mg/L	0.01	0.04
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	54.0
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	0.005
Iron (Total)	mg/L	0.005	1.58



Steve Garrett
Director of Laboratory Services

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Final Report
REPORT No: 23-020872 - Rev. 0

		Client I.D.	Leachate from scrap_ yard ditch next to Land Fill (West)
		Sample I.D.	23-020872-1
		Date Collected	2023-08-10
Parameter	Units	R.L.	-
Lead (Total)	mg/L	0.02	<0.02
Magnesium (Total)	mg/L	0.02	25.6
Manganese (Total)	mg/L	0.001	0.354
Nickel (Total)	mg/L	0.01	<0.01
Potassium (Total)	mg/L	0.1	4.6
Zinc (Total)	mg/L	0.005	0.426
Arsenic (Total)	mg/L	0.0001	0.0005
Mercury	mg/L	0.00002	<0.00002




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Director of Laboratory Services

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Final Report
REPORT No: 23-020872 - Rev. 0

		Client I.D.	Leachate from scrap_ yard ditch next to Land Fill (West)
		Sample I.D.	23-020872-1
		Date Collected	2023-08-10
Parameter	Units	R.L.	-
Benzene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Xylene, m,p-	µg/L	1	<1
Xylene, m,p,o-	µg/L	1.1	1.4
Xylene, o-	µg/L	0.5	0.5
PHC F1 (C6-C10)	µg/L	25	<25
PHC F2 (>C10-C16)	µg/L	50	<50
PHC F3 (>C16-C34)	µg/L	400	<400
PHC F4 (>C34-C50)	µg/L	400	<400
Oil & Grease (Total)	mg/L	1.0	1.0



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Director of Laboratory Services


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Final Report
REPORT No: 23-020872 - Rev. 0

		Client I.D.	Leachate from scrap_ yard ditch next to Land Fill (West)
		Sample I.D.	23-020872-1
		Date Collected	2023-08-10
Parameter	Units	R.L.	-
Acenaphthene	µg/L	0.05	<0.05
Acenaphthylene	µg/L	0.05	<0.05
Anthracene	µg/L	0.05	<0.05
Benzo[a]anthracene	µg/L	0.05	<0.05
Benzo(a)pyrene	µg/L	0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.05	<0.05
Benzo(b+k)fluoranthene	µg/L	0.1	<0.1
Benzo(g,h,i)perylene	µg/L	0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.05	<0.05
Chrysene	µg/L	0.05	<0.05
Dibenzo(a,h)anthracene	µg/L	0.05	<0.05
Fluoranthene	µg/L	0.05	<0.05
Fluorene	µg/L	0.05	<0.05
Indeno(1,2,3,-cd)Pyrene	µg/L	0.05	<0.05
Methylnaphthalene,1-	µg/L	0.05	<0.05
Methylnaphthalene,2-(1-)	µg/L	1	<1
Methylnaphthalene,2-	µg/L	0.05	<0.05
Naphthalene	µg/L	0.05	<0.05
Phenanthrene	µg/L	0.05	<0.05
Pyrene	µg/L	0.05	<0.05
Total PAH	µg/L	0.1	<0.1

Bacteria passed holding time.



Steve Garrett
Director of Laboratory Services

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C.O.C.: G 110792

REPORT No: 23-024054 - Rev. 0

Report To:

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

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Sam Willie

DATE RECEIVED: 2023-Sep-11
DATE REPORTED: 2023-Sep-22
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER: 20249

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2023-Sep-11	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	JYEARWOOD	2023-Sep-06	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2023-Sep-11	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	AHIRSI	2023-Sep-11	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2023-Sep-12	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2023-Sep-12	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2023-Sep-12	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	KDIBBITS	2023-Sep-15	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	MLANE	2023-Sep-12	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	JMACINNES	2023-Sep-22	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2023-Sep-12	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	AMANIYA	2023-Sep-15	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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



Michelle Dubien
Data Specialist

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Final Report
REPORT No: 23-024054 - Rev. 0

		Client I.D.	1 Kit W/W decant ARC-3
		Sample I.D.	23-024054-1
		Date Collected	2023-09-07
Parameter	Units	R.L.	-
Fecal Coliform	CFU/100mL	1	810000
Alkalinity(CaCO3) to pH4.5	mg/L	5	369
pH @25°C	pH units	-	7.76
Conductivity @25°C	uS/cm	1	1020
Chloride	mg/L	0.5	48.0
Nitrate (N)	mg/L	0.05	<0.05
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	4
BOD5	mg/L	3	120
Total Suspended Solids	mg/L	3	34
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	91.7
Total Organic Carbon	mg/L	0.2	72.6
Phenolics	mg/L	0.001	0.896
Hardness (as CaCO3)	mg/L	-	70
Aluminum (Total)	mg/L	0.01	0.18
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	12.2
Chromium (Total)	mg/L	0.002	0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	0.056
Iron (Total)	mg/L	0.005	0.953



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Final Report
REPORT No: 23-024054 - Rev. 0

			Client I.D.	1 Kit W/W decant ARC-3
			Sample I.D.	23-024054-1
			Date Collected	2023-09-07
Parameter	Units	R.L.		
Lead (Total)	mg/L	0.02	<0.02	
Magnesium (Total)	mg/L	0.02	8.61	
Manganese (Total)	mg/L	0.001	0.296	
Nickel (Total)	mg/L	0.01	<0.01	
Potassium (Total)	mg/L	0.1	25.8	
Sodium (Total)	mg/L	0.2	50.7	
Zinc (Total)	mg/L	0.005	0.102	
Arsenic (Total)	mg/L	0.0005	0.0012	
Mercury	mg/L	0.00002	0.00006	

			Client I.D.	1 Kit W/W decant ARC-3
			Sample I.D.	23-024054-1
			Date Collected	2023-09-07
Parameter	Units	R.L.		
Oil & Grease (Total)	mg/L	1.0	8.4	

Bacteria passed holding time.



Michelle Dubien
Data Specialist

C.O.C.: G 107360

REPORT No: 23-024055 - Rev. 0

Report To:

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

CADUCEON Environmental Laboratories

2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Sam Willie

DATE RECEIVED: 2023-Sep-11
DATE REPORTED: 2023-Sep-22
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER: 20249

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2023-Sep-11	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	JYEARWOOD	2023-Sep-06	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2023-Sep-11	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	AHIRSI	2023-Sep-11	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2023-Sep-12	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2023-Sep-12	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2023-Sep-12	D-HG-02	SM 3112B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	KDIBBITS	2023-Sep-15	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	MLANE	2023-Sep-12	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	JMACINNES	2023-Sep-22	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2023-Sep-12	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	AMANIYA	2023-Sep-15	TSS-001	SM 2540D

R.L. = Reporting Limit

NC = Not Calculated

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Final Report

REPORT No: 23-024055 - Rev. 0

Client I.D.

W/W Lagoon Becant
Kit ARC-6B

Sample I.D.

23-024055-1

Date Collected

2023-09-08

Parameter	Units	R.L.	
Fecal Coliform	CFU/100mL	1	130000
Alkalinity(CaCO ₃) to pH4.5	mg/L	5	38
pH @25°C	pH units	-	6.84
Conductivity @25°C	uS/cm	1	515
Chloride	mg/L	0.5	41.1
Nitrate (N)	mg/L	0.05	30.9
Nitrite (N)	mg/L	0.05	0.22
Sulphate	mg/L	1	3
BOD ₅	mg/L	3	8
Total Suspended Solids	mg/L	3	14
Ammonia (N)-Total (NH ₃ +NH ₄)	mg/L	0.05	1.11
Total Organic Carbon	mg/L	0.2	29.6
Phenolics	mg/L	0.001	0.040
Hardness (as CaCO ₃)	mg/L	-	100
Aluminum (Total)	mg/L	0.01	0.09
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	28.2
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	0.020
Iron (Total)	mg/L	0.005	0.201



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Final Report
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			Client I.D.	W/W Lagoon Becant Kit ARC-6B
			Sample I.D.	23-024055-1
			Date Collected	2023-09-08
Parameter	Units	R.L.		
Lead (Total)	mg/L	0.02	<0.02	
Magnesium (Total)	mg/L	0.02	16.1	
Manganese (Total)	mg/L	0.001	0.006	
Nickel (Total)	mg/L	0.01	<0.01	
Potassium (Total)	mg/L	0.1	6.5	
Sodium (Total)	mg/L	0.2	34.4	
Zinc (Total)	mg/L	0.005	0.011	
Arsenic (Total)	mg/L	0.0005	0.0015	
Mercury	mg/L	0.00002	0.00004	

			Client I.D.	W/W Lagoon Becant Kit ARC-6B
			Sample I.D.	23-024055-1
			Date Collected	2023-09-08
Parameter	Units	R.L.		
Oil & Grease (Total)	mg/L	1.0	2.6	

Bacteria passed holding time.



Michelle Dubien
Data Specialist