



**CLIENT NAME: REGION OF QUEENS MUNICIPALITY
345 ROY TURNER ROAD
LIVERPOOL, NS B0T1K0
(902) 354-3455**

ATTENTION TO: ADAM GRANT

PROJECT:

AGAT WORK ORDER: 25X257953

TRACE ORGANICS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Mar 27, 2025

PAGES (INCLUDING COVER): 14

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

***Notes**

Empty box for notes.

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Certificate of Analysis

AGAT WORK ORDER: 25X257953

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
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 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Haloacetic Acids in Water

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	G / S	RDL	SOUTH QUEENS WATER TREATMENT FACILITY		OLD COBB BARN RD	SCHOOL ST. SAMPLE STATION	BROOKLYN SAMPLE STATION	RAW WATER
				WORKS DEPT	FACILITY	Water	Water	Water	Water
				2025-03-11 15:00	2025-03-11 13:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 13:00
				6580482	6580483	6580484	6580485	6580486	6580487
Monobromoacetic Acid	ug/L		0.5	<0.5	10	12	11	8.4	9.6
Monochloroacetic Acid	ug/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloroacetic Acid	ug/L		0.5	<0.5	13	15	14	12	12
Dibromoacetic Acid	ug/L		0.5	<0.5	1.1	1.0	<0.5	0.8	<0.5
Trichloroacetic Acid	ug/L		0.5	<0.5	12	17	15	10	13
Haloacetic Acids (HAA5)	ug/L	80	2.0	<2.0	36	45	40	31	35
Bromochloroacetic Acid	ug/L		0.5	<0.5	2.7	3.0	2.6	2.6	2.4
Surrogate	Unit	Acceptable Limits							
2-Bromopropionic Acid	%	70-130		98	94	98	94	93	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2025-04
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6580482-6580487 Haloacetic Acids (HAA5) is a calculated parameter. The calculated value is the sum of Monobromoacetic Acid, Monochloroacetic Acid, Dichloroacetic Acid, Dibromoacetic Acid and Trichloroacetic Acid.
 Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Ashleigh Dussalt



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CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trihalomethane Analysis - Water

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	G / S	RDL	SOUTH QUEENS WATER TREATMENT		OLD COBB	SCHOOL ST.	BROOKLYN	RAW WATER
				WORKS DEPT	FACILITY	BARN RD	SAMPLE STATION	SAMPLE STATION	
				6580482	6580483	6580484	6580485	6580486	6580487
Chloroform	mg/L	0.001	<0.001	0.019	0.024	0.022	0.015	0.017	
Bromodichloromethane	mg/L	0.001	<0.001	0.006	0.007	0.007	0.005	0.006	
Dibromochloromethane	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Total Trihalomethanes	mg/L	0.1	0.001	<0.001	0.025	0.031	0.029	0.020	0.023
Surrogate	Unit	Acceptable Limits							
Toluene-d8	%	50-140	87	84	82	83	76	78	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CDWQ-MAC(ug/L)
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6580482-6580487 Total Trihalomethanes is a calculated parameter. The calculated value is the sum of Chloroform + Bromodichloromethane + Dibromochloromethane + Bromoform. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:

Ashleigh Dussalt



Certificate of Analysis

AGAT WORK ORDER: 25X257953

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CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	SOUTH QUEENS WATER TREATMENT							
		SAMPLE DESCRIPTION:		WORKS DEPT	TREATMENT FACILITY	OLD COBB BARN RD	SCHOOL ST. SAMPLE STATION	BROOKLYN SAMPLE STATION	RAW WATER
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2025-03-11 15:00	2025-03-11 13:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 13:00
		G / S	RDL	6580482	6580483	6580484	6580485	6580486	6580487
pH		7.0-10.5		5.52	6.54	6.61	6.61	6.61	6.61
Reactive Silica as SiO2	mg/L		0.5	2.8	2.6	2.7	2.9	2.8	2.7
Chloride	mg/L	250 AO	1	7	16	16	16	16	16
Fluoride	mg/L	1.5	0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Sulphate	mg/L	500 AO	2	<2	4	4	4	4	4
Alkalinity	mg/L		5	<5	11	11	12	13	12
True Color	TCU	15 AO	5	26	<5	<5	<5	<5	<5
Turbidity	NTU	1.0	0.5	0.81	<0.50	<0.50	<0.50	<0.50	0.50
Electrical Conductivity	umho/cm		1	39	99	98	99	101	100
Nitrate + Nitrite as N	mg/L		0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate as N	mg/L	10	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as N	mg/L	1.0	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Ortho-Phosphate as P	mg/L		0.01	<0.01	0.20	0.22	0.24	0.21	0.22
Total Sodium	mg/L	200 AO	0.1	5.4	20.5	22.3	21.1	22.7	22.2
Total Potassium	mg/L		0.1	0.4	0.4	0.5	0.4	0.4	0.4
Total Calcium	mg/L		0.1	0.8	0.7	0.9	0.8	0.7	1.0
Total Magnesium	mg/L		0.1	0.8	0.7	0.8	0.8	0.8	0.8
Bicarb. Alkalinity (as CaCO3)	mg/L		5	<5	11	11	12	13	12
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10	<10	<10	<10	<10
Hydroxide	mg/L		5	<5	<5	<5	<5	<5	<5
Calculated TDS	mg/L		1	15	49	51	51	53	52
Hardness	mg/L			5.3	4.6	5.5	5.3	5.0	5.8
Langelier Index (@20C)	NA			-5.40	-4.13	-3.95	-3.97	-3.99	-3.87
Langelier Index (@ 4C)	NA			-5.72	-4.45	-4.27	-4.29	-4.31	-4.19

Certified By:

Kaleigh Cullen



Certificate of Analysis

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ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	SOUTH QUEENS WATER TREATMENT							
		G / S	RDL	WORKS DEPT	OLD COBB	SCHOOL ST.	BROOKLYN	RAW WATER	
				FACILITY	BARN RD	SAMPLE STATION	SAMPLE STATION	Water	
				Water	Water	Water	Water	Water	
DATE SAMPLED:	2025-03-11 15:00	2025-03-11 13:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 13:00			
6580482	6580483	6580484	6580485	6580486	6580487				
Saturation pH (@ 20C)	NA			10.9	10.7	10.6	10.6	10.6	10.5
Saturation pH (@ 4C)	NA			11.2	11.0	10.9	10.9	10.9	10.8
Anion Sum	me/L			0.20	0.75	0.75	0.77	0.79	0.77
Cation sum	me/L			0.39	1.01	1.10	1.04	1.11	1.10
% Difference/ Ion Balance	%			32.0	14.5	18.7	14.8	16.6	17.4
Total Aluminum	ug/L	2900, 100	5	226	32	32	25	36	24
Total Antimony	ug/L	6	2	<2	<2	<2	<2	<2	<2
Total Arsenic	ug/L	10	2	<2	<2	<2	<2	<2	<2
Total Barium	ug/L	2000	5	<5	<5	<5	<5	<5	<5
Total Beryllium	ug/L		2	<2	<2	<2	<2	<2	<2
Total Bismuth	ug/L		2	<2	<2	<2	<2	<2	<2
Total Boron	ug/L	5000	5	65	52	41	38	10	11
Total Cadmium	ug/L	7	0.09	<0.09	<0.09	<0.09	<0.09	<0.09	0.10
Total Chromium	ug/L	50	1	<1	<1	<1	<1	<1	<1
Total Cobalt	ug/L		1	<1	<1	<1	<1	<1	<1
Total Copper	ug/L	2000, 1000	1	<1	18	<1	2	21	1
Total Iron	ug/L	100 AO	50	344	124	<50	<50	<50	<50
Total Lead	ug/L	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Manganese	ug/L	120, 20 AO	2	101	31	14	17	78	26
Total Molybdenum	ug/L		2	<2	<2	<2	<2	<2	<2
Total Nickel	ug/L		2	<2	<2	<2	<2	<2	<2
Total Phosphorous	mg/L		0.02	1.08	0.99	1.06	0.99	1.09	1.09
Total Selenium	ug/L	50	1	<1	<1	<1	<1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Strontium	ug/L	7000	5	9	9	9	9	10	10

Certified By:

Kaleigh Cullen



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ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	SOUTH QUEENS WATER TREATMENT FACILITY							
		G / S	RDL	WORKS DEPT	FACILITY	OLD COBB	SCHOOL ST.	BROOKLYN	RAW WATER
Total Thallium	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Total Tin	ug/L		2	<2	<2	<2	<2	<2	<2
Total Titanium	ug/L		2	<2	<2	<2	<2	<2	<2
Total Uranium	ug/L	20	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Vanadium	ug/L		2	<2	<2	<2	<2	<2	<2
Total Zinc	ug/L	5000 AO	5	<5	188	180	196	215	208

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Canadian Drinking Water Quality - updated 2025-04
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6580482-6580487 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.
 pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result
 Ion Balance is biased high, contributing parameters have been confirmed.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25X257953

PROJECT:

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CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

TOC (Water)

DATE RECEIVED: 2025-03-13

DATE REPORTED: 2025-03-27

Parameter	Unit	G / S	RDL	SOUTH QUEENS WATER TREATMENT FACILITY		OLD COBB BARN RD	SCHOOL ST. SAMPLE STATION	BROOKLYN SAMPLE STATION	RAW WATER
				WORKS DEPT	FACILITY	Water	Water	Water	Water
				2025-03-11 15:00	2025-03-11 13:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 15:00	2025-03-11 13:00
Total Organic Carbon	mg/L		0.5	5.7	2.0	2.4	1.9	2.0	2.3

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Kathleen Cullen



Exceedance Summary

AGAT WORK ORDER: 25X257953

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SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6580482	WORKS DEPT	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Total Iron	ug/L	100 AO	344
6580482	WORKS DEPT	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	True Color	TCU	15 AO	26
6580482	WORKS DEPT	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	5.52
6580483	SOUTH QUEENS WATER TREATMENT FACILITY	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Total Iron	ug/L	100 AO	124
6580483	SOUTH QUEENS WATER TREATMENT FACILITY	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.54
6580484	OLD COBB BARN RD	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.61
6580485	SCHOOL ST. SAMPLE STATION	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.61
6580486	BROOKLYN SAMPLE STATION	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.61
6580487	RAW WATER	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.61

Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X257953

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Mar 27, 2025

DUPLICATE

REFERENCE MATERIAL

METHOD BLANK SPIKE

MATRIX SPIKE

PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value			Recovery	Acceptable Limits		Recovery	Acceptable Limits	
							Measured Value	Acceptable Limits			Lower	Upper		Lower	Upper
								Lower	Upper						

Haloacetic Acids in Water

Monobromoacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	95%	70%	130%	60%	60%	130%	70%	70%	130%
Monochloroacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	92%	70%	130%	62%	60%	130%	79%	70%	130%
Dichloroacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	85%	70%	130%	86%	60%	130%	78%	70%	130%
Dibromoacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	92%	70%	130%	94%	60%	130%	86%	70%	130%
Trichloroacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	89%	70%	130%	87%	60%	130%	100%	70%	130%
Bromochloroacetic Acid	6580482	6580482	< 0.5	< 0.5	NA	< 0.5	106%	70%	130%	97%	60%	130%	107%	70%	130%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Trihalomethane Analysis - Water

Chloroform	5457	6577018	0.021	0.019	10.0%	< 0.001	92%	50%	140%	67%	60%	130%	93%	50%	140%
Bromodichloromethane	5457	6577018	0.018	0.014	25.0%	< 0.001	104%	50%	140%	128%	60%	130%	100%	50%	140%
Dibromochloromethane	5457	6577018	0.005	0.004	NA	< 0.001	92%	50%	140%	122%	60%	130%	124%	50%	140%
Bromoform	5457	6577018	<0.001	<0.001	NA	< 0.001	94%	50%	140%	101%	60%	130%	140%	50%	140%

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.
 The sample spikes and dups are not from the same sample ID.

Certified By:

*Ashleigh
Dussalt*

Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X257953

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Water Analysis															
RPT Date: Mar 27, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Standard Water Analysis + Total Metals

pH	6578224		6.81	6.82	0.1%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	6580485	6580485	2.9	3.0	1.2%	< 0.5	95%	80%	120%	103%	80%	120%	103%	80%	120%
Chloride	6580475		9	9	1.8%	< 1	84%	80%	120%	NA	80%	120%	89%	70%	130%
Fluoride	6580475		0.26	0.25	NA	< 0.12	83%	80%	120%	NA	80%	120%	NA	70%	130%
Sulphate	6580475		4	4	NA	< 2	80%	80%	120%	NA	80%	120%	88%	70%	130%
Alkalinity	6578224		57	57	0.2%	< 5	92%	80%	120%	NA			NA		
True Color	6580485	6580485	<5	<5	NA	< 5	82%	80%	120%	95%	80%	120%	NA		
Turbidity	6578237	6578237	3.44	3.48	1.2%	< 0.5	102%	80%	120%				NA		
Electrical Conductivity	6578224		837	849	1.4%	< 1	98%	90%	110%	NA			NA		
Nitrate as N	6580475		0.09	0.07	NA	< 0.05	91%	80%	120%	NA	80%	120%	92%	70%	130%
Nitrite as N	6580475		<0.05	<0.05	NA	< 0.05	98%	80%	120%	NA	80%	120%	99%	70%	130%
Ammonia as N	6583161		0.27	0.26	4.1%	< 0.03	99%	80%	120%	99%	80%	120%	102%	70%	130%
Ortho-Phosphate as P	6580485	6580485	0.24	0.24	2.1%	< 0.01	93%	80%	120%	98%	80%	120%	101%	80%	120%
Total Sodium	6580486	6580486	22.7	22.6	0.4%	< 0.1	107%	70%	130%	110%	80%	120%	NA	70%	130%
Total Potassium	6580486	6580486	0.4	0.4	NA	< 0.1	107%	70%	130%	109%	80%	120%	128%	70%	130%
Total Calcium	6580486	6580486	0.7	0.8	13.1%	< 0.1	102%	70%	130%	106%	80%	120%	126%	70%	130%
Total Magnesium	6580486	6580486	0.8	0.9	0.5%	< 0.1	107%	80%	130%	109%	80%	120%	NA	70%	130%
Bicarb. Alkalinity (as CaCO3)	6578224		57	57	0.2%	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6578224		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6578224		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6580486	6580486	36	36	0.1%	< 5	103%	70%	130%	117%	80%	120%	125%	70%	130%
Total Antimony	6580486	6580486	<2	<2	NA	< 2	94%	70%	130%	95%	80%	120%	110%	70%	130%
Total Arsenic	6580486	6580486	<2	<2	NA	< 2	104%	70%	130%	106%	80%	120%	120%	70%	130%
Total Barium	6580486	6580486	<5	<5	NA	< 5	91%	70%	130%	96%	80%	120%	100%	70%	130%
Total Beryllium	6580486	6580486	<2	<2	NA	< 2	116%	70%	130%	NA	80%	120%	NA	70%	130%
Total Bismuth	6580486	6580486	<2	<2	NA	< 2	96%	70%	130%	97%	80%	120%	110%	70%	130%
Total Boron	6580486	6580486	10	5	NA	< 5	105%	70%	130%	NA	80%	120%	NA	70%	130%
Total Cadmium	6580486	6580486	<0.09	<0.09	NA	< 0.09	95%	70%	130%	95%	80%	120%	102%	70%	130%
Total Chromium	6580486	6580486	<1	<1	NA	< 1	105%	70%	130%	109%	80%	120%	120%	70%	130%
Total Cobalt	6580486	6580486	<1	<1	NA	< 1	104%	70%	130%	104%	80%	120%	118%	70%	130%
Total Copper	6580486	6580486	21	21	1.7%	< 1	105%	70%	130%	107%	80%	120%	117%	70%	130%
Total Iron	6580486	6580486	<50	<50	NA	< 50	106%	70%	130%	106%	80%	120%	120%	70%	130%
Total Lead	6580486	6580486	<0.5	<0.5	NA	< 0.5	96%	70%	130%	97%	80%	120%	109%	70%	130%
Total Manganese	6580486	6580486	78	78	0.3%	< 2	103%	70%	130%	107%	80%	120%	120%	70%	130%
Total Molybdenum	6580486	6580486	<2	<2	NA	< 2	94%	70%	130%	93%	80%	120%	108%	70%	130%
Total Nickel	6580486	6580486	<2	<2	NA	< 2	102%	70%	130%	105%	80%	120%	117%	70%	130%
Total Phosphorous	6580486	6580486	1.09	1.05	4.5%	< 0.02	94%	70%	130%	104%	80%	120%	111%	70%	130%
Total Selenium	6580486	6580486	<1	<1	NA	< 1	105%	70%	130%	106%	80%	120%	113%	70%	130%
Total Silver	6580486	6580486	<0.1	<0.1	NA	< 0.1	94%	70%	130%	95%	80%	120%	99%	70%	130%

Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY
AGAT WORK ORDER: 25X257953
PROJECT:
ATTENTION TO: ADAM GRANT
SAMPLING SITE:
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Mar 27, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Total Strontium	6580486	6580486	10	10	NA	< 5	103%	70%	130%	105%	80%	120%	119%	70%	130%	
Total Thallium	6580486	6580486	<0.1	<0.1	NA	< 0.1	96%	70%	130%	96%	80%	120%	108%	70%	130%	
Total Tin	6580486	6580486	<2	<2	NA	< 2	94%	70%	130%	95%	80%	120%	111%	70%	130%	
Total Titanium	6580486	6580486	<2	<2	NA	< 2	105%	70%	130%	108%	80%	120%	NA	70%	130%	
Total Uranium	6580486	6580486	<0.2	<0.2	NA	< 0.2	93%	70%	130%	92%	80%	120%	103%	70%	130%	
Total Vanadium	6580486	6580486	<2	<2	NA	< 2	103%	70%	130%	105%	80%	120%	119%	70%	130%	
Total Zinc	6580486	6580486	215	209	2.8%	< 5	116%	70%	130%	99%	80%	120%	NA	70%	130%	

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

TOC (Water)

Total Organic Carbon	6601503		4.7	4.6	2.2%	< 0.5	94%	90%	110%	95%	90%	110%	96%	80%	120%
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Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

TOC (Water)

Total Organic Carbon	6580487	6580487	2.3	2.5	NA	< 0.5	90%	90%	110%	100%	90%	110%	113%	80%	120%
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Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: 

Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X257953

PROJECT:
ATTENTION TO: ADAM GRANT

SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Monobromoacetic Acid	ORG-91-5121	EPA 552.3	GC ECD
Monochloroacetic Acid	ORG-91-5121	EPA 552.3	GC ECD
Dichloroacetic Acid	ORG-91-5121	EPA 552.3	GC ECD
Dibromoacetic Acid	ORG-91-5121	EPA 552.3	GC ECD
Trichloroacetic Acid	ORG-91-5121	EPA 552.3	GC ECD
Haloacetic Acids (HAA5)	ORG-91-5121	EPA 552.3	GC ECD
Bromochloroacetic Acid	ORG-91-5121	EPA 552.3	GC/ECD
2-Bromopropionic Acid	ORG-91-5121	EPA 552.3	GC/ECD
Chloroform	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Bromodichloromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Dibromochloromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Bromoform	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Total Trihalomethanes	TO-0330	EPA SW-846 8260	GC/MS
Toluene-d8	TO-0330	EPA SW-846 5030 & 8260	GC/MS

Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY
AGAT WORK ORDER: 25X257953
PROJECT:
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER