AGAT Laboratories

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Dartmouth, Nova Scotia
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FAX (902)468-8924
http://www.agatlabs.com

CLIENT NAME: REGION OF QUEENS MUNICIPALITY
345 ROY TURNER ROAD
LIVERPOOL, NS B0T1K0
(902) 354-3455
ATTENTION TO: ADAM GRANT
PROJECT:
AGAT WORK ORDER: 25X309003
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer
DATE REPORTED: Jun 23, 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

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: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Haloacetic Acids in Water

DATE RECEIVED: 2025-06-12

DATE REPORTED: 2025-06-23

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:				2025-06-10 09:00	2025-06-10 10:30	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 10:30
Parameter	**Unit**	**G / S**	**RDL**	**6810350**	**6810353**	**6810354**	**6810355**	**6810356**	**6810357**
Monobromoacetic Acid	ug/L		0.5	12	<0.5	<0.5	14	17	7.6
Monochloroacetic Acid	ug/L		0.5	<0.5	<0.5	12	<0.5	<0.5	<0.5
Dichloroacetic Acid	ug/L		0.5	12	<0.5	<0.5	14	14	10
Dibromoacetic Acid	ug/L		0.5	<0.5	<0.5	0.5	0.5	0.6	<0.5
Trichloroacetic Acid	ug/L		0.5	13	0.6	11	17	19	8.9
Haloacetic Acids (HAA5)	ug/L	80	2.0	37	<2.0	24	46	50	27
Bromochloroacetic Acid	ug/L		0.5	2.9	<0.5	2.9	3.4	4.0	2.8
Surrogate	**Unit**	**Acceptable Limits**							
2-Bromopropionic Acid	%	70-130		91	77	80	70	77	82

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.

6810350-6810357 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: R. Chakraberty

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AGAT WORK ORDER: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trihalomethane Analysis - Water

DATE RECEIVED: 2025-06-12

DATE REPORTED: 2025-06-23

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:				2025-06-10 09:00	2025-06-10 10:30	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 10:30
Parameter	**Unit**	**G / S**	**RDL**	**6810350**	**6810353**	**6810354**	**6810355**	**6810356**	**6810357**
Chloroform	mg/L		0.001	0.030	<0.001	0.026	0.034	0.030	0.023
Bromodichloromethane	mg/L		0.001	0.007	<0.001	0.006	0.009	0.008	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	0.037	<0.001	0.032	0.043	0.038	0.029
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	%	50-140		85	83	80	87	89	84

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.

6810350-6810357 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: R. Chakraberty

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AGAT WORK ORDER: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-06-12

DATE REPORTED: 2025-06-23

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:				2025-06-10 09:00	2025-06-10 10:30	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 10:30
Parameter	Unit	G / S	RDL	6810350	6810353	6810354	6810355	6810356	6810357
pH		7.0-10.5		**6.10**	**5.40**	**6.01**	**5.98**	**5.96**	**6.00**
Reactive Silica as SiO2	mg/L		0.5	1.1	1.1	1.1	1.1	0.9	1.0
Chloride	mg/L	250 AO	1	14	6	14	14	15	14
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	4	<2	5	5	5	5
Alkalinity	mg/L		5	5	<5	6	6	6	6
True Color	TCU	15 AO	5	<5	**25**	<5	<5	<5	<5
Turbidity	NTU	1.0	0.5	<5	**3.47**	0.94	<5	<5	0.58
Electrical Conductivity	umho/cm		1	76	29	76	76	76	78
Nitrate + Nitrite as N	mg/L		0.05	0.17	0.15	0.20	0.19	0.18	0.17
Nitrate as N	mg/L	10	0.05	0.17	0.15	0.20	0.19	0.18	0.17
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
Total Organic Carbon	mg/L		0.50	1.5	4.7	1.9	1.7	1.6	1.6
Ortho-Phosphate as P	mg/L		0.01	0.23	<0.01	0.24	0.22	0.24	0.21
Total Sodium	mg/L	200 AO	0.1	14.2	4.1	13.7	14.4	13.4	13.7
Total Potassium	mg/L		0.1	0.3	0.3	0.3	0.3	0.3	0.3
Total Calcium	mg/L		0.1	0.5	0.4	0.4	0.5	0.3	0.5
Total Magnesium	mg/L		0.1	0.5	0.5	0.4	0.5	0.5	0.5
Bicarb. Alkalinity (as CaCO3)	mg/L		5	5	<5	6	6	6	6
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	38	13	39	39	39	39
Hardness	mg/L			3.3	3.1	2.6	3.3	2.8	3.3
Langelier Index (@20C)	NA			-5.05	-5.81	-5.16	-5.09	-5.33	-5.07
Langelier Index (@ 4C)	NA			-5.37	-6.13	-5.48	-5.41	-5.65	-5.39

Certified By: Kaleigh Cullen

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Certificate of Analysis

AGAT WORK ORDER: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-06-12

DATE REPORTED: 2025-06-23

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:				2025-06-10 09:00	2025-06-10 10:30	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 10:30
Parameter	Unit	G / S	RDL	6810350	6810353	6810354	6810355	6810356	6810357
Saturation pH (@ 20C)	NA			11.1	11.2	11.2	11.1	11.3	11.1
Saturation pH (@ 4C)	NA			11.5	11.5	11.5	11.4	11.6	11.4
Anion Sum	me/L			0.59	0.18	0.63	0.63	0.66	0.63
Cation sum	me/L			0.71	0.30	0.67	0.71	0.66	0.68
% Difference/ Ion Balance	%			8.9	24.7	2.5	5.9	0.2	3.9
Total Aluminum	ug/L	2900, 100	5	24	244	25	24	25	25
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	<5	<5	<5	<5	<5	<5
Total Cadmium	ug/L	7	0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
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	19	<1	<1	3	<1	35
Total Iron	ug/L	100 AO	50	**109**	**478**	<50	65	<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	6	77	3	4	<2	47
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	0.49	0.48	0.46	0.51	0.43	0.52
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	6	6	6	6	6	5
Total Thallium	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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AGAT WORK ORDER: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-06-12

DATE REPORTED: 2025-06-23

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:				2025-06-10 09:00	2025-06-10 10:30	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 11:00	2025-06-10 10:30
Parameter	**Unit**	**G / S**	**RDL**	**6810350**	**6810353**	**6810354**	**6810355**	**6810356**	**6810357**
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	190	7	186	184	228	208

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.

6810350 % 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

6810353 % 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.

6810354-6810357 % 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

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Kaleigh Cullen

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Exceedance Summary

AGAT WORK ORDER: 25X309003

PROJECT:

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

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SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6810350	Works Dept.	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Total Iron	ug/L	100 AO	109
6810350	Works Dept.	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.10
6810353	South Queens Water Treatment Facility	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Total Iron	ug/L	100 AO	478
6810353	South Queens Water Treatment Facility	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	True Color	TCU	15 AO	25
6810353	South Queens Water Treatment Facility	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	Turbidity	NTU	1.0	3.47
6810353	South Queens Water Treatment Facility	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	5.40
6810354	Old Cobb Barn Rd.	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.01
6810355	School St. Sample Station	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	5.98
6810356	Brooklyn Sample Station	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	5.96
6810357	Raw Water	NS-CDWQ incl [AO]	Standard Water Analysis + Total Metals	pH		7.0-10.5 OG	6.00

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Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X309003

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Jun 23, 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
Haloacetic Acids in Water															
Monobromoacetic Acid	6807342		5.3	4.8	9.9%	< 0.5	90%	70%	130%	74%	60%	130%	73%	70%	130%
Monochloroacetic Acid	6807342		< 0.5	< 0.5	NA	< 0.5	98%	70%	130%	60%	60%	130%	70%	70%	130%
Dichloroacetic Acid	6807342		2.3	2.4	NA	< 0.5	85%	70%	130%	78%	60%	130%	78%	70%	130%
Dibromoacetic Acid	6807342		< 0.5	< 0.5	NA	< 0.5	87%	70%	130%	77%	60%	130%	77%	70%	130%
Trichloroacetic Acid	6807342		27	27	0.0%	< 0.5	84%	70%	130%	85%	60%	130%	79%	70%	130%
Bromochloroacetic Acid	6807342		0.7	0.7	NA	< 0.5	101%	70%	130%	94%	60%	130%	94%	70%	130%
Trihalomethane Analysis - Water															
Chloroform	8422	6807566	<0.001	<0.001	NA	< 0.001	102%	50%	140%	99%	60%	130%	99%	50%	140%
Bromodichloromethane	8422	6807566	<0.001	<0.001	NA	< 0.001	126%	50%	140%	127%	60%	130%	128%	50%	140%
Dibromochloromethane	8422	6807566	<0.001	<0.001	NA	< 0.001	111%	50%	140%	115%	60%	130%	121%	50%	140%
Bromoform	8422	6807566	<0.001	<0.001	NA	< 0.001	99%	50%	140%	102%	60%	130%	109%	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: R. Chakraberty

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SAMPLED BY:

Water Analysis

RPT Date: Jun 23, 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															
pH	6810355	6810355	5.98	5.98	0.0%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	6804928		4.0	4.1	2.7%	< 0.5	99%	80%	120%	103%	80%	120%	103%	80%	120%
Chloride	6810350	6810350	14	14	2.8%	< 1	94%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	6810350	6810350	<0.12	<0.12	NA	< 0.12	102%	80%	120%	NA	80%	120%	96%	70%	130%
Sulphate	6810350	6810350	4	4	NA	< 2	109%	80%	120%	NA	80%	120%	103%	70%	130%
Alkalinity	6810355	6810355	6	6	NA	< 5	101%	80%	120%	NA			NA		
True Color	6804928		<5	<5	NA	< 5	95%	80%	120%	102%	80%	120%	NA		
Turbidity	6810355	6810355	<0.5	<0.5	NA	< 0.5	100%	80%	120%	NA			NA		
Electrical Conductivity	6810355	6810355	76	76	0.3%	< 1	99%	90%	110%	NA			NA		
Nitrate as N	6810350	6810350	0.17	<0.05	NA	< 0.05	112%	80%	120%	NA	80%	120%	89%	70%	130%
Nitrite as N	6810350	6810350	<0.05	<0.05	NA	< 0.05	97%	80%	120%	NA	80%	120%	91%	70%	130%
Ammonia as N	6814348		<0.03	<0.03	NA	< 0.03	98%	80%	120%	101%	80%	120%	105%	70%	130%
Total Organic Carbon	6811192		<0.50	<0.50	NA	< 0.5	96%	80%	120%	NA	80%	120%	97%	80%	120%
Ortho-Phosphate as P	6804928		<0.01	<0.01	NA	< 0.01	99%	80%	120%	102%	80%	120%	102%	80%	120%
Total Sodium	6817737		12.1	11.7	3.1%	< 0.1	108%	70%	130%	108%	80%	120%	94%	70%	130%
Total Potassium	6817737		0.4	0.4	NA	< 0.1	109%	70%	130%	112%	80%	120%	103%	70%	130%
Total Calcium	6817737		14.1	13.1	7.7%	< 0.1	104%	70%	130%	115%	80%	120%	100%	70%	130%
Total Magnesium	6817737		0.7	0.7	1.8%	< 0.1	104%	80%	130%	105%	80%	120%	97%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6810355	6810355	6	6	NA	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6810355	6810355	<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6810355	6810355	<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6817737		49	52	6.2%	< 5	125%	70%	130%	110%	80%	120%	93%	70%	130%
Total Antimony	6817737		<2	<2	NA	< 2	95%	70%	130%	96%	80%	120%	100%	70%	130%
Total Arsenic	6817737		<2	<2	NA	< 2	100%	70%	130%	101%	80%	120%	95%	70%	130%
Total Barium	6817737		<5	<5	NA	< 5	94%	70%	130%	96%	80%	120%	89%	70%	130%
Total Beryllium	6817737		<2	<2	NA	< 2	99%	70%	130%	98%	80%	120%	91%	70%	130%
Total Bismuth	6817737		<2	<2	NA	< 2	102%	70%	130%	102%	80%	120%	97%	70%	130%
Total Boron	6817737		10	9	NA	< 5	94%	70%	130%	105%	80%	120%	91%	70%	130%
Total Cadmium	6817737		<0.09	<0.09	NA	< 0.09	98%	70%	130%	98%	80%	120%	93%	70%	130%
Total Chromium	6817737		<1	<1	NA	< 1	103%	70%	130%	104%	80%	120%	96%	70%	130%
Total Cobalt	6817737		<1	<1	NA	< 1	101%	70%	130%	103%	80%	120%	95%	70%	130%
Total Copper	6817737		< 1	< 1	NA	< 1	101%	70%	130%	100%	80%	120%	95%	70%	130%
Total Iron	6817737		<50	<50	NA	< 50	103%	70%	130%	105%	80%	120%	97%	70%	130%
Total Lead	6817737		<0.5	<0.5	NA	< 0.5	103%	70%	130%	102%	80%	120%	98%	70%	130%
Total Manganese	6817737		3	3	NA	< 2	105%	70%	130%	104%	80%	120%	97%	70%	130%
Total Molybdenum	6817737		<2	<2	NA	< 2	98%	70%	130%	99%	80%	120%	102%	70%	130%
Total Nickel	6817737		< 2	< 2	NA	< 2	100%	70%	130%	101%	80%	120%	94%	70%	130%
Total Phosphorous	6817737		0.46	0.54	16.0%	< 0.02	100%	70%	130%	101%	80%	120%	101%	70%	130%
Total Selenium	6817737		<1	<1	NA	< 1	99%	70%	130%	103%	80%	120%	98%	70%	130%

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Quality Assurance

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X309003

PROJECT:

ATTENTION TO: ADAM GRANT

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jun 23, 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 Silver	6817737		<0.1	<0.1	NA	< 0.1	99%	70%	130%	97%	80%	120%	94%	70%	130%
Total Strontium	6817737		11	11	NA	< 5	102%	70%	130%	104%	80%	120%	96%	70%	130%
Total Thallium	6817737		<0.1	<0.1	NA	< 0.1	103%	70%	130%	102%	80%	120%	97%	70%	130%
Total Tin	6817737		<2	<2	NA	< 2	96%	70%	130%	97%	80%	120%	102%	70%	130%
Total Titanium	6817737		<2	<2	NA	< 2	101%	70%	130%	105%	80%	120%	105%	70%	130%
Total Uranium	6817737		<0.2	<0.2	NA	< 0.2	99%	70%	130%	98%	80%	120%	94%	70%	130%
Total Vanadium	6817737		<2	<2	NA	< 2	102%	70%	130%	103%	80%	120%	96%	70%	130%
Total Zinc	6817737		<5	<5	NA	< 5	124%	70%	130%	104%	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.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Standard Water Analysis + Total Metals

Ammonia as N	6810976		<0.03	<0.03	NA	< 0.03	98%	80%	120%	100%	80%	120%	97%	70%	130%
Total Organic Carbon	6810354	6810354	1.9	1.7	NA	< 0.5	97%	80%	120%	NA	80%	120%	95%	80%	120%

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

Standard Water Analysis + Total Metals

Reactive Silica as SiO2	6810976		11.5	11.4	1.5%	< 0.5	98%	80%	120%	106%	80%	120%	109%	80%	120%
True Color	6810976		<5	<5	NA	< 5	90%	80%	120%	100%	80%	120%	NA		
Ortho-Phosphate as P	6810976		0.58	0.56	1.8%	< 0.01	102%	80%	120%	98%	80%	120%	109%	80%	120%

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

Certified By: Kaleigh Cullen

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Method Summary

CLIENT NAME: REGION OF QUEENS MUNICIPALITY

AGAT WORK ORDER: 25X309003

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

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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 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
Ammonia as N	INOR-121-6047	SM 4500-NH3 H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
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 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	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

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
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

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 13.3, 13.9, 12.6
Hold Time:
AGAT Job Number: 25X309003
Notes: COC not signed 25 JUN 12 8:44AM

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	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)
Works Dept	June/10/25 9am	DW				✓	✓												✓	✓								
South Queens Water Treatment Facility	June/10/25 10:30am	DW				✓	✓												✓	✓								
Old Cobb Barn Rd	June/10/25 11am	DW				✓	✓												✓	✓								
School St. Sample Station	June/10/25 11am	DW				✓	✓												✓	✓								
Brooklyn Sample Station	June/10/25 11am	DW				✓	✓												✓	✓								
Raw Water	June/10/25 10:30am	RW				✓	✓												✓	✓								

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name):	Date/Time
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time

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

Page 1 of 1
N°:

Document ID: DIV-133-1502.002 Date revised: May 19, 2016