AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
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CLIENT NAME: REGION OF QUEENS MUNICIPALITY
345 ROY TURNER ROAD
LIVERPOOL, NS B0T1K0
(902) 354-3455
ATTENTION TO: ADAM GRANT
PROJECT:
AGAT WORK ORDER: 25X341211
TRACE ORGANICS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor
WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer
DATE REPORTED: Sep 17, 2025
PAGES (INCLUDING COVER): 16
VERSION*: 1

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

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Certificate of Analysis

AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Haloacetic Acids (water)

DATE RECEIVED: 2025-09-05

DATE REPORTED: 2025-09-17

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	**Unit**	**G / S**	**RDL**	**7027014**	**7027032**	**7027033**	**7027034**	**7027035**	**7027036**
Chloroacetic Acid	ug/L		0.5	0.8	0.9	1.2	1.2	1.0	<0.5
Bromoacetic Acid	ug/L		0.5	3.7	1.9	3.9	4.1	3.6	<0.5
Dichloroacetic Acid	ug/L		0.5	6.7	5.4	9.1	10.9	13.1	<0.5
Trichloroacetic Acid	ug/L		0.5	3.9	2.5	5.8	7.2	9.0	<0.5
Bromochloroacetic Acid	ug/L		0.5	1.4	1.4	2.0	2.2	2.4	<0.5
Dibromoacetic Acid	ug/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Haloacetic Acids	ug/L	80	4.0	16.5	12.1	22.0	25.6	29.1	<4.0
HAA5	ug/L	80	4.0	15.1	10.7	20.0	23.4	26.7	<4.0
Surrogate	**Unit**	**Acceptable Limits**							
2-Bromobutanoic acid	%	70-130		**59**	**60**	70	73	76	76

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.

7027014-7027032 HAA5 is a calculated parameter. The calculated parameter is non-accredited. The component parameters of the calculation are accredited. Surrogate not within acceptance limits due to the nature of the sample.

7027033-7027036 HAA5 is a calculated parameter. The calculated parameter is non-accredited. The component parameters of the calculation are accredited.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trihalomethane Analysis - Water

DATE RECEIVED: 2025-09-05

DATE REPORTED: 2025-09-17

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	**Unit**	**G / S**	**RDL**	**7027014**	**7027032**	**7027033**	**7027034**	**7027035**	**7027036**
Chloroform	mg/L		0.0010	0.0239	0.0143	0.0254	0.0316	0.0409	<0.001
Bromodichloromethane	mg/L		0.001	0.011	0.006	0.012	0.014	0.017	<0.001
Dibromochloromethane	mg/L		0.001	0.001	0.001	0.002	0.002	0.002	<0.001
Bromoform	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Trihalomethanes	mg/L	0.100	0.001	0.036	0.021	0.039	0.048	0.060	<0.001
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	%	50-140		85	85	86	84	78	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to 2024 Canadian Drinking Water Quality MAC (AO)
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.

7027014-7027036 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 Dussault

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AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Ammonia as N (TO)

DATE RECEIVED: 2025-09-05

DATE REPORTED: 2025-09-17

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	**Unit**	**G / S**	**RDL**	**7027014**	**7027032**	**7027033**	**7027034**	**7027035**	**7027036**
Ammonia as N	mg/L		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

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

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Kaleigh Cullen

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AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (CGY) ug/L

DATE RECEIVED: 2025-09-05

DATE REPORTED: 2025-09-17

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	Unit	G / S	RDL	7027014	7027032	7027033	7027034	7027035	7027036
pH				6.16	5.84	5.83	5.82	5.85	5.42
Reactive Silica as SiO2	mg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	mg/L		1	10	11	10	10	10	6
Fluoride	mg/L		0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Sulphate	mg/L		2	3	3	3	3	3	<2
Alkalinity	mg/L		5	5	6	6	<5	6	<5
True Color	TCU		5	<5	<5	<5	<5	<5	<5
Turbidity	NTU		0.50	10.4	2.0	1.0	1.5	1.0	1.6
Electrical Conductivity	umho/cm		1	56	55	55	55	56	30
Nitrate + Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Organic Carbon	mg/L		0.50	1.6	1.6	1.6	1.5	1.6	2.9
Ortho-Phosphate as P	mg/L		0.01	0.20	0.20	0.28	0.23	0.22	<0.01
Bicarb. Alkalinity (as CaCO3)	mg/L		5	5	6	6	<5	6	<5
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	28	29	28	24	29	12
Hardness	mg/L			3.1	3.1	3.1	3.1	3.1	3.1
Langelier Index (@20C)	NA			-5.07	-5.31	-5.32	-5.41	-5.30	-5.79
Langelier Index (@ 4C)	NA			-5.39	-5.63	-5.64	-5.73	-5.62	-6.11
Saturation pH (@ 20C)	NA			11.2	11.2	11.2	11.2	11.2	11.2
Saturation pH (@ 4C)	NA			11.6	11.5	11.5	11.6	11.5	11.5
Anion Sum	me/L			0.44	0.49	0.46	0.34	0.46	0.17
Cation sum	me/L			0.52	0.51	0.51	0.51	0.55	0.30
% Difference/ Ion Balance	%			7.8	1.9	4.7	19.2	8.7	28.2

Certified By: Kaleigh Cullen

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Certificate of Analysis

AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (CGY) ug/L

DATE RECEIVED: 2025-09-05

DATE REPORTED: 2025-09-17

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	Unit	G / S	RDL	7027014	7027032	7027033	7027034	7027035	7027036
Total Aluminum	ug/L	2900	4.000	37.7	12.4	10.5	8.14	11.1	52.3
Total Antimony	ug/L	6	1	<1	<1	<1	<1	<1	<1
Total Arsenic	ug/L	10	1	<1	<1	<1	<1	<1	<1
Total Barium	ug/L	2000	50	<50	<50	<50	<50	<50	<50
Total Beryllium	ug/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Bismuth	ug/L		1	<1	<1	<1	<1	<1	<1
Total Boron	ug/L	5000	10	<10	<10	<10	<10	<10	<10
Total Cadmium	ug/L	7	0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Total Chromium	ug/L	50	0.5	<0.5	0.6	0.7	<0.5	<0.5	<0.5
Total Cobalt	ug/L		0.01	<0.01	0.03	0.02	0.01	<0.01	0.09
Total Copper	ug/L	2000	0.8	12.5	17.6	1.9	1.7	<0.8	<0.8
Total Iron	ug/L		10	200	<10	11	38	<10	232
Total Lead	ug/L	5	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.151
Total Manganese	ug/L	120	0.2	3.0	4.0	2.3	1.5	0.6	15.7
Total Molybdenum	ug/L		1	<1	<1	<1	<1	<1	<1
Total Nickel	ug/L		3.000	<3.000	<3.000	<3.000	<3.000	<3.000	<3.000
Total Selenium	ug/L	50	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Silver	ug/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Strontium	ug/L	7000	1	5	5	6	6	5	5
Total Thallium	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Tin	ug/L		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Uranium	ug/L	20	1	<1	<1	<1	<1	<1	<1
Total Vanadium	ug/L		1	<1	<1	<1	<1	<1	<1
Total Zinc	ug/L		4	222	248	227	173	193	5
Total Sodium	mg/L		0.02	10.3	10.3	10.2	10.1	10.6	4.79
Total Potassium	mg/L		0.02	0.20	0.20	0.20	0.20	0.21	0.20

Certified By: Kaleigh Cullen

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Certificate of Analysis

AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (CGY) ug/L

DATE RECEIVED: 2025-09-05 **DATE REPORTED: 2025-09-17**

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	Unit	G / S	RDL	7027014	7027032	7027033	7027034	7027035	7027036
Total Calcium	mg/L		0.05	0.42	0.41	0.44	0.45	0.40	0.39
Total Magnesium	mg/L		0.005	0.509	0.531	0.517	0.505	0.491	0.510
Ammonia as N	mg/L		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to 2024 Canadian Drinking Water Quality MAC
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.

7027014-7027033 % 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

7027034 % 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
The cation and anion sums are at, or below, 1 me/L, therefore the acceptable criteria is a difference of less than 0.3me/L.

7027035 % 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

7027036 % 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
The cation and anion sums are at, or below, 1 me/L, therefore the acceptable criteria is a difference of less than 0.3me/L.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By: Kaleigh Cullen

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Certificate of Analysis

AGAT WORK ORDER: 25X341211

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Water Analysis - TOC

DATE RECEIVED: 2025-09-05 **DATE REPORTED: 2025-09-17**

SAMPLE DESCRIPTION:				Works Dept.	South Queens Water Treatment Facility	Old Cobb Barn Rd	School St. Sample Station	Brooklyn Sample Station	Raw Water
SAMPLE TYPE:				Drinking Water	Drinking Water	Drinking Water	Drinking Water	Drinking Water	Water
DATE SAMPLED:				2025-09-03 11:30	2025-09-03 11:00	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:30	2025-09-03 11:00
Parameter	**Unit**	**G / S**	**RDL**	**7027014**	**7027032**	**7027033**	**7027034**	**7027035**	**7027036**
Total Organic Carbon	mg/L		0.5	1.7	1.8	1.7	1.7	1.9	3.1

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

Analysis performed at AGAT Calgary (unless marked by *)

Certified By: Kaleigh Cullen

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Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Sep 17, 2025

PARAMETER	Batch	Sample Id	DUPLICATE Dup #1	DUPLICATE Dup #2	DUPLICATE RPD	Method Blank	REFERENCE MATERIAL Measured Value	REFERENCE MATERIAL Acceptable Limits Lower	REFERENCE MATERIAL Acceptable Limits Upper	METHOD BLANK SPIKE Recovery	METHOD BLANK SPIKE Acceptable Limits Lower	METHOD BLANK SPIKE Acceptable Limits Upper	MATRIX SPIKE Recovery	MATRIX SPIKE Acceptable Limits Lower	MATRIX SPIKE Acceptable Limits Upper
Haloacetic Acids (water)															
Chloroacetic Acid	1	999	13.0	12.4	4.7%	< 0.5	123%	70%	130%	65%	60%	130%	70%	60%	130%
Bromoacetic Acid	1	999	15.5	15.4	0.6%	< 0.5	122%	70%	130%	78%	60%	130%	NA	60%	130%
Dichloroacetic Acid	1	999	22.8	21.4	6.3%	< 0.5	131%	70%	130%	114%	60%	130%	60%	60%	130%
Trichloroacetic Acid	1	999	18.4	12.0	30.0%	< 0.5	108%	70%	130%	92%	60%	130%	NA	60%	130%
Bromochloroacetic Acid	1	999	20.5	18.9	8.1%	< 0.5	113%	70%	130%	103%	60%	130%	85%	60%	130%
Dibromoacetic Acid	1	999	20.6	16.3	23.3%	< 0.5	111%	70%	130%	103%	60%	130%	90%	60%	130%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.
Certified Reference Material: More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Trihalomethane Analysis - Water															
Chloroform	5623	7017845	0.0052	0.0054	3.8%	< 0.0010	89%	50%	140%	92%	60%	130%	103%	50%	140%
Bromodichloromethane	5623	7017845	0.002	0.003	NA	< 0.001	120%	50%	140%	115%	60%	130%	115%	50%	140%
Dibromochloromethane	5623	7017845	<0.001	<0.001	NA	< 0.001	111%	50%	140%	103%	60%	130%	102%	50%	140%
Bromoform	5623	7017845	<0.001	<0.001	NA	< 0.001	114%	50%	140%	100%	60%	130%	98%	50%	140%

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

Certified By: Ashleigh Dussault

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Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Sep 17, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Standard Water Analysis + Total Metals (CGY) ug/L															
pH	7026338		6.08	6.08	0.1%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	7023288		14.3	14.0	2.3%	< 0.5	114%	80%	120%	NA	80%	120%	95%	80%	120%
Chloride	7027032	7027032	11	10	5.1%	< 1	93%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	7027032	7027032	<0.12	<0.12	NA	< 0.12	103%	80%	120%	NA	80%	120%	112%	70%	130%
Sulphate	7027032	7027032	3	3	NA	< 2	98%	80%	120%	NA	80%	120%	95%	70%	130%
Alkalinity	7026338		33	34	2.1%	< 5	104%	80%	120%	NA			NA		
True Color	7023288		6	6	NA	< 5	103%	80%	120%	102%	80%	120%	NA		
Turbidity	7025212	7025212	1.5	1.7	NA	< 0.5	102%	80%	120%	NA			NA		
Electrical Conductivity	7026338		408	408	0.0%	< 1	99%	90%	110%	NA			NA		
Nitrate as N	7027032	7027032	<0.05	<0.05	NA	< 0.05	108%	80%	120%	NA	80%	120%	117%	70%	130%
Nitrite as N	7027032	7027032	<0.05	<0.05	NA	< 0.05	110%	80%	120%	NA	80%	120%	93%	70%	130%
Total Organic Carbon	7024818		3.0	3.0	0.7%	< 0.5	84%	80%	120%	NA	80%	120%	97%	80%	120%
Ortho-Phosphate as P	7023288		<0.01	<0.01	NA	< 0.01	98%	80%	120%	96%	80%	120%	97%	80%	120%
Bicarb. Alkalinity (as CaCO3)	7026338		33	34	2.1%	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	7026338		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	7026338		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	7022538	7022538	18.0	20.4	NA	<4.00	104%	70%	130%	NA	80%	120%	109%	70%	130%
Total Antimony	7022538	7022538	<1	<1	NA	< 1	92%	70%	130%	NA	80%	120%	90%	70%	130%
Total Arsenic	7022538	7022538	<1	<1	NA	< 1	101%	70%	130%	NA	80%	120%	101%	70%	130%
Total Barium	7022538	7022538	<50	<50	NA	< 50	98%	70%	130%	NA	80%	120%	94%	70%	130%
Total Beryllium	7022538	7022538	<0.5	<0.5	NA	< 0.5	93%	70%	130%	NA	80%	120%	97%	70%	130%
Total Bismuth	7022538	7022538	<1	<1	NA	< 1	103%	70%	130%	NA	80%	120%	99%	70%	130%
Total Boron	7022538	7022538	<10	<10	NA	< 10	97%	70%	130%	NA	80%	120%	95%	70%	130%
Total Cadmium	7022538	7022538	<0.016	<0.016	NA	< 0.016	100%	70%	130%	NA	80%	120%	98%	70%	130%
Total Chromium	7022538	7022538	1.3	1.0	NA	< 0.5	103%	70%	130%	NA	80%	120%	102%	70%	130%
Total Cobalt	7022538	7022538	0.04	0.05	NA	< 0.01	107%	70%	130%	NA	80%	120%	107%	70%	130%
Total Copper	7022538	7022538	<0.8	<0.8	NA	< 0.8	110%	70%	130%	NA	80%	120%	109%	70%	130%
Total Iron	7022538	7022538	77	80	2.9%	< 10	107%	70%	130%	NA	80%	120%	107%	70%	130%
Total Lead	7022538	7022538	<0.100	<0.100	NA	< 0.100	100%	70%	130%	NA	80%	120%	97%	70%	130%
Total Manganese	7022538	7022538	26.9	28.5	5.8%	< 0.2	103%	70%	130%	NA	80%	120%	102%	70%	130%
Total Molybdenum	7022538	7022538	<1	<1	NA	< 1	90%	70%	130%	NA	80%	120%	89%	70%	130%
Total Nickel	7022538	7022538	<3.000	<3.000	NA	< 3.000	108%	70%	130%	NA	80%	120%	106%	70%	130%
Total Selenium	7022538	7022538	<0.5	<0.5	NA	< 0.5	108%	70%	130%	NA	80%	120%	106%	70%	130%
Total Silver	7022538	7022538	<0.05	<0.05	NA	< 0.05	108%	70%	130%	NA	80%	120%	105%	70%	130%
Total Strontium	7022538	7022538	38	39	5.1%	< 1	98%	70%	130%	NA	80%	120%	96%	70%	130%
Total Thallium	7022538	7022538	<0.1	<0.1	NA	< 0.1	101%	70%	130%	NA	80%	120%	94%	70%	130%
Total Tin	7022538	7022538	<0.2	<0.2	NA	< 0.2	93%	70%	130%	NA	80%	120%	91%	70%	130%
Total Uranium	7022538	7022538	<1	<1	NA	< 1	97%	70%	130%	NA	80%	120%	95%	70%	130%
Total Vanadium	7022538	7022538	<1	<1	NA	< 1	98%	70%	130%	NA	80%	120%	98%	70%	130%

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Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 17, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Zinc	7022538	7022538	23	<4	NA	< 4	125%	70%	130%	NA	80%	120%	107%	70%	130%
Total Sodium	7022538	7022538	9.65	9.99	3.5%	< 0.02	104%	70%	130%	NA	80%	120%	108%	70%	130%
Total Potassium	7022538	7022538	0.63	0.66	4.2%	< 0.02	99%	70%	130%	NA	80%	120%	99%	70%	130%
Total Calcium	7022538	7022538	14.5	15.4	6.2%	< 0.05	99%	70%	130%	NA	80%	120%	97%	70%	130%
Total Magnesium	7022538	7022538	1.68	1.75	4.0%	< 0.005	104%	70%	130%	NA	80%	120%	104%	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.

Water Analysis - TOC

Total Organic Carbon	7040244	7040244	10.8	10.7	1.2%	< 0.5	95%	80%	120%	94%	80%	120%	94%	80%	120%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Ammonia as N (TO)

Ammonia as N	7026355		<0.02	<0.02	NA	< 0.02	110%	70%	130%	101%	80%	120%	99%	70%	130%

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

Certified By: Kaleigh Cullen

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QC Exceedance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

RPT Date: Sep 17, 2025		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
Haloacetic Acids (water)										
Dichloroacetic Acid	999	131%	70%	130%	114%	60%	130%	60%	60%	130%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.
Certified Reference Material: More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Chloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Trichloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Bromochloroacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
Dibromoacetic Acid	ORG-120-5110	EPA 552.3	GC/ECD
2-Bromobutanoic acid	ORG-120-5110	EPA 552.3	GC/ECD
Total Haloacetic Acids	ORG-120-5110	EPA 552.3	GC/ECD
HAA5	ORG-120-5110	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

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Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY **AGAT WORK ORDER: 25X341211**

PROJECT: **ATTENTION TO: ADAM GRANT**

SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO2	INOR-121-6027	SM 4500-SiO2 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
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Bicarb. Alkalinity (as CaCO3)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO3)	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	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Antimony	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Arsenic	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Barium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Beryllium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Bismuth	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Boron	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cadmium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Chromium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cobalt	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Copper	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Iron	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Lead	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Manganese	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Molybdenum	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP/MS
Total Nickel	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Selenium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Silver	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Strontium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Thallium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Tin	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Uranium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS

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Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X341211

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Vanadium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Zinc	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Sodium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Potassium	WATR 0200; INST 0141	SM 3030 E; SM 31205B	ICP-MS
Total Calcium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Magnesium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Ammonia as N	INOR-121-6047	SM 4500-NH3 H	COLORIMETER
Total Organic Carbon	INST 0170	SM 5310 B	COMBUSTION

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 8.6, 11.4, 11.1
Hold Time:
AGAT Job Number: 25X341211
Notes: 25 SEP 5 8:01AM

Report Information
Company: Region of Queens Municipality
Contact: Adam Grant
Address: 142 Hank Snow Drive
Liverpool NS
Phone: 902-350-2046 Fax: 902-354-7473
Client Project #:
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Adam Grant
Email: agrant@regionofqueens.com
2. Name: Ben Underhill
Email: bunderhill@aiwuc.ca

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ■ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ■ / No ☐
Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ■ CDWQ
☐ Industrial ☐ NSEQS-Cont Sites
☐ Commercial ☐ HRM 101
☐ Res/Park ☐ Storm Water
☐ Agricultural ☐ Waste Water
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment
Works Dept	Sept/3/25 11:30am	DW	9	
South Queens Water Treatment Facility	Sept/3/25 11am	DW	9	
Old Cobb Barn Rd	Sept/3/25 11:90am	DW	9	
School St. Sample Station	Sept/3/25 12:10pm	DW	9	
Brooklyn Sample Station	Sept/3/25 11:10am	DW	9	
Raw Water	Sept/3/25 11am	RW	9	

Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	BOD CBOD	pH	TSS TDS VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC P/A MPN MF	HPC – Pseudomonas	Fecal Coliform – MPN MF	Other:	Other:	Hazardous (Y/N)
	✓	✓												✓	✓								
	✓	✓												✓	✓								
	✓	✓												✓	✓								
	✓	✓												✓	✓								
	✓	✓												✓	✓								
	✓	✓												✓	✓								

Samples Relinquished By (Print Name): Adam Schnare
Date/Time: Sept/4/25
Samples Relinquished By (Sign):
Date/Time: Sept/4/25
Samples Received By (Print Name):
Date/Time:
Samples Received By (Sign):
Date/Time:

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

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No:

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