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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: DW 110985 **REPORT No: 23-025578 - Rev. 0**

Report To:
Hamlet of Pangnirtung
P.O. Box 253
Pangnirtung, NVT X0A 0R0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Andrew Keenaivak

DATE RECEIVED: 2023-Sep-21
DATE REPORTED: 2023-Oct-05
SAMPLE MATRIX: Drinking Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2023-Sep-21	A-IC-01	SM 4110B
Colour (Liquid)	1	OTTAWA	MDON	2023-Sep-22	A-COL-01	SM 2120C
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2023-Sep-22	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Cyanide Total (Liquid)	1	KINGSTON	JMACINNES	2023-Sep-25	CN-001	SM 4500-CN-E
DOC/DIC (Liquid)	1	OTTAWA	VKASYAN	2023-Sep-21	C-OC-01	EPA 415.2
HAA's (Liquid) (Subcontracted)	1	SGS_LAKEFIELD	SLOZO	2023-Sep-29	Subcontracted	Subcontracted
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2023-Sep-22	D-ICPMS-01	EPA 6020
ICP/MS (Liquid)	1	OTTAWA	AOZKAYMAK	2023-Sep-25	D-ICPMS-01	EPA 200.8
ICP/OES Total (Liquid)	1	OTTAWA	NHOGAN	2023-Sep-26	D-ICP-01	SM 3120B
ICP/OES (Liquid)	1	OTTAWA	NHOGAN	2023-Sep-22	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2023-Sep-22	D-HG-02	SM 3112B
Mercury (Liquid) Lab Filtered	1	OTTAWA	TBENNETT	2023-Sep-22	D-HG-02	SM 3112B
Ammonia (Liquid)	1	KINGSTON	JYEARWOOD	2023-Sep-27	NH3-001	SM 4500NH3
PHC F1 (Liquid)	1	RICHMOND_HILL	FLENA	2023-Sep-26	C-VPHW-01	MECP E3421
PHC F2-4 (Liquid)	1	KINGSTON	STHOMPSON	2023-Sep-26	PHC-W-001	MECP E3421
SVOC - Semi-Volatiles (Liquid)	1	KINGSTON	EASIEDU	2023-Sep-27	NAB-W-001	EPA 8270D
Total Organic Carbon (TOC)	1	OTTAWA	VKASYAN	2023-Sep-21	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	KKHUTSYYEVA	2023-Sep-25	TSS-001	SM 2540D
Turbidity (Liquid)	1	OTTAWA	MDON	2023-Sep-22	A-TURB-01	SM 2130B
UV Trans. (Subcontracted)	1	TESTMARK	SISLAM	2023-Sep-22		Subcontracted
VOC-Volatiles Full (Water)	1	RICHMOND_HILL	FLENA	2023-Sep-26	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-napth 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.

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.

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Microbiology Supervisor

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

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	Client I.D.		WTP Treated Water	WTP Treated Water - Total
	Sample I.D.		23-025578-1	23-025578-2
	Date Collected		2023-09-15	2023-09-15
Parameter	Units	R.L.	-	-
Alkalinity(CaCO3) to pH4.5	mg/L	5	6	
pH @25°C	pH units	-	5.81	
Conductivity @25°C	uS/cm	1	23	
TDS (Calc. from Cond.)	mg/L	3	12	
Colour	TCU	2	<2	
Turbidity	NTU	0.1	0.7	
Fluoride	mg/L	0.1	<0.1	
Chloride	mg/L	0.5	4.2	
Nitrate (N)	mg/L	0.05	<0.05	
Sulphate	mg/L	1	<1	
Total Suspended Solids	mg/L	3	<3	
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.10	
Dissolved Organic Carbon	mg/L	0.2	1.5	
Total Organic Carbon	mg/L	0.2	1.5	
Cyanide (Total)	mg/L	0.005	<0.005	
Hardness (as CaCO3)	mg/L as CaCO3	0.02	3.46	
Aluminum	mg/L	0.01	0.03	
Barium	mg/L	0.001	0.001	
Boron	mg/L	0.005	<0.005	
Calcium	mg/L	0.02	0.89	
Copper	mg/L	0.002	0.005	

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	Client I.D.		WTP Treated Water	WTP Treated Water - Total
	Sample I.D.		23-025578-1	23-025578-2
	Date Collected		2023-09-15	2023-09-15
Parameter	**Units**	**R.L.**	-	-
Iron	mg/L	0.005	0.019	
Manganese	mg/L	0.001	0.002	
Potassium	mg/L	0.1	0.2	
Sodium	mg/L	0.2	3.5	
Zinc	mg/L	0.005	<0.005	
Aluminum (Total)	mg/L	0.01		0.04
Barium (Total)	mg/L	0.001		0.001
Boron (Total)	mg/L	0.005		<0.005
Calcium (Total)	mg/L	0.02		1.01
Copper (Total)	mg/L	0.002		0.003
Iron (Total)	mg/L	0.005		0.027
Manganese (Total)	mg/L	0.001		0.001
Potassium (Total)	mg/L	0.1		<0.1
Sodium (Total)	mg/L	0.2		3.7
Zinc (Total)	mg/L	0.005		0.005
Arsenic	mg/L	0.0001	<0.0001	
Cadmium	mg/L	0.000015	<0.000015	
Chromium	mg/L	0.001	<0.0010	
Lead	mg/L	0.00002	<0.00002	
Selenium	mg/L	0.001	<0.001	
Uranium	mg/L	0.00005	<0.00005	

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			Client I.D.	WTP Treated Water	WTP Treated Water - Total
			Sample I.D.	23-025578-1	23-025578-2
			Date Collected	2023-09-15	2023-09-15
Parameter	**Units**	**R.L.**		-	-
Arsenic (Total)	mg/L	0.0001			<0.0001
Cadmium (Total)	mg/L	0.000015			<0.000015
Chromium (Total)	mg/L	0.001			<0.001
Lead (Total)	mg/L	0.00002			0.00002
Selenium (Total)	mg/L	0.001			<0.001
Uranium (Total)	mg/L	0.00005			<0.00005
Mercury	mg/L	0.00002			<0.00002
Mercury (Filtered)	mg/L	0.00002		<0.00002	

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			Client I.D.	WTP Treated Water
			Sample I.D.	23-025578-1
			Date Collected	2023-09-15
Parameter	Units	R.L.		-
Benzene	µg/L	0.5		<0.5
Bromodichloromethane	µg/L	2		<2
Bromoform	µg/L	5		<5
Chloroform	µg/L	1		4
Dibromochloromethane	µg/L	2		<2
Ethylbenzene	µg/L	0.5		<0.5
Total Trihalomethanes	µg/L	6		<6
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

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		Client I.D.	WTP Treated Water
		Sample I.D.	23-025578-1
		Date Collected	2023-09-15
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

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Subcontracted Analyses

	Client I.D.		WTP Treated Water
	Sample I.D.		23-025578-1
	Date Collected		2023-09-15
Parameter	Units	R.L.	-
Total Haloacetic Acids (HAA5)	µg/L	5.3	16.7
(Mono) Chloroacetic Acid	µg/L	4.7	<4.7
Bromoacetic Acid	µg/L	2.9	<2.9
Dichloroacetic Acid	µg/L	2.6	9.5
Dibromoacetic Acid	µg/L	2.0	<2.0
Trichloroacetic Acid	µg/L	5.3	7.2
UV Transmittance	%	-	97.3

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