

Water Well Survey Report

Highway 400 – Highway 404 Link (Bradford Bypass)

Ontario Ministry of Transportation

60636190

June 19, 2023

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Quality Information

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Ontario Ministry of Transportation

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Ref: 60636190

AECOM

1. Introduction

The Ontario Ministry of Transportation (the Ministry) has retained AECOM Canada Ltd. (AECOM) to undertake a Preliminary Design and project-specific assessment of environmental impacts for the proposed Highway 400 – Highway 404 Link (Bradford Bypass). The Bradford Bypass (the project) is being assessed in accordance with Ontario Regulation 697/21 (the Regulation).

The Bradford Bypass is part of Ontario's plan to expand highways and public transit across the Greater Golden Horseshoe to fight congestion, create jobs and prepare for the massive population growth expected in the next 30 years. Simcoe County's population is expected to increase to 416,000 by 2031, with the Regional Municipality of York growing to 1.79 million by 2041. The Bradford Bypass has been proposed as a response to this dramatic growth in population and travel demand in the area and the forecasted increase in congestion on key roadways linking Highway 400 to Highway 404.

The project is a new 16.3 kilometres controlled access freeway. The proposed highway will extend from Highway 400 between 8th Line and 9th Line in Bradford West Gwillimbury, will cross a small portion of King Township, and will connect to Highway 404 between Queensville Sideroad and Holborn Road in East Gwillimbury. There are proposed full and partial interchanges, as well as grade separated crossings at intersecting municipal roads and watercourses, including the Holland River and Holland River East Branch. This project also includes the design integration for the replacement of the 9th Line structure on Highway 400, which will accommodate the proposed future ramps north of the Bradford Bypass corridor. The Ministry is considering an interim four-lane configuration and an ultimate eight-lane design for the Bradford Bypass. The interim condition will include two general purpose lanes in each direction and the ultimate condition will include four lanes in each direction (one high-occupancy vehicle lane and three general purpose travel lanes in each direction). The interim and ultimate designs are being reviewed as the project progresses. This Report and its findings are based on the project footprint identified within this Report. Should the footprint change or be modified in any way, a review of the changes shall be undertaken, and the Report will be updated to reflect the changes, impacts, mitigation measures, and any commitments to future work.

This Water Well Survey Report (this Report) provides a summary of the work undertaken and factual data obtained by AECOM as part of the Preliminary Design assignment to fulfil obligations for the pre-construction assessment of private well supplies in the vicinity of the Study Area. The Study Area map is presented in **Figure 1**.

2. Purpose and Work Program Description

The purpose of undertaking a Water Well Survey in Preliminary Design is to review available secondary source information and also to obtain primary data from stakeholders within the Study Area regarding their existing water well. The Door to Door Water Well Survey (DDWWS) provides a baseline for the water wells prior to the proposed construction to determine existing water quality and quantity of each property.

The initial step in the DDWWS involved a review of available project documentation and design information relating to the proposed construction activities and methods, as well as a desktop review of existing published information within a radial distance of approximately 500 m of the Study Area (the 'Study Area') (see **Figure 1**) as a precursor to field assessment activities, including:

- Aerial photographs;
- Available Ontario Ministry of Environment, Conservation, and Parks (MECP) Water Well Record and Permit To Take Water (PTTW) databases (incl. Environmental Bill of Rights registry);

- Available mapping (e.g., topographic, base mapping, geological) and reports (e.g., watershed plans, aquifer vulnerability mapping, site-specific investigations);
- Subsurface or other hydrogeological information that AECOM and/or the MTO may have on file which pertains to the Study Area; and
- Geotechnical data / reports carried out as part of the current project, if available.

Upon completion of the preliminary desktop review undertaken in 2021, a water well survey form was mailed to all known and listed Property Owners in the MECP database on August 31, 2021. In addition to the water well survey form, a letter was also included which provided an explanation of the water well survey works. The Property Owners that were contacted were given time to complete the water well survey form and send it back to the Project Team. The water well survey form allowed the Property Owner to confirm groundwater use and to provide basic well information, including the location, type, depth, condition, use, yield, and water quality of any identified wells. A stamped envelope was left at each residence in a conspicuous location (i.e., in mailbox or front door) for completion by the Property Owner and return mailing to AECOM.

The purpose of the initial desktop review and field reconnaissance was to identify, on a preliminary basis to the extent possible, the following:

- General groundwater usage including aquifers, well types and locations
- Location and use of large volume wells, if present; and
- Wells with known quality and/or quantity problems.

For each identified well source where permission to access was obtained from the Property Owner, a baseline well survey / assessment was carried out to document pre-construction conditions (quality and quantity). The scope of each baseline (pre-construction) well survey was developed based on requirements outlined in the following reference documents:

- a) MTO, April 2004. Guidelines for Drinking Water Sampling and Testing in Ministry of Transportation Activities.
- b) MECP, December 2009. Water Supply Wells Requirements and Best Management Practices. Chapter 10 Yield Test.

The baseline survey for each identified well (where accessible) included the following elements, at a minimum:

- 1. Interview with the current Property Owner and/or tenant.
- Documentation of well construction details (including well type, diameter, casing material, total depth, stick-up, general condition, co-ordinate location, etc.) in written form and through the collection of digital photographs.
- 3. Measurement of the static groundwater level within the well.
- 4. Collection of a representative raw (untreated) water sample for analysis of general water quality (ph; total hardness; total alkalinity; calcium, magnesium, sodium; potassium; iron, manganese; chloride; sulphate; nitrate [NO₃-N]; nitrite [NO₂-N], ammonia / ammonium [NH₃-N]; electrical conductivity; total dissolved solids [TDS]; total suspended solids [TSS]; tannin and lignins) and microbiological (*E. coli,* faecal coliforms, total coliforms) parameters.

Variations to the generalized methodology above were made in the field, as required, based on site-specific conditions encountered at each property and/or requests made by individual Property Owners.

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During site investigations, private wells were not opened, and the measurement of groundwater levels and completion of well yield tests were not completed as part of this program. Groundwater samples were obtained from untreated taps to obtain a representative sample. Groundwater quality samples were submitted under chain of custody documentation to a Canadian Association for Laboratory Accreditation (CALA) accredited environmental analytical laboratory for general inorganic and microbiological testing. Any exceedances of the applicable drinking water standards were reported to the well owner, MTO, and to the local public health unit, where appropriate.

As detailed in the MTO Guidance Document (April 2004), the following standard forms were referenced by AECOM in the completion of this assignment:

- Form 1: Field Survey Documentation Form
- Form 2: Standard Checklist for Collection and Handling of Drinking Water Samples
- Form 3: Letter to Licensed Laboratory
- Form 4: Analytical Results Comparison Table
- Form 5: Notification Letter No exceedance of Regulated Parameters
- Form 6: Notification Letter Exceedance of MTO Mandatory Parameters
- Form 7: Notification Letter Exceedance of Other Regulated Parameters
- Form 8: Communication Record
- Form 9: Checklist for Well Water Quantity Testing

Results of the DDWWS are summarized in this Report. The documentation provided includes well owner notification in accordance with the procedures outlined within the MTO Guideline Document (April 2004). All reporting completed for this assignment has been completed by an experienced hydrogeologist licenced by the Professional Geoscientist of Ontario (PGO).

2.1 Identification of Licenced Laboratory

AECOM retained AGAT Laboratories (Mississauga, ON) to provide analytical testing services for this assignment. AGAT is a CAEAL, SCC and MECP-accredited environmental analytical laboratory, and are well qualified to provide the services required.

2.2 Project Staff / Licencing

AECOM is a *Licenced Water Well Contractor* (#7503) with the MECP. Licences presently held by AECOM include Class #4 (Pump Installation) and Class #5 (Monitoring, Sampling, Testing, and Non-Powered Construction).

Mr. Brian Holden (P.Geo.) was designated by AECOM as the Well Technician for this assignment. Brian led the water well survey program, completed all phone and in-person interviews and wrote the exceedance letters as necessary. Brian possesses more than 13 years professional consulting experience in the development and implementation of hydrogeologic / environmental investigations. Brian possesses knowledge of the relevant guidelines, acts and legislation as they apply to water resource development, construction dewatering, aggregate resources, environmental site assessment / investigation, waste management, and remediation. Brian's consulting experience has included a broad range of projects, such as: preliminary and detailed hydrogeological investigations, water budget / balance assessments, groundwater and surface water resource development, aggregate resources (development and operational monitoring), environmental impact and site assessment, environmental permitting (Permit To Take Water (PTTW) / Environmental Compliance Approval (ECA)), and contaminated site remediation / monitoring.

3. Results and Discussion

Upon completion of the initial background information review, a total of one hundred and forty-three (143) properties that were identified within a radial distance of approximately 500 m of the Bradford Bypass Study Area. A summary of the results of the private well survey requests that were mailed to residences is provided in **Table 1**.

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Table 1: Summary of Results of Private Well Survey Requests Mailed to Residences

Property ID ¹	Property Description / Address	UTM Co-Ordinate Location	Contact With Owner / Resident (Y/N)	Complete Survey Received	Permission To Complete Testing (Y/N)
1	23 Grandview Crescent, Bradford West Gwillimbury	17T 4888284mN 614823.6mE	N	N	
2	2360 Line 10, Bradford West Gwillimbury	17T 4889873mN 614514.4mE	N	N	
3	2388 Line 10, Bradford West Gwillimbury	17T 4889841mN 614405.4mE	N	N	
4	2438 Line 10, Bradford West Gwillimbury	17T 4889860mN 614338.4mE	N	N	
5	2445 Line 11, Bradford West Gwillimbury	17T 4891073mN 614164.4mE	N	N	
5	2450 9TH LINE RR#2 BRADFORD	17T 4889474mN 614331mE	N	N	
6	2457 Line 10, Bradford West Gwillimbury	17T 4889673mN 614189.4mE	N	N	
7	2464 Line 11, Bradford West Gwillimbury	17T 4891052mN 613838mE	N	N	
8	2506 Line 8, Bradford West Gwillimbury	17T 4886913mN 614419mE	N	N	
9	2516 Line 11, Bradford West Gwillimbury	17T 4890979mN 613650mE	N	N	
10	2527 Line 11, Bradford West Gwillimbury	17T 4890817mN 613340mE	N	N	
11	2545 Line 9, Bradford West Gwillimbury	17T 4888163mN 614004.4mE	N	N	
12	2551 Line 11, Bradford West Gwillimbury	17T 4890838mN 613549.4mE	N	N	
13	2552 Line 11, Bradford West Gwillimbury	17T 4890923mN 613414.4mE	N	N	
14	2557 Line 9, Bradford West Gwillimbury	17T 4888153mN 613944.4mE	N	N	
15	2560 Line 10, Bradford West Gwillimbury	17T 4889593mN 613754.4mE	N	N	
16	2577 Line 11, Bradford West Gwillimbury	17T 4890833mN 613444.4mE	N	N	
17	29 Grandview Crescent, Bradford West Gwillimbury	17T 4888395mN 614811.6mE	Υ	Υ	Υ
18	300 Barrie Street, Bradford West Gwillimbury	17T 4886802mN 614492mE	N	N	
19	3031 Yonge Street, Bradford West Gwillimbury	17T 4888023mN 614414.4mE	N	N	
20	3086 Yonge Street, Bradford West Gwillimbury	17T 4888431mN 614247.6mE	N	N	
21	3281 Yonge Street, Bradford West Gwillimbury	17T 4889497mN 614318.4mE	N	N	
22	3378 Yonge Street, Bradford West Gwillimbury	17T 4889698mN 613982mE	N	N	
23	3378 Yonge Street, Bradford West Gwillimbury	17T 4889661mN 613676.6mE	N	N	
24	3415 Yonge Street, Bradford West Gwillimbury	17T 4890054mN 614006mE	N	N	
25	3479 Yonge Street, Bradford West Gwillimbury	17T 4889973mN 614114.4mE	N	N	
26	100 Oak Drive, River Drive Park	17T 4887635.28 m N 619074.09 m E	N	N	
27	101 River Drive, River Drive Park	17T 4887697.88 m N 619296.29 m E	N	N	
28	103 River Drive, River Drive Park	17T 4887709.27 m N 619276.09 m E	N	N	
29	103 Oak Avenue, River Drive Park	17T 4887673.50 m N 619113.56 m E	N	N	
30	104 River Drive, River Drive Park	17T 4887690.44 m N 619190.11 m E	N	N	
31	1193 Holborn Road, Queensville	17T 4890057.05 m N 622717.10 m E	N	N	
32	12 Arthur Evans Crescent, Bradford	17T 4887000.36 m N 611644.66 m E	N	N	
33	120 Artesian Industrial Parkway, Bradford	17T 4887765.67 m N 615458.50 m E	N	N	
34	1337 Holborn Road, Bradford	17T 4890193.51 m N 623165.05 m E	N	N	
35	1367 Holborn Road, Bradford	17T 4890310.84 m N 623235.41 m E	N	N	

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Water Well Survey Report Highway 400 – Highway 404 Link (Bradford Bypass)

Property ID ¹	Property Description / Address	UTM Co-Ordinate Location	Contact With Owner / Resident (Y/N)	Complete Survey Received	Permission To Complete Testing (Y/N)
36	140 Noble Drive, Bradford	17T 4886661.55 m N 613606.80 m E	N	N	
37	70 Artesian Industrial Parkway, Bradford	17T 4887545.95 m N 615493.82 m E	N	N	
38	1512 Holborn Road, Queensville	17T 4890554.44 m N 623564.62 m E	N	N	
39	1538 Holborn Road, Queensville	17T 4890578.53 m N 623623.52 m E	Υ	Υ	Y
40	1611 Holborn Road, Queensville	17T 4890454.52 m N 623909.79 m E	N	N	
41	1737 Holborn Road, Bradford	17T 4890575.99 m N 624269.65 m E	Υ	Υ	Υ
42	1845 Holborn Road, Queensville	17T 4890626.10 m N 624411.09 m E	N	N	
43	1865 Holborn Road, Queensville	17T 4890810.60 m N 624594.03 m E	N	N	
44	20717 Yonge Street, East Gwillimbury	17T 4887945.00 m N 620535.09 m E	N	N	
45	20760 Bathurst Street, Holland Landing	17T 4887079.62 m N 617817.04 m E	N	N	
46	20760 Yonge Street, East Gwillimbury	17T 4887817.75 m N, 619949.02 m E	N	N	
47	20767 Bathurst Street, Bradford	17T 4887141.90 m N 617929.78 m E	N	N	
48	20772 Yonge Street, Bradford	17T 4887884.64 m N 619967.13 m E	N	N	
49	20775 2nd Concession Road, Bradford	17T 4888531.08 m N 621844.85 m E	N	N	
50	20775 Yonge Street, East Gwillimbury	17T 4887905.36 m N 619974.98 m E	N	N	
51	20799 Bathurst Street, Holland Landing	17T 4887276.32 m N 617979.95 m E	N	N	
52	20812 Yonge Street, East Gwillimbury	17T 4887983.06 m N 619923.92 m E	N	N	
53	20820 Bathurst Street, Holland Landing	17T 4887351.42 m N 617869.50 m E	N	N	
54	20831 2nd Concession Road, East Gwillimbury	17T 4888697.31 m N 621911.76 m E	N	N	
55	20832 2nd Concession Road, East Gwillimbury	17T 4888656.34 m N 621764.37 m E	N	N	
56	20841 2nd Concession Road, East Gwillimbury	17T 4888674.80 m N 621811.60 m E	N	N	
57	20843 Yonge Street, East Gwillimbury	17T 4888130.98 m N 619985.83 m E	N	N	
58	20854 Leslie Street, Queensville	17T 4889801.76 m N 623625.60 m E	N	N	
59	20877 Yonge Street	17T 4888181.90 m N 619953.40 m E	Y	Υ	Y
60	20901 Yonge Street, East Gwillimbury	17T 4888239.78 m N 619942.70 m E	Υ	Υ	Υ
61	20908 Leslie Street, Bradford	17T 4889853.08 m N 623654.70 m E	N	N	
62	20913 Leslie Street, Queensville	17T 4889457.25 m N 623752.20 m E	N	N	
63	20918 Yonge Street	17T 4888295.50 m N 619783.22 m E	N	N	
64	20929 2nd Concession Road, Holland Landing	17T 4888587.29 m N 620857.88 m E	N	N	
65	20967 2nd Concession Road, East Gwillimbury	17T 4889042.63 m N 621738.31 m E	N	N	
66	20989 Yonge Street	17T 4888553.37 m N 620234.90 m E	Y	Υ	Y
67	2100 8th Line, Bradford	17T 4887281.58 m N 615670.44 m E	N	N	
68	21019 Bathurst Street, River Drive Park	17T 4888185.79 m N 618365.91 m E	N	N	
69	21022 Leslie Street, Queensville	17T 4889854.95 m N 623654.85 m E	N	N	
	21028 Leslie Street, Queensville	17T 4889854.98 m N 623654.94 m E	N	N	
	21032 Leslie Street, Queensville	17T 4889820.85 m N 623616.26 m E	N	N	
	21044 Leslie Street, Bradford	17T 4889770.90 m N 623520.56 m E	Y	Y	Υ
73	21087 Leslie Street, Queensville	17T 4890209.66 m N 624109.23 m E	N	N	

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Property ID ¹	Property Description / Address	UTM Co-Ordinate Location	Contact With Owner / Resident (Y/N)	Complete Survey Received	Permission To Complete Testing (Y/N)
74	21114 Yonge Street	17T 4888660.49 m N 619307.79 m E	N	N	
75	21138 Leslie Street, Queensville	17T 4890121.27 m N 623591.49 m E	N	N	
76	21145 Leslie Street, Queensville	17T 4890177.43 m N 623598.38 m E	Υ	Υ	Y
77	21153 2nd Concession Road, East Gwillimbury	17T 4889573.23 m N 621730.16 m E	N	N	
78	21170 Woodbine Avenue, Bradford	17T 4890754.32 m N 625078.81 m E	N	N	
79	21173 2nd Concession Road, Queensville	17T 4889577.39 m N 621623.40 m E	N	N	
80	21186 2nd Concession Road, East Gwillimbury	17T 4889621.86 m N 621569.38 m E	N	N	
81	21192 Leslie Street, Queensville	17T 4890255.16 m N 623488.95 m E	N	N	
82	21210 Bathurst Street, Bradford	17T 4888021.42 m N 617288.97 m E	N	N	
83	21320 Leslie Street, Queensville	17T 4890681.16 m N 623425.24 m E	N	N	
84	22 Morgans Road, East Gwillimbury	17T 4888000.71 m N 619909.28 m E	N	N	
85	2244 8th Line, Bradford	17T 4887212.22 m N 615449.56 m E	N	N	
86	2316 8th Line, Bradford	17T 4887198.69 m N 615326.50 m E	N	N	
87	2362 Line 8, Bradford West Gwillimbury	17T 4887135.20 m N 615102.41 m E	N	N	
88	2374 Line 11, Bradford	17T 4891185.55 m N 614336.19 m E	Υ	Υ	Υ
89	24 Morgans Road, East Gwillimbury	17T 4887946.53 m N 619765.14 m E	N	N	
90	2533 Line 9, Bradford West Gwillimbury	17T 4888198.21 m N 614047.28 m E	N	N	
91	2580 8th Line, Bradford	17T 4886785.01 m N 614102.56 m E	N	N	
92	2594 8th Line, Bradford	17T 4886771.67 m N 614026.99 m E	N	N	
93	2636 8th Line, Bradford	17T 4886706.74 m N 613864.44 m E	N	N	
94	2646 8th Line, Bradford	17T 4886677.26 m N 613803.25 m E	Y	Y	Y
95	2676 8th Line, Bradford	17T 4886665.98 m N 613762.80 m E	N	N	
96	3 Arthur Evans Crescent, Bradford	17T 4886961.58 m N 611445.98 m E	N	N	
97	30 Morgans Road, East Gwillimbury	17T 4887873.28 m N 619628.09 m E	N	N	
98	3004 Line 8, Bradford West Gwillimbury	17T 4886112.80 m N 612059.82 m E	N	N	
99	3111 Sideroad 10, Bradford	17T 4886455.65 m N 611526.58 m E	N	N	
100	3163 Sideroad 10, Bradford	17T 4886742.55 m N 611477.40 m E	N	N	
101	3173 Sideroad 10, Bradford	17T 4886795.03 m N 611469.08 m E	Υ	Υ	Υ
102	3183 Sideroad 10, Bradford	17T 4886819.01 m N 611464.83 m E	Υ	Υ	Υ
103	3199 Sideroad 10, Bradford	17T 4886895.22 m N 611453.12 m E	N	N	
104	32 Morgan's Road, East Gwillimbury	17T 4887927.56 m N 619699.20 m E	N	N	
105	3223 Sideroad 10, Bradford	17T 4887046.91 m N 611423.23 m E	Υ	Υ	Y
106	3224 Sideroad 10, Bradford West Gwillimbury	17T 4886998.38 m N 611363.19 m E	N	N	
107	3231 Sideroad 10, Bradford	17T 4887053.35 m N 611412.98 m E	N	N	
108	3241 Sideroad 10, Bradford	17T 4887102.76 m N 611405.75 m E	Υ	Υ	Y
109	3247 Sideroad 10, Bradford	17T 4887134.39 m N 611397.38 m E	Υ	Υ	Y
110	33 Morgans Road, East Gwillimbury	17T 4887848.06 m N 619703.85 m E	N	N	
111	3381 Line 9, Bradford	17T 4886885.64 m N 610057.67 m E	N	N	

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Property ID'	Property Description / Address	UTM Co-Ordinate Location	Contact With Owner / Resident (Y/N)	Complete Survey Received	Permission To Complete Testing (Y/N)
112	3385 Sideroad 5, Bradford West Gwillimbury	17T 4887236.77 m N 608253.17 m E	N	N	-
113	34 Morgans Road, East Gwillimbury	17T 4887877.45 m N 619582.72 m E	N	N	
114	3412 8th Line, Bradford	17T 4885473.65 m N, 609475.55 m E	N	N	
115	3474 8th Line, Bradford	17T 4885364.31 m N 609864.95 m E	N	N	
116	3483 8th Line, Bradford	17T 4885361.36 m N 609826.61 m E	N	N	
117	3484 Line 9, Bradford	17T 4886729.87 m N 609585.48 m E	N	N	
118	35 Morgans Road, East Gwillimbury	17T 4887878.31 m N 619637.81 m E	N	N	
119	3500 Line 9, Bradford	17T 4886711.49 m N 609500.03 m E	N	N	
120	3507 8th Line, Bradford West Gwillimbury	17T 4885313.03 m N 609690.47 m E	N	N	
121	3538 8th Line, Bradford West Gwillimbury	17T 4885264.09 m N 609508.22 m E	N	N	
122	3556 8th Line, Bradford West Gwillimbury	17T 4885303.90 m N 609434.17 m E	N	N	
123	3566 Line 9, Bradford West Gwillimbury	17T 4886586.11 m N 609161.53 m E	N	N	
124	3634 Line 9, Bradford	17T 4886479.45 m N 608842.66 m E	N	N	
125	3658 Line 9, Bradford West Gwillimbury	17T 4886449.64 m N 608750.47 m E	N	N	
126	3663 8th Line, Bradford	17T 4885069.36 m N 608948.70 m E	N	N	
127	3664 8th Line, Bradford	17T 4885084.36 m N 608947.78 m E	N	N	
128	37 Morgans Road, East Gwillimbury	17T 4887857.20 m N 619640.00 m E	N	N	
129	4 Arthur Evans Crescent, Bradford	17T 4886969.48 m N 611589.37 m E	N	N	
130	45 Morgans Road, East Gwillimbury	17T 4887840.53 m N 619638.67 m E	N	N	
131	682 Holborn Road, Bradford	17T 4889844.50 m N 621315.94 m E	N	N	
132	7 Arthur Evans Crescent, Bradford	17T 4886991.03 m N 611550.60 m E	N	N	
133	7 Morgan's Road, Bradford	17T 4887917.05 m N 619904.91 m E	N	N	
134	750 Hochreiter Road, Holland Landing	17T 4887864.29 m N 616815.04 m E	N	N	
135	87 Oak Avenue, River Drive Park	17T 4887586.41 m N 619206.10 m E	N	N	
136	89 Oak Avenue, River Drive Park	17T 4887589.67 m N 619205.46 m E	N	N	
137	9 Arthur Evans Crescent, Bradford	17T 4887048.98 m N 611631.68 m E	N	N	
138	91 River Drive, River Drive Park	17T 4887645.88 m N 619333.35 m E	N	N	
139	92 River Drive, River Drive Park	17T 4887635.21 m N 619257.03 m E	N	N	
140	95 Oak Avenue, River Drive Park	17T 4887624.75 m N 619170.12 m E	N	N	
141	98 Oak Avenue, River Drive Park	17T 4887614.28 m N 619069.18 m E	N	N	
142	1562 Holborn Road, Queensville	17T 4890578.42 m N 623674.93 m E	Υ	Υ	Υ
143	3236 Sideroad 10, Bradford	17T 4887084.65 m N 611372.46 m E	Υ	Υ	Υ

Note: 1 – Water well records are not available on the MECP database for property IDs 142 and 143.

Following the mailing of the form and letter to 143 Property Owners, a response was received from a total of seventeen (17) Property Owners, or 12% of the identified properties. The properties were scheduled for participation within the pre-construction Private Well Monitoring Program (PWMP) between October 6th, 2021, and May 31st, 2022, as summarized in **Table 2**.

Table 2: Private Well Monitoring Program Testing Summary

Property ID	Property Description / Address	Date of Site Visit	Well Accessible for Monitoring (Y/N)	Raw (Untreated) Water Sample Obtained (Y/N)
17	29 Grandview Crescent (Residence) – c/o Jennifer and Frank Caietta	3-Mar-22 & 31-May-22	N	Y
39	1538 Holborn Road (Residence) – c/o Janice Hachkowski and Brian Hachkowski	13-Oct-21	Y	Y
41	1737 Holborn Road (Residence) – c/o Alan Watman and Beverly Watman	6-Oct-21	Y	Y
59	20877 Yonge Street (Residence) – c/o Nicholas Dargus	14-Oct-21	Y	Y
60	20901 Yonge Street (Residence) – c/o Glenn Duclos and Rebecca Duclos	14-Oct-21	Y	Y
66	20989 Yonge Street (Residence) – c/o Charles W and Karen C Foster	13-Oct-21	Y	Y
72	21044 Leslie Street (Residence) – c/o Florence Lewis	7-Oct-21	Y	Y
76	21145 Leslie Street (Residence) – c/o Bruce Newland and Pat Newland	7-Oct-21	Y	Y
88	2374 Line 11 (Residence) – c/o Joe Rodrigues	14-Oct-21	Υ	Y
94	2646 8th Line (Residence) – c/o Don Monforton	7-Oct-21	Υ	Y
101	3173 Sideroad 10 (Residence) – c/o Thomas Mayville	14-Oct-21	Y	Y
102	3183 Sideroad 10 (Residence) – c/o Manuel Marques	31-May-22	Y	Y
105	3223 Sideroad 10 (Residence) – c/o Ben Dalimonte	6-Oct-21	Υ	Y
108	3241 Sideroad 10 (Residence) – c/o Ric Bourgeois and Sue Bourgeois	7-Oct-21	Y	Y
109	3247 Sideroad 10 (Residence) – c/o Marie A. Pearson	6-Oct-21	Y	Y
142	1562 Holborn Road (Residence) – c/o Bob and Ann Liszon	3-Mar-22	Y	Y
143	3236 Sideroad 10 (Residence) - c/o Paul Watson	3-Mar-22	Υ	Υ

Further property specific details regarding the testing work that was completed at each property is provided in the appendices attached to this Report. A general summary of the results of the DDWWS is summarized below:

- Water quality sampling results from eleven (11) of the properties determined that the drinking water sample obtained had exceedances above the Ontario Drinking Water Standards (ODWS) for healthrelated parameters. Owners were contacted by phone to resample the well water and they were informed to contact the Local Public Health Units to discuss the results further.
- Other parameters that were exceeded for the ODWS fell into the aesthetic objectives which may impair the taste, odour, and colour of water which may interfere with good water quality or are operational quidelines that must be controlled to make water treatment systems effective.

Water Well Survey Report Highway 400 – Highway 404 Link (Bradford Bypass)

- Drilled wells were in excellent condition; however, dug wells had historical lid issues or debris/objects blocking assessment of the well lid.
- All properties except for one have water softeners and/or some form of water treatment (chlorination, reverse osmosis or ultraviolet lights).

A copy of the lab results, including the completed AECOM field investigation and any exceedances, were hand delivered to all respective properties in an envelope.

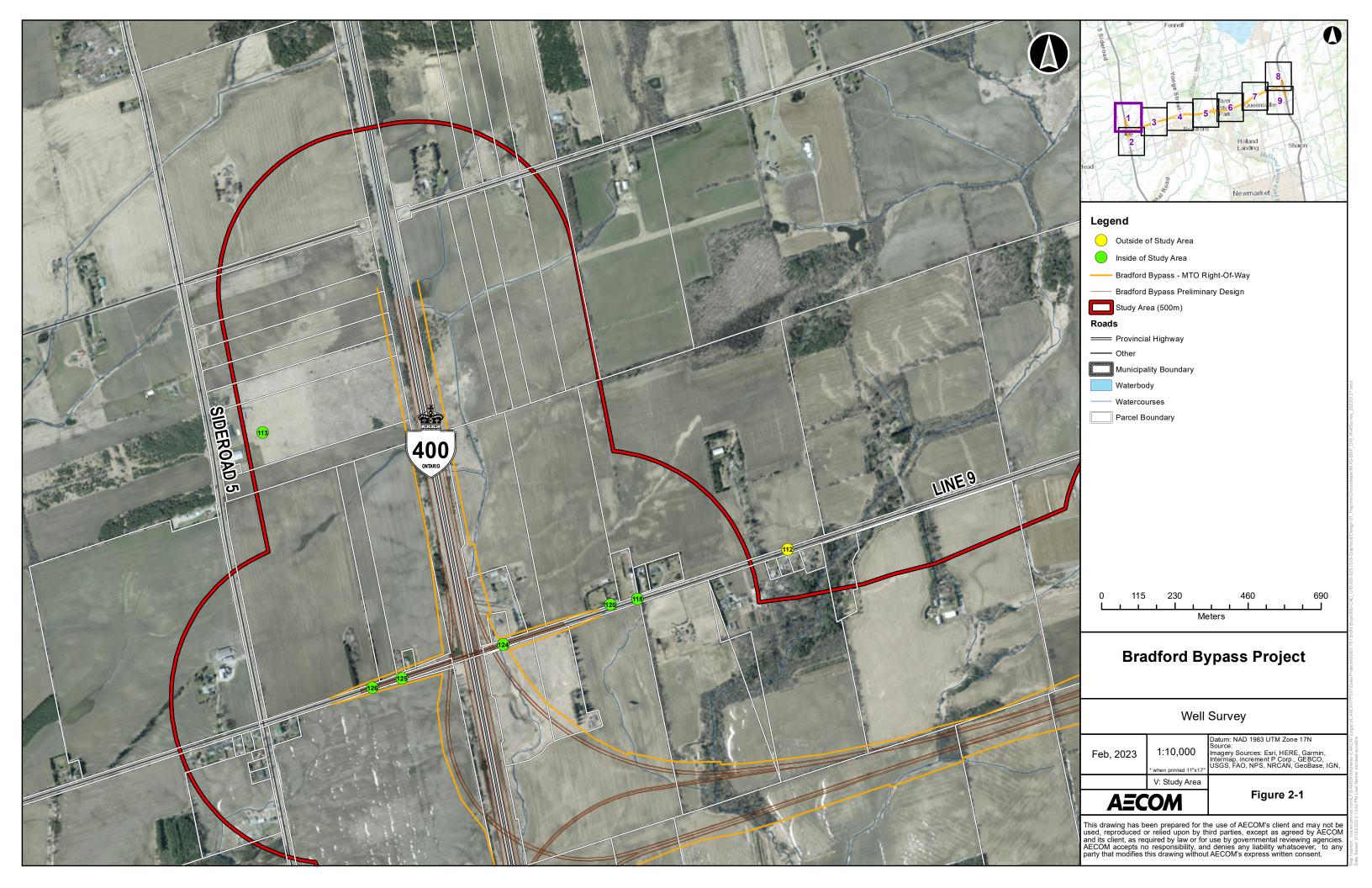
4. Conclusion

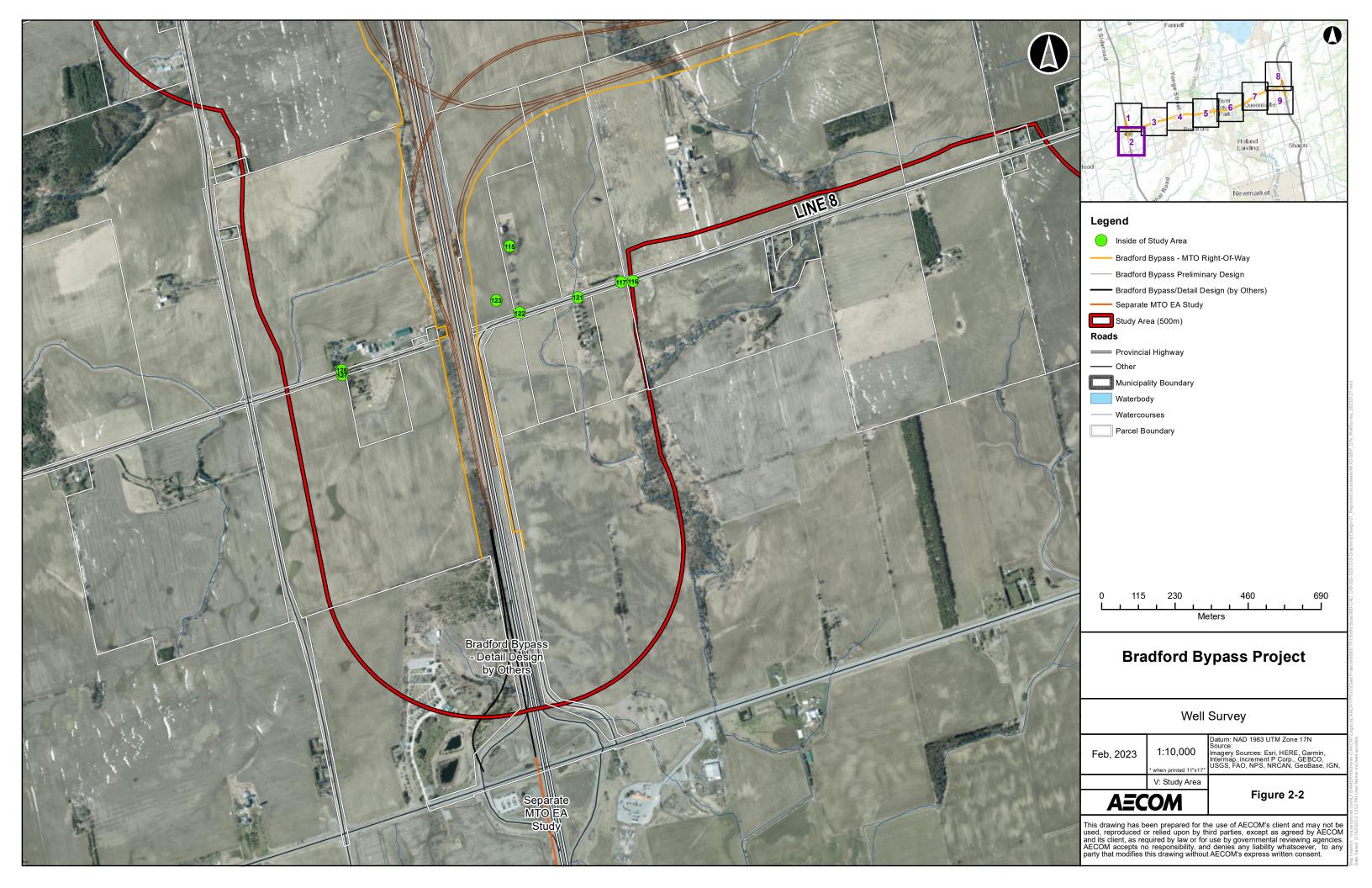
It is recommended that prior to any construction dewatering occurring near the seventeen (17) properties listed in **Table 2**, that the Property Owners be contacted regarding the undertaking of a repeat monitoring and sampling of the residential well during and after construction to confirm that there is no effect on the water quality from the baseline assessed. For the remaining 126 Property Owners for which no response was provided, an attempt shall be undertaken during Detail Design to contact these owners via mail, email, phone calls, site visit, etc. The DDWWS provides a baseline for the water wells prior to the proposed construction to determine existing water quality and quantity of each property.

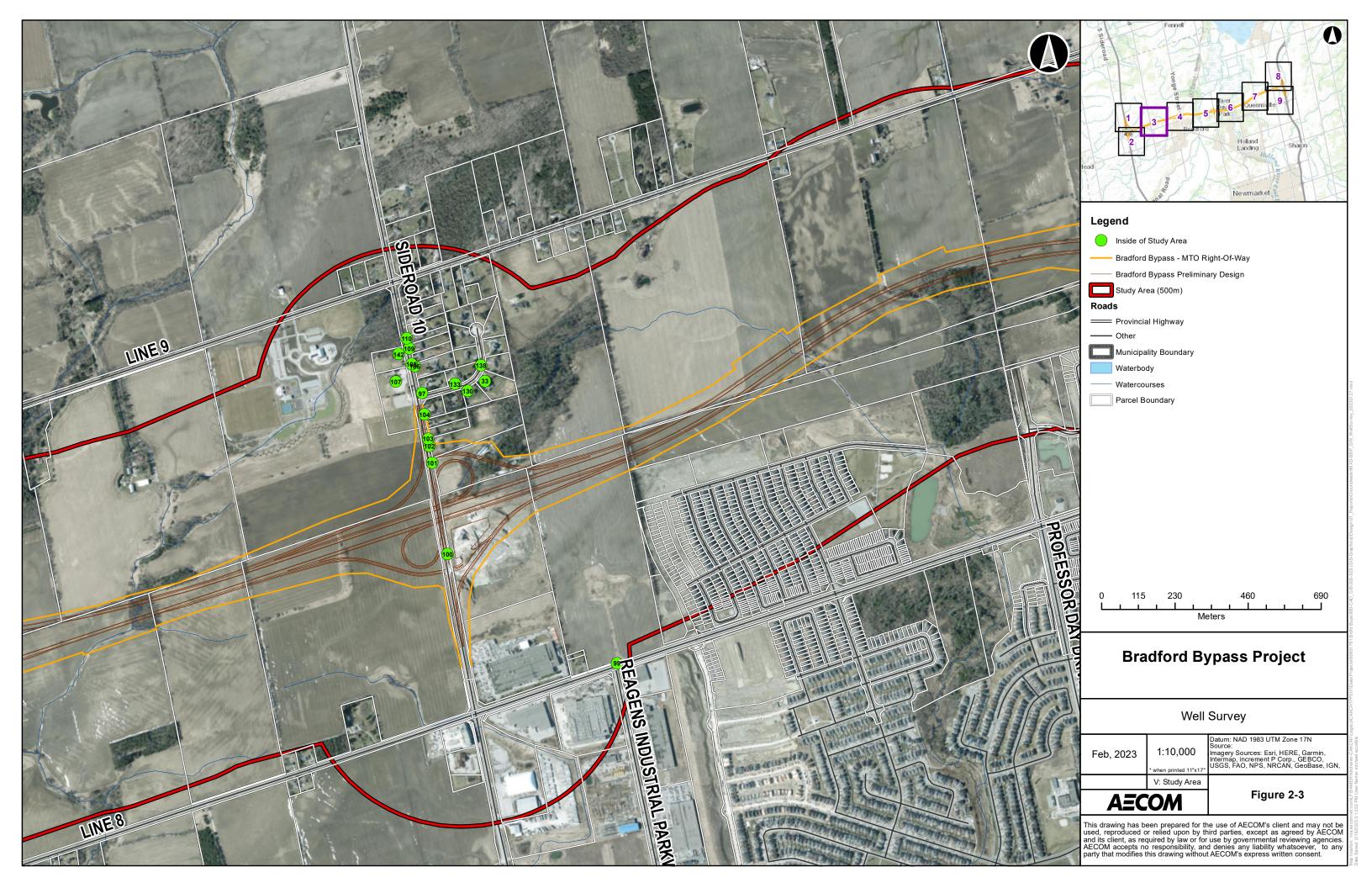
As the Preliminary Design progresses, and as the project moves into the next phase, there is the potential for Study Area refinements to the project footprint to be made. Should changes be made, a review of water wells shall be completed, and efforts shall be made to contact the Property Owner to inquire about the status of their well. Additionally, it is recommended that during Detail Design, a second round of letters be mailed to all Property Owners within 500 m of the Study Area to confirm that all impacted and/ or concerned Property Owners with wells are monitored during and after construction to capture and ensure potential well issues are addressed and monitored.

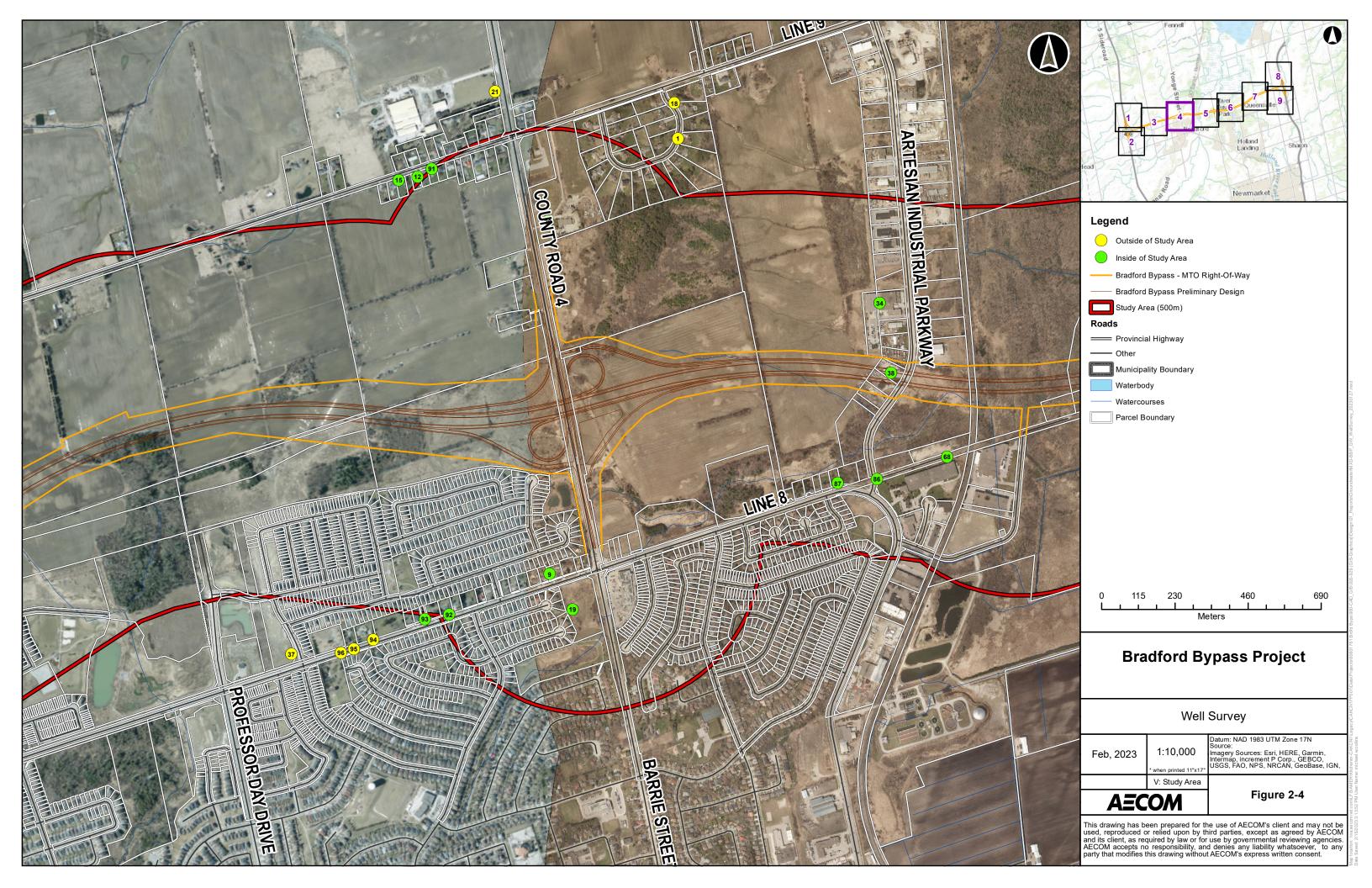


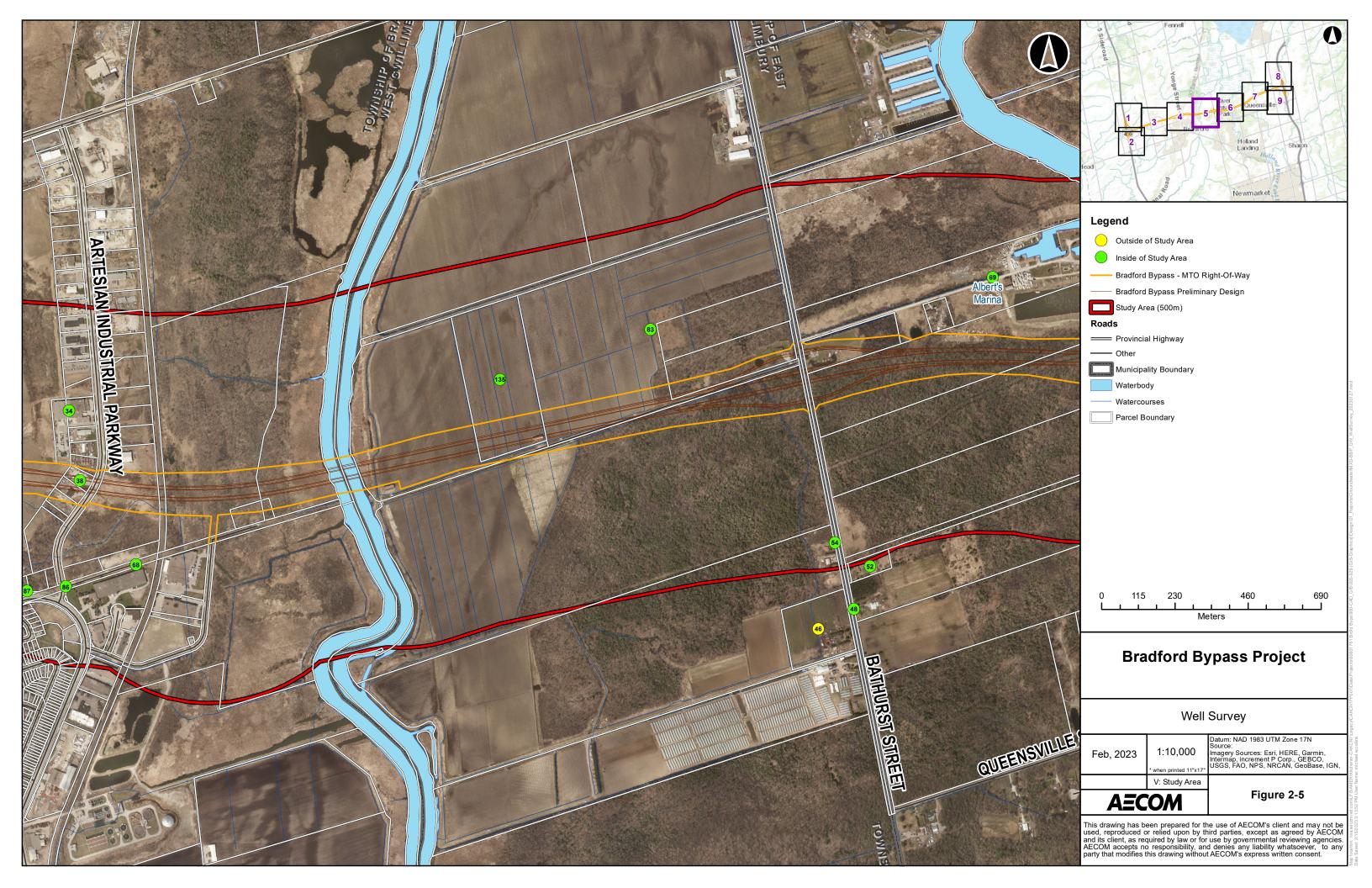
Figures

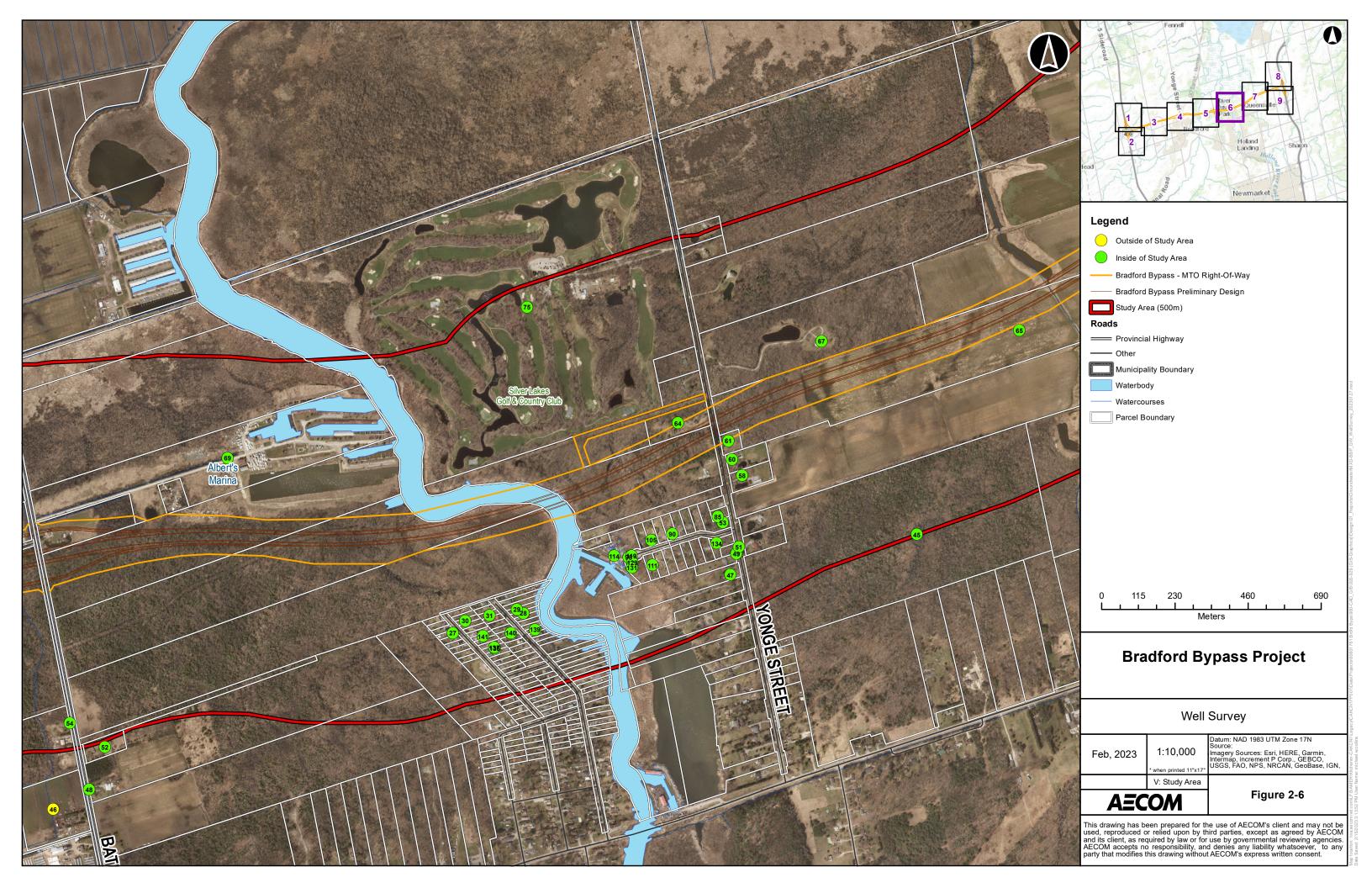


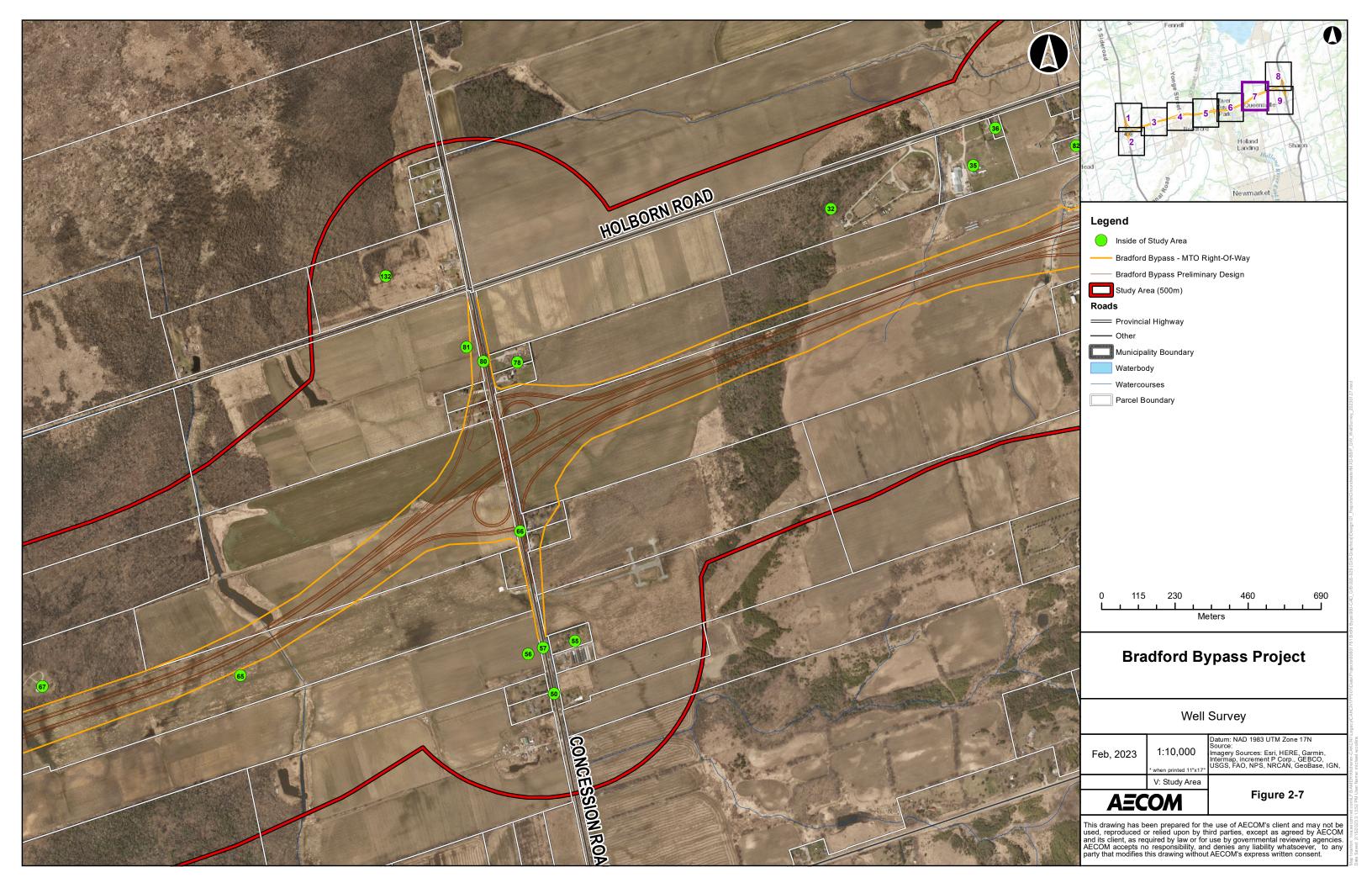


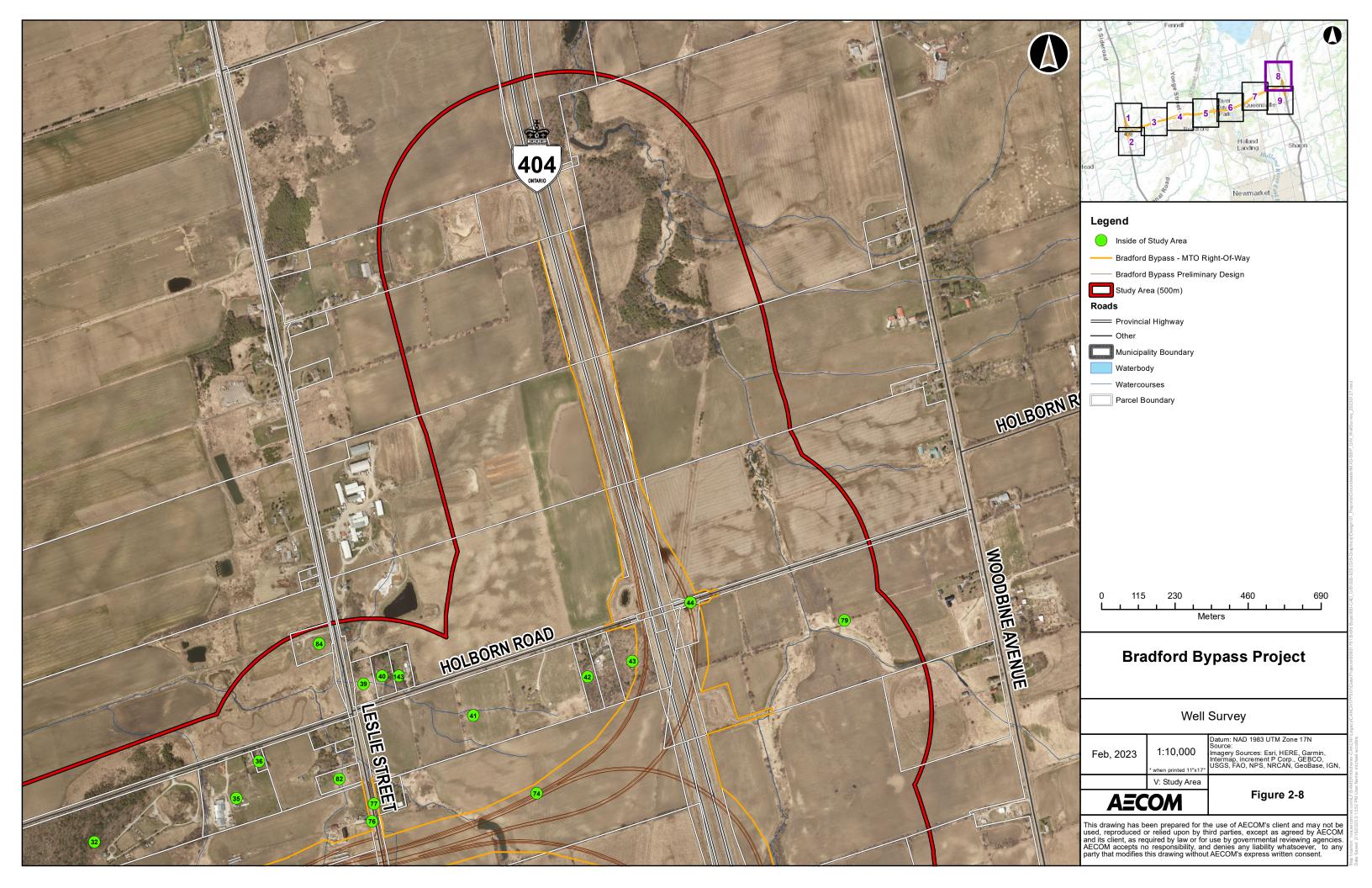


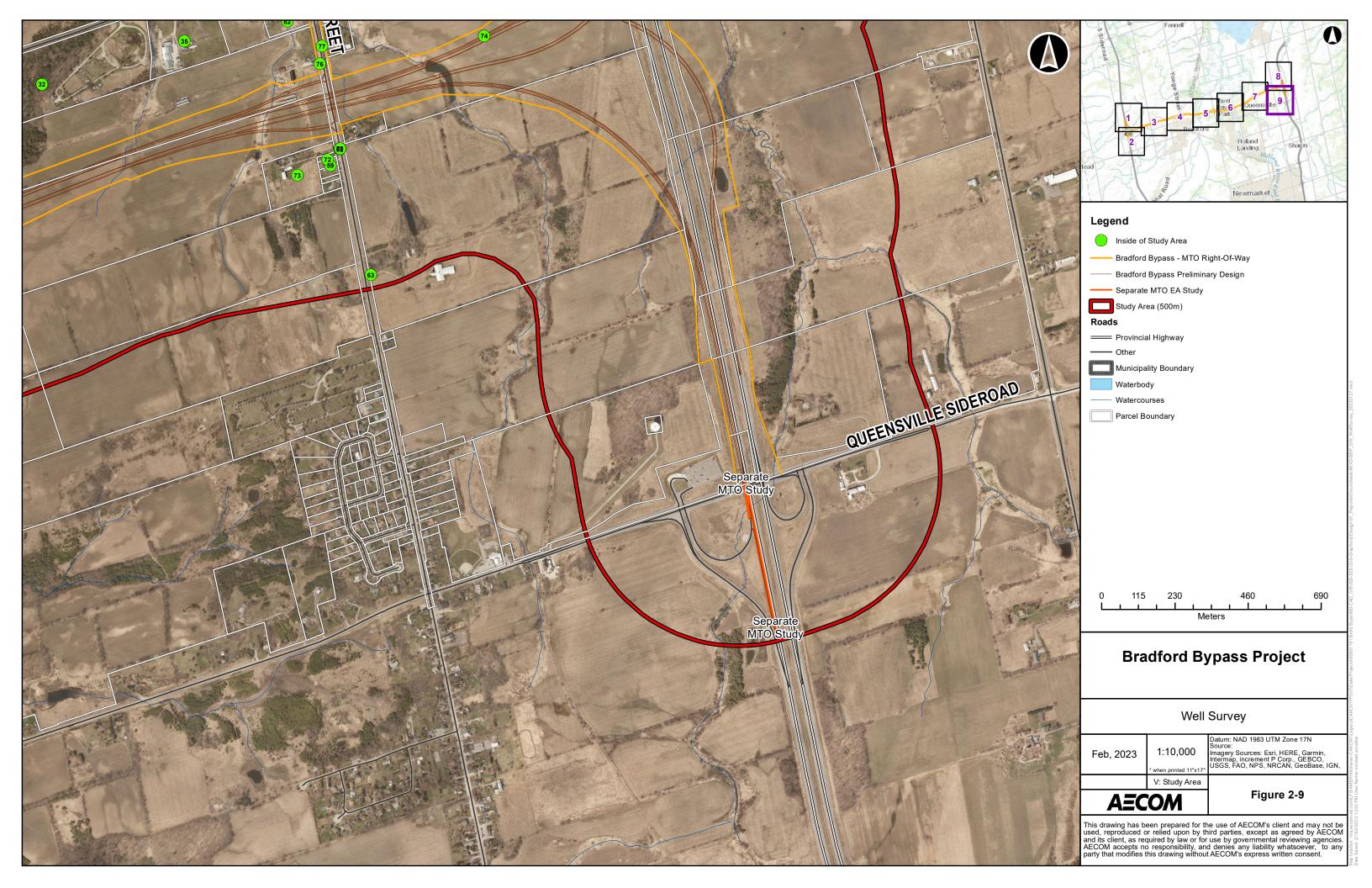














Appendix A

Property ID #39 – 1538 Holborn Road

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Janice & Brian Hachkowski 1538 Holborn Road Queensville, ON LOG 1R0

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Hachkowski,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 13th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample / duplicate obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Total Coliforms	4 / 3 CFU/100mL	0 CFU/100mL	MAC	Y
Hardness (as CaCO ₃)	118 / 117 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Mr. Hachkowski on November 19^{th,} 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 1538 Holborn Road

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

1538 Holborn Road E, Queensville, Ontario, L0G 1R0

Owner Information:

Owner Name: Janice Hachkowski and Brian Hachkowski

Phone Number: 905-478-2325

Email: jansgingerbread@hotmail.com

Well Record

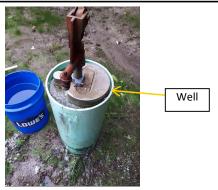
Coordinates (UTM)......623639E/4890556N

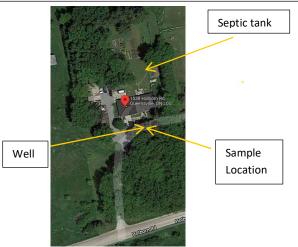
(NAD83 Zone17)

Well Location...... In front and right of house

Casing Position......N/A
Casing Condition.....Fair

Water Usage......Residential
Water Source.....Overburden
Static Water Level.....N/A; 12.19 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... 100' from well

Treatment System.....None

Recent Test Results......None

Water Sampled......Yes (October 13, 2021)

Sample Source...... Drilled tap

Appearance......clear

Comments:

- Bored well replaced by drilled well in 1992
- Dug well flows seasonally, overflow into swale
- Duplicate sample taken as requested

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	4 CFU/ 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	118 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC-Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 20, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 12

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

DATE RECEIVED: 2021-10-13

SAMPLING SITE:

Total Coliforms & E. Coli (Using MI Agar) DATE REPORTED: 2021-10-20

SAMPLE DESCRIPTION: 1538 Holborn
SAMPLE TYPE: Water
DATE SAMPLED: 2021-10-13
10:50

 Parameter
 Unit
 G / S
 RDL
 3086557

 Escherichia coli
 CFU/100mL
 0
 1
 ND

 Total Coliforms
 CFU/100mL
 0
 1
 4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3086557 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

manjot Bhelly Amanjot Bhelly Chemist



Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Water Quality Assessment (mg/L) Groundwater							
DATE RECEIVED: 2021-10-13							DATE REPORTED: 2021-10-20
			SA	SCRIPTION: MPLE TYPE: E SAMPLED:	1538 Holborn Water 2021-10-13 10:50		
Parameter	Unit	G / S: A	G / S: B	RDL	3086557		
Electrical Conductivity	μS/cm			2	395		
pH	pH Units		6.5-8.5	NA	7.97		
Saturation pH (Calculated)					7.51		
Langelier Index (Calculated)					0.459		
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	118		
Total Dissolved Solids	mg/L		500	10	210[<b]< td=""><td></td><td></td></b]<>		
Alkalinity (as CaCO3)	mg/L		30-500	5	177		
Bicarbonate (as CaCO3)	mg/L			5	177		
Carbonate (as CaCO3)	mg/L			5	<5		
Hydroxide (as CaCO3)	mg/L			5	<5		
Fluoride	mg/L	1.5		0.05	0.14[<a]< td=""><td></td><td></td></a]<>		
Chloride	mg/L		250	0.10	16.4[<b]< td=""><td></td><td></td></b]<>		
Nitrate as N	mg/L	10.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Bromide	mg/L			0.05	0.14		
Sulphate	mg/L		500	0.10	<0.10[<b]< td=""><td></td><td></td></b]<>		
Ortho Phosphate as P	mg/L			0.10	<0.10		
Ammonia as N	mg/L			0.02	0.49		
Total Phosphorus	mg/L			0.02	<0.02		
Total Organic Carbon	mg/L			0.5	35.8		
True Colour	TCU		5	5	<5[<b]< td=""><td></td><td></td></b]<>		
Turbidity	NTU		5	0.5	0.5[<b]< td=""><td></td><td></td></b]<>		
Dissolved Calcium	mg/L			0.05	23.4		
Dissolved Magnesium	mg/L			0.05	14.4		
Dissolved Potassium	mg/L			0.50	1.65		
Dissolved Sodium	mg/L	20		0.05	32.1[>A]		
Dissolved Aluminum	mg/L			0.004	0.014		
Dissolved Antimony	mg/L	0.006		0.001	<0.001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Arsenic	mg/L	0.01		0.001	<0.001[<a]< td=""><td></td><td></td></a]<>		

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment (mg/L) Groundwater

Water quality Accessment (mg/L) croanawater											
DATE RECEIVED: 2021-10-13							DATE REPORTED: 2021-10-20				
			SAMPLE DES	CRIPTION:	1538 Holborn						
			SAM	PLE TYPE:	Water						
			DATE SAMPLED:		2021-10-13 10:50						
Parameter	Unit	G / S: A	G / S: B	RDL	3086557						
Dissolved Barium	mg/L	1.0		0.002	0.081[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Beryllium	mg/L			0.0005	<0.0005						
Dissolved Boron	mg/L	5.0		0.010	0.095[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Cadmium	mg/L	0.005		0.0001	<0.0001[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Chromium	mg/L	0.05		0.002	<0.002[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Cobalt	mg/L			0.0005	<0.0005						
Dissolved Copper	mg/L			0.001	<0.001						
Dissolved Iron	mg/L			0.010	<0.010						
Dissolved Lead	mg/L	0.010		0.0005	<0.0005[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Manganese	mg/L			0.002	0.012						
Dissolved Mercury	mg/L	0.001		0.0001	<0.0001[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Molybdenum	mg/L			0.002	<0.002						
Dissolved Nickel	mg/L			0.003	<0.003						
Dissolved Selenium	mg/L	0.05		0.001	<0.001[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Silver	mg/L			0.0001	<0.0001						
Dissolved Strontium	mg/L			0.005	0.962						
Dissolved Thallium	mg/L			0.0003	<0.0003						
Dissolved Tin	mg/L			0.002	<0.002						
Dissolved Titanium	mg/L			0.002	<0.002						
Dissolved Tungsten	mg/L			0.010	<0.010						
Dissolved Uranium	mg/L	0.02		0.0005	<0.0005[<a]< td=""><td></td><td></td><td></td></a]<>						
Dissolved Vanadium	mg/L			0.002	<0.002						
Dissolved Zinc	mg/L			0.005	<0.005						

Comments:

Dissolved Zirconium

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

< 0.004

0.004

Analysis performed at AGAT Toronto (unless marked by *)

mg/L

Certified By:



Exceedance Summary

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

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CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT	
3086557	1538 Holborn	ON 169/03 AO&OG	Water Quality Assessment (mg/L) Groundwater	Hardness (as CaCO3) (Calculated)	mg/L	80-100	118	
3086557	1538 Holborn	ON 169/03 MAC/IMAC	Total Coliforms & E. Coli (Using MI Agar)	Total Coliforms	CFU/100mL	. 0	4	
3086557	1538 Holborn	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L) Groundwater	Dissolved Sodium	mg/L	20	32.1	



5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMPLING SITE: SA

Microbiology Analysis															
RPT Date: Oct 20, 2021				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	7	Lower	Upper		Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3085462 ND ND NA <1 Total Coliforms 3085462 ND ND NA <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Amanjot Bhells Amanuor Bhelas

Certified By:

AGAT WORK ORDER: 21T815177

ATTENTION TO: Brian Holden

Quality Assurance

CLIENT NAME: AECOM CANADA LTD
PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalys	is								
RPT Date: Oct 20, 2021			DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLAN	(SPIKE	MAT	TRIX SPIKE	
	Sa	mple D #4			Method Blank	Measured		ptable		1 1 11	eptable mits		Lin	ptable nits
PARAMETER		ld Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	1	Recovery	Lower	1
Water Quality Assessment (n	ng/L) Groundwater	'			1	•								
Electrical Conductivity	3086235	6120	6130	0.2%	< 2	104%	90%	110%						
рН	3086235	7.42	7.44	0.3%	NA	103%	90%	110%						
Total Dissolved Solids	3086147	540	558	3.3%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3086235	689	702	1.9%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3086235	689	702	1.9%	< 5									
Carbonate (as CaCO3)	3086235	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3086235	<5	<5	NA	< 5									
Fluoride	3080984	< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	93%	80%	120%	112%	70%	130%
Chloride	3080984	59.6	58.8	1.4%	< 0.10	94%	70%	130%	101%	80%	120%	103%	70%	130%
Nitrate as N	3080984	7.76	7.58	2.3%	< 0.05	94%	70%	130%	102%	80%	120%	101%	70%	130%
Nitrite as N	3080984	<0.05	<0.05	NA	< 0.05	106%	70%	130%	103%	80%	120%	112%	70%	130%
Bromide	3080984	<0.05	<0.05	NA	< 0.05	98%		130%	92%	80%	120%	88%	70%	130%
Sulphate	3080984	27.6	27.5	0.4%	< 0.10	95%	70%	130%	99%	80%	120%	98%	70%	130%
Ortho Phosphate as P	3080984	<0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3084096	0.03	0.03	NA	< 0.02	103%	70%	130%	106%	80%	120%	89%	70%	130%
Total Phosphorus	3070594	0.03	0.03	NA	< 0.02	99%	70%	130%	96%	80%	120%	97%	70%	130%
Total Organic Carbon	3080535	11.2	11.2	0.0%	< 0.02	95%	90%	110%	100%	90%	110%	NA	80%	120%
True Colour	3095546	46	46	0.0%	< 5	100%	90%	110%	100 /6	30 /6	11076	INA	00 /6	12070
Turbidity	3089426	14.4	15.2	5.4%	< 0.5	99%	80%	120%						
Dissolved Calcium	3086543	75.0	75.2	0.3%	< 0.05	96%		130%	98%	80%	120%	97%	70%	130%
Disable d Managarium	0000540	04.7	04.7	0.00/	0.05	000/	700/	4000/	4000/	000/	4000/	4000/	700/	4200/
Dissolved Magnesium	3086543	24.7	24.7	0.0%	< 0.05	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Potassium	3086543	2.72	2.68	1.5%	< 0.50	100%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Sodium	3086543	8.64	8.57	0.8%	< 0.05	96%	70%	130%	96%	80%	120%	102%	70%	130%
Dissolved Aluminum	3086788	0.028	0.026	7.4%	< 0.004	104%	70%	130%	110%	80%	120%	105%	70%	130%
Dissolved Antimony	3086788	< 0.001	< 0.001	NA	< 0.001	94%	70%	130%	99%	80%	120%	95%	70%	130%
Dissolved Arsenic	3086788	0.001	0.001	NA	< 0.001	96%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Barium	3086788	0.050	0.047	6.2%	< 0.002	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Beryllium	3086788	< 0.0005	< 0.0005	NA	< 0.0005	107%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Boron	3086788	0.031	0.030	NA	< 0.010	103%	70%	130%	106%	80%	120%	101%	70%	130%
Dissolved Cadmium	3086788	< 0.0001	< 0.0001	NA	< 0.0001	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Chromium	3086788	0.003	0.003	NA	< 0.002	99%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Cobalt	3086788	0.0008	0.0007	NA	< 0.0005	94%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Copper	3086788	< 0.001	< 0.001	NA	< 0.001	95%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Iron	3086788	5970	5440	9.3%	< 0.010	87%	70%	130%	112%	80%	120%	101%	70%	130%
Dissolved Lead	3086788	< 0.0005	< 0.0005	NA	< 0.0005	97%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Manganese	3086788	0.949	0.875	8.1%	< 0.002	95%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Mercury	3073029	<0.0001	<0.0001	NA	< 0.0001			130%	97%	80%		97%		130%
Dissolved Molybdenum	3086788	0.008	0.007	NA	< 0.002	95%		130%	102%	80%	120%	104%		130%
Dissolved Nickel	3086788	< 0.003	< 0.003	NA	< 0.003			130%	104%		120%	106%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 20, 2021				DUPLICATE			REFERENCE M			METHOD	BLANK	SPIKE	MAT	RIX SP	IKE
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		eptable mits	Recovery	Lie	ptable nits	Recovery	1 1:	eptable mits
		Id					value	Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Selenium	3086788		<0.001	0.001	NA	< 0.001	97%	70%	130%	93%	80%	120%	98%	70%	130%
Dissolved Silver	3086788		< 0.0001	< 0.0001	NA	< 0.0001	99%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Strontium	3086788		0.271	0.249	8.5%	< 0.005	94%	70%	130%	102%	80%	120%	103%	70%	130%
Dissolved Thallium	3086788		< 0.0003	< 0.0003	NA	< 0.0003	99%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Tin	3086788		< 0.002	< 0.002	NA	< 0.002	98%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Titanium	3086788		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Tungsten	3086788		< 0.010	< 0.010	NA	< 0.010	98%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	3086788		0.0013	0.0012	NA	< 0.0005	96%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Vanadium	3086788		< 0.002	< 0.002	NA	< 0.002	94%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Zinc	3086788		< 0.005	< 0.005	NA	< 0.005	100%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Zirconium	3086788		< 0.004	< 0.004	NA	< 0.004	94%	70%	130%	99%	80%	120%	100%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

CHARTERED OF MINIOTOGRAPH OF THE MINIOTOGRAPH

Certified By:



Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	7.07.11 0.011		7.11.01.27.12.12.11.11.12.2
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A	
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Foliassium Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Aluminum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMI LING SITE.		SAMI LED DT.	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311 B	² CVAAS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS



CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 20, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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
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- The test results reported herewith relate only to the samples as received by the laboratory.
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 contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 12

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Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-13 DATE REPORTED: 2021-10-20

 Parameter
 Unit
 G / S
 RDL
 308655

 Escherichia coli
 CFU/100mL
 0
 1
 ND

 Total Coliforms
 CFU/100mL
 0
 1
 3

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3086558 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

manjot Bhells AMANJOT BHELA SCHEMIST



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment (mg/L) Groundwater

DATE RECEIVED: 2021-10-13 DATE REPORTED: 2021-10-20

			SAMPLE DE	SCRIPTION:	1539 Holborn	
			SAI	MPLE TYPE:	Water	
				SAMPLED:	2021-10-13 10:56	
Parameter	Unit	G / S: A	G / S: B	RDL	3086558	
Electrical Conductivity	μS/cm			2	394	
рН	pH Units		6.5-8.5	NA	8.00	
Saturation pH (Calculated)					7.51	
Langelier Index (Calculated)					0.493	
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	117	
Total Dissolved Solids	mg/L		500	10	204[<b]< td=""><td></td></b]<>	
Alkalinity (as CaCO3)	mg/L		30-500	5	179	
Bicarbonate (as CaCO3)	mg/L			5	179	
Carbonate (as CaCO3)	mg/L			5	<5	
Hydroxide (as CaCO3)	mg/L			5	<5	
Fluoride	mg/L	1.5		0.05	0.14[<a]< td=""><td></td></a]<>	
Chloride	mg/L		250	0.10	16.5[<b]< td=""><td></td></b]<>	
Nitrate as N	mg/L	10.0		0.05	<0.05[<a]< td=""><td></td></a]<>	
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""><td></td></a]<>	
Bromide	mg/L			0.05	0.14	
Sulphate	mg/L		500	0.10	<0.10[<b]< td=""><td></td></b]<>	
Ortho Phosphate as P	mg/L			0.10	<0.10	
Ammonia as N	mg/L			0.02	0.50	
Total Phosphorus	mg/L			0.02	< 0.02	
Total Organic Carbon	mg/L			0.5	25.0	
True Colour	TCU		5	5	<5[<b]< td=""><td></td></b]<>	
Turbidity	NTU		5	0.5	0.5[<b]< td=""><td></td></b]<>	
Dissolved Calcium	mg/L			0.05	23.3	
Dissolved Magnesium	mg/L			0.05	14.4	
Dissolved Potassium	mg/L			0.50	1.60	
Dissolved Sodium	mg/L	20		0.05	32.2[>A]	
Dissolved Aluminum	mg/L			0.004	0.010	
Dissolved Antimony	mg/L	0.006		0.001	<0.001[<a]< td=""><td></td></a]<>	
Dissolved Arsenic	mg/L	0.01		0.001	0.002[<a]< td=""><td></td></a]<>	

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment (mg/L) Groundwater

			Trato.	quality 7	m) momentum	ig/=/ Groundwater	
DATE RECEIVED: 2021-10-13							DATE REPORTED: 2021-10-20
			SAMPLE DE	SCRIPTION:	1539 Holborn		
			SA	MPLE TYPE:	Water		
			DATE	E SAMPLED:	2021-10-13 10:56		
Parameter	Unit	G / S: A	G / S: B	RDL	3086558		
Dissolved Barium	mg/L	1.0		0.002	0.089[<a]< td=""><td></td><td></td></a]<>		
Dissolved Beryllium	mg/L			0.0005	<0.0005		
Dissolved Boron	mg/L	5.0		0.010	0.100[<a]< td=""><td></td><td></td></a]<>		
Dissolved Cadmium	mg/L	0.005		0.0001	<0.0001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Chromium	mg/L	0.05		0.002	<0.002[<a]< td=""><td></td><td></td></a]<>		
Dissolved Cobalt	mg/L			0.0005	< 0.0005		
Dissolved Copper	mg/L			0.001	<0.001		
Dissolved Iron	mg/L			0.010	<0.010		
Dissolved Lead	mg/L	0.010		0.0005	<0.0005[<a]< td=""><td></td><td></td></a]<>		
Dissolved Manganese	mg/L			0.002	0.007		
Dissolved Mercury	mg/L	0.001		0.0001	<0.0001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Molybdenum	mg/L			0.002	<0.002		
Dissolved Nickel	mg/L			0.003	< 0.003		
Dissolved Selenium	mg/L	0.05		0.001	<0.001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Silver	mg/L			0.0001	<0.0001		
Dissolved Strontium	mg/L			0.005	1.03		
Dissolved Thallium	mg/L			0.0003	<0.0003		
Dissolved Tin	mg/L			0.002	<0.002		
Dissolved Titanium	mg/L			0.002	<0.002		
Dissolved Tungsten	mg/L			0.010	<0.010		
Dissolved Uranium	mg/L	0.02		0.0005	<0.0005[<a]< td=""><td></td><td></td></a]<>		
Dissolved Vanadium	mg/L			0.002	<0.002		
Dissolved Zinc	mg/L			0.005	0.006		

Comments:

Dissolved Zirconium

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

< 0.004

0.004

Analysis performed at AGAT Toronto (unless marked by *)

mg/L

Certified By:



Exceedance Summary

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3086558	1539 Holborn	ON 169/03 AO&OG	Water Quality Assessment (mg/L) Groundwater	Hardness (as CaCO3) (Calculated)	mg/L	80-100	117
3086558	1539 Holborn	ON 169/03 MAC/IMAC	Total Coliforms & E. Coli (Using MI Agar)	Total Coliforms	CFU/100mL	. 0	3
3086558	1539 Holborn	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L) Groundwater	Dissolved Sodium	mg/L	20	32.2



Quality Assurance

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMPLING SITE:

	Microbiology Analysis															
RPT Date: Oct 20, 2021 DUPLICATE							REFEREN	ICE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE	
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank		Measured			Recovery	Lin	ptable nits	Recovery	Lin	eptable mits
		ld	Dup#1 Dup				Value	Lower Upper		,	Lower	Upper	,	Lower	Upper	

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3085462 ND ND NA <1 Total Coliforms 3085462 ND ND NA <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Amanjot Bhells Amanus Bhells Charteres

Certified By:

AGAT WORK ORDER: 21T815177

ATTENTION TO: Brian Holden

Quality Assurance

CLIENT NAME: AECOM CANADA LTD
PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalys	is								
RPT Date: Oct 20, 2021			DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLAN	(SPIKE	MAT	TRIX SPIKE	
	Sa	mple D #4			Method Blank	Measured		ptable		1 1 11	eptable mits		Lin	ptable nits
PARAMETER		ld Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	1	Recovery	Lower	1
Water Quality Assessment (n	ng/L) Groundwater	'			1	•								
Electrical Conductivity	3086235	6120	6130	0.2%	< 2	104%	90%	110%						
рН	3086235	7.42	7.44	0.3%	NA	103%	90%	110%						
Total Dissolved Solids	3086147	540	558	3.3%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3086235	689	702	1.9%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3086235	689	702	1.9%	< 5									
Carbonate (as CaCO3)	3086235	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3086235	<5	<5	NA	< 5									
Fluoride	3080984	< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	93%	80%	120%	112%	70%	130%
Chloride	3080984	59.6	58.8	1.4%	< 0.10	94%	70%	130%	101%	80%	120%	103%	70%	130%
Nitrate as N	3080984	7.76	7.58	2.3%	< 0.05	94%	70%	130%	102%	80%	120%	101%	70%	130%
Nitrite as N	3080984	<0.05	<0.05	NA	< 0.05	106%	70%	130%	103%	80%	120%	112%	70%	130%
Bromide	3080984	<0.05	<0.05	NA	< 0.05	98%		130%	92%	80%	120%	88%	70%	130%
Sulphate	3080984	27.6	27.5	0.4%	< 0.10	95%	70%	130%	99%	80%	120%	98%	70%	130%
Ortho Phosphate as P	3080984	<0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3084096	0.03	0.03	NA	< 0.02	103%	70%	130%	106%	80%	120%	89%	70%	130%
Total Phosphorus	3070594	0.03	0.03	NA	< 0.02	99%	70%	130%	96%	80%	120%	97%	70%	130%
Total Organic Carbon	3080535	11.2	11.2	0.0%	< 0.02	95%	90%	110%	100%	90%	110%	NA	80%	120%
True Colour	3095546	46	46	0.0%	< 5	100%	90%	110%	100 /6	30 /6	11076	INA	00 /6	12070
Turbidity	3089426	14.4	15.2	5.4%	< 0.5	99%	80%	120%						
Dissolved Calcium	3086543	75.0	75.2	0.3%	< 0.05	96%		130%	98%	80%	120%	97%	70%	130%
Disable d Managarium	0000540	04.7	04.7	0.00/	0.05	000/	700/	4000/	4000/	000/	4000/	4000/	700/	4200/
Dissolved Magnesium	3086543	24.7	24.7	0.0%	< 0.05	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Potassium	3086543	2.72	2.68	1.5%	< 0.50	100%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Sodium	3086543	8.64	8.57	0.8%	< 0.05	96%	70%	130%	96%	80%	120%	102%	70%	130%
Dissolved Aluminum	3086788	0.028	0.026	7.4%	< 0.004	104%	70%	130%	110%	80%	120%	105%	70%	130%
Dissolved Antimony	3086788	< 0.001	< 0.001	NA	< 0.001	94%	70%	130%	99%	80%	120%	95%	70%	130%
Dissolved Arsenic	3086788	0.001	0.001	NA	< 0.001	96%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Barium	3086788	0.050	0.047	6.2%	< 0.002	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Beryllium	3086788	< 0.0005	< 0.0005	NA	< 0.0005	107%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Boron	3086788	0.031	0.030	NA	< 0.010	103%	70%	130%	106%	80%	120%	101%	70%	130%
Dissolved Cadmium	3086788	< 0.0001	< 0.0001	NA	< 0.0001	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Chromium	3086788	0.003	0.003	NA	< 0.002	99%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Cobalt	3086788	0.0008	0.0007	NA	< 0.0005	94%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Copper	3086788	< 0.001	< 0.001	NA	< 0.001	95%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Iron	3086788	5970	5440	9.3%	< 0.010	87%	70%	130%	112%	80%	120%	101%	70%	130%
Dissolved Lead	3086788	< 0.0005	< 0.0005	NA	< 0.0005	97%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Manganese	3086788	0.949	0.875	8.1%	< 0.002	95%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Mercury	3073029	<0.0001	<0.0001	NA	< 0.0001			130%	97%	80%		97%		130%
Dissolved Molybdenum	3086788	0.008	0.007	NA	< 0.002	95%		130%	102%	80%	120%	104%		130%
Dissolved Nickel	3086788	< 0.003	< 0.003	NA	< 0.003			130%	104%		120%	106%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 20, 2021				DUPLICATE			REFERENCE M			METHOD	BLANK	SPIKE	MAT	RIX SP	IKE
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		eptable mits	Recovery	Lie	ptable nits	Recovery	1 1:	eptable mits
		Id					value	Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Selenium	3086788		<0.001	0.001	NA	< 0.001	97%	70%	130%	93%	80%	120%	98%	70%	130%
Dissolved Silver	3086788		< 0.0001	< 0.0001	NA	< 0.0001	99%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Strontium	3086788		0.271	0.249	8.5%	< 0.005	94%	70%	130%	102%	80%	120%	103%	70%	130%
Dissolved Thallium	3086788		< 0.0003	< 0.0003	NA	< 0.0003	99%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Tin	3086788		< 0.002	< 0.002	NA	< 0.002	98%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Titanium	3086788		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Tungsten	3086788		< 0.010	< 0.010	NA	< 0.010	98%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	3086788		0.0013	0.0012	NA	< 0.0005	96%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Vanadium	3086788		< 0.002	< 0.002	NA	< 0.002	94%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Zinc	3086788		< 0.005	< 0.005	NA	< 0.005	100%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Zirconium	3086788		< 0.004	< 0.004	NA	< 0.004	94%	70%	130%	99%	80%	120%	100%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

CHARTERED OF MINIOTOGRAPH OF THE MINIOTOGRAPH

Certified By:



Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	7.07.11 0.011		7.11.01.27.12.12.11.11.12.2
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A	
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Foliassium Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Aluminum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMI LING SITE.				
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE	
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311 B	² CVAAS	
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS	

MINISTRY OF THE ENVIRONMENT

Ontario Signatura	WATER WE		CORD	#1034 4034
1. PRI 2. CHE	NT ONLY IN SPACES PROVIDED CK CORRECT BOX WHERE APPLICABLE	6914136	69.003	CON. 15 N
YORK	TOWN OF EAST G		ON., BLOCK, TRACT, SURVEY.	ETC. 22 23 2 ETC. LOT 25-27
	R. R. # 1.	QUEENSVILLE.	ONTARIO.	DATE COMPLETED 48.53
	8,903.50	ELEVATION SI BC	BASIN CODE	DAY 13 MOD 6 YR.77
	LOG OF OVERBURDEN AND BED	25 26 30	31	
GENERAL COLOUR COMMON MAT	OTHER MAYERIA		ERAL DESCRIPTION	DEPTH - FEET
	top soil			FROM TO
	brown clay			2 18
	blue silty clay			18 27
	silty sand			27 29
31 baoh bh	60 18605 602786584	0029 2884		
WATER RECORD	51 CASING & OPEN HOL	43 S121	54 E(S) OF OPENING 31-3	65 75 80 33 DIAMETER 34-38 LENGTH 39-40
WATER FOUND KIND OF WATER	INSIDE WALL THICKNESS	DEPTH - FEET	OT NO.)	INCHES FEET
10-13 FRESH 3 SULF	THUR 14 10-11 1 □ STEEL 12	13-16 TO MAI	TERIAL AND TYPE	DEPTH TO TOP 41-44 80 OF SCREEN
15-18 1 FRESH 3 SULF 2 SALTY 4 MINE 20-23 1 FRESH 3 SULF 2 SALTY 4 MINE 25-28 1 FRESH 3 SULF 2 SALTY 4 MINE 30-33 1 FRESH 3 SULF 2 SALTY 4 MINE	RAL	27-30	SET AT - FEET MATE	SEALING RECORD (CEMENT GROUT. LEAD PACKER, ETC.)
	MPING RATE 15-14 DURATION OF PUMPING		OCATION OF	M/E I I
UN TEFET FEET FEET PUT TEFET PUT TEF	WATER LEVELS DURING 1 PUMPING	IN DIAGRAM BEI LOT LINE. IN	OW SHOW DISTANCES OF DICATE NORTH BY ARROV	WELL FROM ROAD AND
FINAL 54 WATER S] (ON 2	2	(043
STATUS OF WELL 55.56 WATER STATUS 1 DOMESTIC 2 STOCK 3 IRRIGATI	E 7 UNFINISHED E WELL C 5 COMMERCIAL 6 MUNICIPAL ON 7 PUBLIC SUPPLY	W -	H CELES	OLBOURNE RD.
USE CONTROL OF	er 9 NOT USED		3	
METHODA	CONVENTIONAL) 7 DIAMOND REVERSE) 8 DIAMOND AIR) 9 DRIVING	DRILLERS REMARKS	S	
J.F. KITCHI	NG & SON LTD. 3109	DATE OF INSPECTION	3 TRACTOR 99-62 DATE	2 90977 "
J.F. KITCHI ADDRESS BOX 20, H NAME OF DRILLER OR BORER SIGNATURE OF DNY ACOR	CLIAND LANDING ONT. LICENCE NUMBER SUBMISSION DATE	REMARKS:	CSS.S	
MINISTRY OF THE	DAY 31 MO 7 YR 77 ENVIRONMENT COPY	0		FORM 7 MOE 07-091



The Ontario Water Resources Act WATER WELL RECORD

_	SPACES PROVIDED RECT BOX WHERE APPLICABLE	6921997	N
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE		26
	6 WILL	IMBYRY 3	PLETED 48-53
	8 HOLEORN	RC ELEVATION RC BASIN CODE 11	2 MO O & YR S2
1 2 M 10 12	I PAT A	25 G [26 11 PO] 31 31 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	47
L	OG OF OVERBURDEN AND BEDI	ROCK MATERIALS (SEE INSTRUCTIONS)	DEPTH - FEET
GENERAL COLOUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	FROM TO
BROWN CLAY	STONES	PACKED	0 7
GREY CLAY	STONES	PACKED 3 000	7 30
GREY GLAVEL	CLAY	SILTY	30 37
GLEY CLAY	STONES	PACKED	37 50
GREY CLAY	PEBBLES	DENSE	20 100
GREY CLAY	Stones	PACKÉ O	100 216
BROWN BRNEL	ZANO	COESE	216 223
GREY CLAY	PEBBLES	PACKED	223 241
BLEY CLAY	HALDPAN - GRAVEL		241 259
GREY /IMPSTONE	FRACTURED	HALP	259 280
	1 1 1 1 1 1 1		<u> </u>
31	<u>, , , , , , , , , , , , , , , , , , , </u>	┇╸┎┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸┸ ┇╏╏╻╻┇╏╻╏╻╏┇╏╻╻╏╏┆┇	
41 WATER RECORD	51 CASING & OPEN HOL	E RECORD Z SIZE ST OF OPENING 31-33 DIAM	ETER 34-38 LENGTH 39-40
WATER FOUND KIND OF WATER	INSIDE WALL DIAM MATERIAL THICKNESS	DEPTH - FEET SECTION 10 SECTION 1	1NCHES FEET DEPTH TO TOP
2 80 2 G SALTY 4 MINERALS 6 GAS	INCHES INCHES	13-16	OF SCREEN FEET
15-18 1 FRESH 3 SULPHUR 19	6 Jaconcrete 4 open Hole 5 Jaconcrete 4 open Hole 4 open Hole	0 259 61 PLUGGING & SEA	LING RECORD
20-23 1 FRESH 3 SULPHUR 24	17-18 1 STEEL 19 2 GALVANIZED	20-23 DEPTH SET AT - FEET MATERIAL AN	D TYPE (CEMENT GROUT LEAD PACKER, ETC.)
2 SALTY 4 MINERALS 6 GAS 25-28 1 FRESH 3 SULPHUR 29	3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC		EHCEO
2 SALTY 6 GAS	24-25 1	27-30 18-21 22-25	
30-33 1 FRESH 3 SULPHUR * 34 4 MINERALS 2 SALTY 6 GAS	4 OPEN HOLE 5 PLASTIC	26-29 30-33 80	
71 PUMPING TEST METHOD ALE TO PUMPING RA	TE 11-14 DURATION OF PUMPING 45 GPM 2 15-16 5 17- HOURS MI	LOCATION OF WEL	L
STATIC WATER LEVEL 25 WATER	I D BUMPING	IN DIAGRAM BELOW SHOW DISTANCES OF WELL LOT LINE INDICATE NORTH BY ARROW.	. FROM ROAD AND
PUMPING 19-21 22-24 15 MINUTE		1 1	
	Ret 647 FEET 72 FEET 73FE	ocow (E)	BINE AUR
IF FLOWING. GIVE RATE GPM RECOMMENDED PUMP TYPE RECOMMENDED PUMP TYPE PUMP	FEET 1 DCLEAR 2 CLOUD		·
RECOMMENDED PUMP TYPE RECOMMENDED PUMP SETTING	ED 43-45 RECOMMENDED 46-		
50-53]	
FINAL 1 WATER SUPPLY 2 OBSERVATION W	5 ABANDONED, INSUFFICIENT SUPPLEL 6 ABANDONED POOR QUALITY		
STATUS J TEST HOLE OF WELL 4 RECHARGE WELL	7 UNFINISHED	1 30 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
55-56 1 DOMESTIC	5 COMMERCIAL 6 MUNICIPAL	7 m 2330' 2	
WATER 3 IRRIGATION USE 4 INDUSTRIAL	7 PUBLIC SUPPLY COOLING OR AIR CONDITIONING		
☐ OTHER —	9 NOT USED		
METHOD 2 CABLE TOOL 2 PROTARY (CONVE			
OF CONSTRUCTION 3 ROTARY (REVER 4 ROTARY (AIR) 5 AIR PERCUSSION	9 DRIVING	I CESLIE	119558
NAME OF WELL CONTRACTOR	WELL CONTRACTOR	R'S DATA SA CONTRACTOR 59-52 DATE RECEIV	
	L DRILLING 6418	DATE OF INSPECTION	3 1 1992
	earl OUT KOK)	() N	
NAME OF WELL TECHNICIAN NAME OF WELL TECHNICIAN DETK	AUICH WELL TECHNICIAN LICENCE NUMBER		
	SUBMISSION DATE DAVIDE MO. 108 YR.	OFFICE	
MINISTRY OF THE ENVIR			ORM NO. 0506 (11/86) FORM 9

AECOM

AECOM Project No.: 60636190

				MECP WW	69141	36	· -		_		
Well Own	er Info	rmati	on:								
Property Owne	er Name:	JANI	C!	4 B.	RIAN	Hac	· H KO	ISK	/		
Property Addr	ess:		38 HOLBORN RUAD E, QUEENSVILLERO 5-478-2325 Email: Jans ginger bread@ hotmail.								
Telephone:		905	-47	8-232	5 Email	•	Jans	Sginge	rbre	ead who	ot mail.
Name of Perso Completing Su	A CONTRACTOR			Macaki							Co
Telephone:		905-	4178	-2325	Email		Inte	Arat ea	lea-	tha su	mon tic
Relationship to Property Owne	r:	Husi	bomo	(Date o	of Surve letion:	y Se	pten	nbe	tha sy	021 00
Name of Origin (if known/differe	al Well Ow nt tuom also	ner. ve)	C ⁱ 0	rigina	/						
Occupant	of Pro	perty	Ser	ved by V	NeⅡ: (if	other th	an Owner	-)	<u></u>		
Name:			_ /					<u>-</u>		<u> </u>	
Telephone:		0	6	O V Email			0. 1	,ve			
Address:	as			S AND THE PROPERTY OF THE PARTY	015	}	0000				
Well Loca	tion:										
Lot: 124	26	Conces	sion:	3		To	ownship:	East	Gu	Mimber	
Well Cons	tructio	n Det	ails:								
Well Record Available?	XVes	□No	Date \	Vell ructed:	June	1977	Well Co			# 3/09 f.K. fchi and Su	
Well Type: (Drilled/Bored/Dug)	1300	ed	Casin	g Material: Concrete, etc.)	Concr		Name: Well Cas Diamete			30 in	2.1
Well Stick Up: (Above Ground)	12 1	och	Well D		29/	eet	Water Le	evel:	1		which
s Well Located n a Well Pit?	☐ Yes (ViNo		it Depth: Ground)	-67		Well Stic	k Up;	- //	47	
s Well Flowing?	[Ä]Yes [□ No	Flow F		<16	PM	Contract		as	abore	
Vell Cap Type:	Concr	refe	Does (Good (Cap Create a Seal?	Yes i		is Wire (Conduit Well Cap] Yes □ N	
the Well:	Accessible Direct San		ÞΟΥ	′es 🗆 No	OR	Burie Other	d, In a We Confined	II Pit, or] Yes [] No	0
Vell Screen nstalled?	□ Yes [If Yes, Slot Si	Length & ze:		Depth	of Top o Ground)				

Well I.D. #:

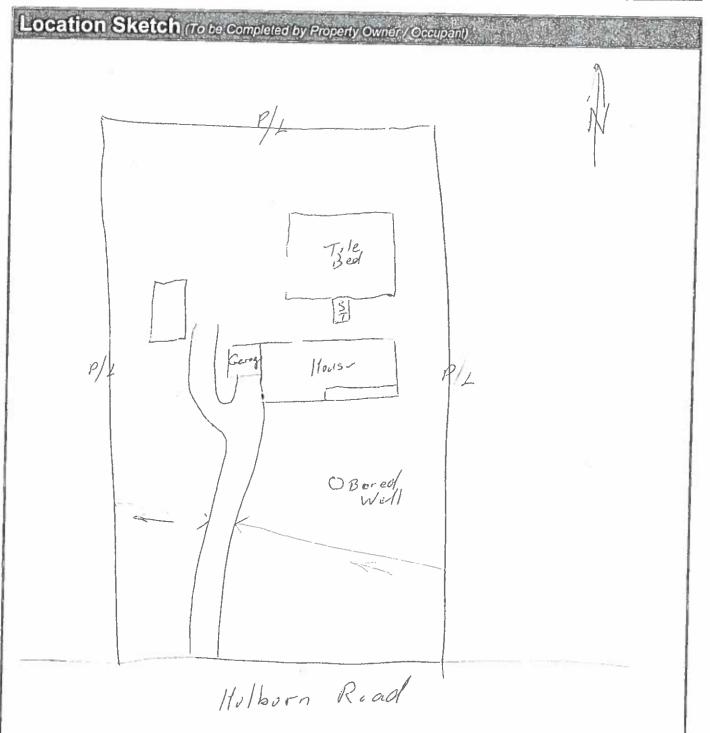
		M	Well I.D. #:				roject No.: roject No.:	60650190		
Pumping Equ	uipme	nt:			,		-			
Pump Type:	⊅ Jet P	ump 🔲 :	Submers	ible 🗆 Pis	ton Pump	☐ Othe	r (please de	escribe):		
Pump Horsepower:	3/4	HP	J	. % .		lp				
Pump Intake Depth: (Below Ground)	-	7.57	(If Not in	mp Age: 40 years mp Location: Basemen 1			Pumping (If Known)	Rate:	>36PM	
Pressure Tank:	Type:	13/00	der				Capacity:		44 Galler	
Water Treatment: (if present)	□ Chlori □ U.V.	nator 🗆 🗆 R.O.	Water S	oftener 🗍 (please des	Water Filte scribe):	er (indical	'e type)			
Well Usage:								·		
Primary Use(s): Do	mestic:	X Yes	□ No.	Livestock:	X Yes	□ No	Lawn Wat	ering:	∑Yes □ No	
# of Persons Using Well:	f of Persons 7 / 2 #of Livestock					Other Daily Amount: (if known)				
Indoor Plumbing Fixt (Washroom(s), Shower(s Laundry, Pool, Spa, etc.)	s), Dishwas	sher,	•	1-5 4-68 1-K.1	drup.	n h	th ouse Lo	u n d	ny Ruom	
Sewage Servi	cing:									
Private Sewage System or Municipal:	Pa	IVATE	- Sys	tem Type: tic tank, etc.)	Sepi	le Tay	ile bed	Distance rom Wel	10091	
Well Location:	□ Uph	ill 🗆 Do	wnhill	X/Same Gr		, , ,				
Presence of Any Abo Potential Source(s) of fincluding distance on / of	f Contam	ination:	Tank o	r Other	100	プセ				
Previous Con	cerns	4 b								
How Long Have You (Operated a Business	Owned, R on this P	esided, o	r /	45 ye	01-5					
Have You Experience Concerns with Your V Quantity or Quality)	d Any <u>Pro</u> Vell Supp	evious ly?		N /1	If Yes, W	hen?				
Cause(s) of the Previous Concern?				re 🗆 Plugg r (Please de		creased (Jsage □ II	nterferen	ce	

			Well I.D. #:	4136		60636190
				7126	Client Project No.:	
Well Modi	fication / I	Maintenan	ce:			
Has Your Well Ever Been	Deepened?	□ Yes No	Cleaned?	□ Yes X No	Reconstructe or Replaced	Yes No
If Yes to Any of Please Provide I		BORED	WELL	Replace	ed by D	RILLED WUT
Other Deta	iils:					2000
Other Details tha						
- Aug	well A	ruo sea	sorally	overAl	ar into	Swarle.
			<u> </u>	·		
	·					
			· · · · · · · · · · · · · · · · · · ·			
Property O	wner Part	icipation i	n Monito	ring Progr	am:	
Does the Property	/ Owner and/or	Occupant Grant	Permission	or MTOJAĘCOM	to Monitor	Al.
and/or Sample Yo	our Well?	- Chir	WITH	PRIDE NO	titication	X Yes □ No
Join omi	1 no	ults has	of dupl	bserdation icate son	no porio no	alytical takeni@some
BORINA	KINCHKOW		134.	1114 1	Buch S.	+127021
	wner / Occupar			Signature	0	Date

AECOM

Well I.D. #: AECOM Project No.: 60636190

MECP WW69 14136 Client Project No.:



Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

General D	etails:					
Project Name:	BRP - V	Vell S	wey	Projec	t No.:	60636190
Address:	BRP - V 1538 Ho	lborn Roc	vd.	Inspec	ted By:	60636190 Holden / Mud r
Date:	October 13/2	(Time:	10:00 - 17:00	Weath	er: C	loude
Easting:	623639	Northing:	4890556	Datum		174
Well Detai	is:					
ls Well Accessil	ole for Inspection?	☐ Yes ☐ I	Vo If No, Provide	Reason:		
MECP Water We Record No.:	11	Date Well Constructed:		Contra	ctor Name:	
Well Type; (Drilled/Bored/Dug)		Well Stick Up (Above Ground)			Material: Concrete, etc.)	
Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Depth (Below Ground)		Well St (Above F	ick Up: Pit Bottom)	
Well Casing Diameter:		Well Depth: (Below Ground)		Ground (Below G	water Leve Ground)	4:
Pump On / Off?	□ On □ Off	Water Level Condition:	Stable (Static)	☐ Declin	ing (Drawdov	n) Rising (Recovery)
Flowing Well?	☐ Yes ☐ No	Flow Rate: (Estimated)		Well Ca	р Туре:	
Vell Screen nstalled?	☐ Yes ☐ No	If Yes, Length & Slot Size:		Top of S	Screen: round)	
s There a Depre Vell Casing Exte	ssion Around the	☐ Yes ☐ No	o Pho	to(s) of W	ell Obtaine	d? ☐ Yes ☐ No
Observation(s) S	ummary:					

AECOM

				Well I.D. #: MECP WWR #:	14136			roject No.:	GC6361	190
Water Qu	ality Sar	nplin	g:	4	892 199	7				
Water Quality Obtained?	Sample	Yes	□ No	if No, Provi	de Reason:					
Sampling Loc	ation:	Drille	of top.	Raw or Trea	ated Sample?					
Disinfected Sa	ample Port?	X Yes	□ No	Disinfection	Method:	(lorox			
Photo of Samp (against white be	ple Obtained? ackground)	Y Yes	□ No	If No, Provid	de Reason:					
Analyte Suite:	9	317	9	+ E.Co	17/10tal	(diffin	<u> </u>		
Sample I.D.:	Sample I.D.: 1538 Holborn Date Samp			Time of 13/2 10:50		21	Number of Sample Bottles:		9	
Field Water Qu	ialia Damai			lange server	10:56	R 272.00				
		ers is (rec		STEEL STEEL						
Temperature:	11.4		pH:	7.	92	Conductivity:		31 de	06	
Turbidity:			D.O.:			Col	our:	de		1538
Odours?	No		Appea	rance/Odour	N	on	L			1439
Type of Conce	rn: (if applicable)			ity Water (7
if the concern to changes were a	was contamina apparent to wa	ation wh	at							-
Were there any	effects of this	concer	n?							-

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

What action was taken to overcome this

T: 905.886.7022 F: 905.538.8076 www.aecom.com

concern?

				Well I.D			AECOM Project No.: 606 30/90	
				MECP WWF	R#: 6921	1997	Client Project No.:	
Well Owne	er Info	rmatio	on.					
		1		· 🙃				
Property Owner		JANIC	5 T	BRIAN	HACHKO	WSK	/	
Property Addre	ss:	Quean	13411	e On	Road Is.	200	2 1 K 0	
Telephone:		905-	478	2325	Email:		lansyinger pread a hotmai	100
Name of Person Completing Sur	vey:	BRIA	ا د.	HACHKON	13K,			,004
Telephone:		905-	478-	2325	Email:		Integral edearth @	
Relationship to Property Owner		Husb	and		Date of Si Completion	urvey	Septent - 17, 2021	
Name of Origina (if known/differen	li Vell Ow Urom;abo	ner: ve)	Oria	ginal				
Occupant	of Pro	perty	Serv	ed by V	Vell: (if othe	er than (Owner)	
Name:		1					/	
Telephone:	050	hov	e	Email:			ove	
Address:	050				OB			
Well Locat	ion:		6:	23638	3 489	705	72 177	
Lot: P.f.	26	Conces	sion:	3		Town	ship: East Gwillimbury	,
Well Const	ructio	n Deta	ails:					
Well Record Available?	Y Yes	□ No	Date W Constru		August 22,	1992 Na	Vell Contractor #6418 ame: Fennella Well On	lline
Mail Torrison		1						11

<u> </u>	Constructed:	Hucust Ld	./972]Name:	Fennella Well Ori
DRILLED	Casing Material: (Steel, Concrete, etc.)	PVC	Well Casing	lo inch
2 feet	Well Depth: (Below Ground)	283	P Water Level:	Static 40 feat
☐ Yes ☒ No	Well Pit Depth: (Below Ground)	N/4	Well Stick Up:	19/
☐ Yes 📈 No	Flow Rate:	N/A	Contractor:	as above
Aluminum	Does Cap Create a Good Seal?	Nes 🗆 N	ls Wire Conduit	N7/11 17 11
Accessible for Direct Sampling?	⊠Yes □ No	OR E	Buried, In a Well Pit, o	r Dy Ha
☐ Yes 🌠 No	If Yes, Length & Slot Size:		Pepth of Top of Screen	
	2 feet Yes No Yes No Huminum Accessible for Direct Sampling?	Casing Material: (Steel, Concrete, etc.) Lest Well Depth: (Below Ground) Yes No Well Pit Depth: (Below Ground) Yes No Flow Rate: Luninum Does Cap Create a Good Seal? Accessible for Direct Sampling?	Casing Material: (Steel, Concrete, etc.) Leed Well Depth: (Below Ground) Yes No Well Pit Depth: (Below Ground) Yes No Flow Rate: Lun, num Good Seal? Accessible for Direct Sampling? Casing Material: (Steel, Concrete, etc.) Well Pit Depth: (Below Ground) Does Cap Create a Good Seal? No OR E	DRILLED Casing Material: (Steel, Concrete, etc.) 2 feet Well Depth: (Below Ground) □ Yes ☑ No □ Yes ☑ No □ Flow Rate: Does Cap Create a Good Seal? Casing Material: (Steel, Concrete, etc.) Well Casing Diameter: Water Level: (Below Ground) Well Stick Up: (Above Pit Bottom) Contractor: Is Wire Conduit Tight to Well Casing Diameter: Well Casing Diameter: Well Casing Diameter: Well Casing Diameter: Water Level: (Below Ground) Well Stick Up: (Above Pit Bottom) Flow Rate: No □ Swire Conduit Tight to Well Casing Diameter: Water Level: (Below Ground) Well Stick Up: (Above Pit Bottom) Contractor: Well Casing Diameter: Water Level: (Below Ground) Well Stick Up: (Above Pit Bottom) Contractor: Well Casing Diameter: Water Level: (Below Ground) Well Stick Up: (Above Pit Bottom) Contractor: Well Casing Diameter: Ontary Contractor Swire Conduit Tight to Well Casing Diameter:

		Well I.D. #;				AECOM Project No.: 6063619				
		MECP WWR #: 092 1997					Client Project No.:			
Pumping E	auinma	nt.				1192		•		
Tamping L	quipine		- , , ,, ., .							
Pump Type:	☐ Jet F	ump 🔊	Submers	sible 🗆 Pis	ton Pump	□ Oihe	r (please o	escribe)	:	
Pump Horsepower: $\frac{1}{2}HP$ Pump				30 years		Pumping Capacity:			G PM	
Pump Intake Dep (Below Ground)	120	259 > 280 P		Pump Location: (If Not in Well)		2/4		Pumping Rate: (If Known)		45 GPM
Pressure Tank	Type:	Blea	lele-				Capacity	' :	440	adlon s
Water Treatment: (if present)				oftener 🗌						
Well Usage										
Primary Úse(š):	Domestic:	✓ Yes	□ No	Livestock:	XYes	□No	Lawn Wa	tering:	Ø√Ye	s 🗍 No
# of Persons Using Well:	712	#of Live: Watered		100	Other Uses:			Daily A		
Indoor Plumbing I (Washroom(s), Show Laundry, Pool, Spa, e	er(s), Dishwas	sher,		1-5 p 4- be	lece droom hen	bouth	Laun	dry	Room	
Sewage Ser	vicing:		<u></u>							
Private Sewage System or Municij	pal!	irate		tem Type: tic tank, etc.)	Sept	tre To	wik	Distance	1 %	50 Ad
Well Location:	i X Upl	nill 🗆 Do	ownhill	☐ Same Gr		,-1 F/	le Degi			Birt
Presence of Any A Potential Source(s including distance on	i) of Contam	ination:	e Tank o	or Other	N	one			<u>, , , , , , , , , , , , , , , , , , , </u>	
Previous Co	ncerns	•						·		
low Long Have Yo Operated a Busine	ou Owned, F ss on this P	Resided, o	or C	Dwned	Sino	e 1	1976	,		
lave You Experier Concerns with You Quantity or Quality)	nced Any <u>Pr</u> ur Well Supp	evious ply?		Yes XINo	If Yes, WI	hen?	<u>.</u>			
Cause(s) of the Previous Concern?	3)			ire 🗆 Plugg			Usage 🗆	Interfere	ence	

			Well I.D. #:	97 1997	AECOM Project No.:_ Client Project No.:	60630196
Well Modif	ication / i				Onent Project No	
Has Your Well Ever Been	Deepened?	□ Yes No	Cleaned?	□ Yes Mo	Reconstructed or Replaced?	☐ Yes X No
If Yes to Any of t Please Provide D	the Above, Details:					
Other Deta	ils:					
Other Details tha	t May be Relev	ant to Assessin	g the Current	Condition of You	ur Well Supply:	
			18			
)						
Property Ov						
Does the Property Ind/or Sample You	Owner and/or ur Well?	- Subject +	0241-	advance ,	to Monitor	X yes □ No
for each regults	site visit	and samp	ling ound	a copy analytreas	of all una	whom taken
HNICE + BRU	IN HACHK	cowsky	Bus	Maclke	Seo Seo	tember 17.2021
	wner / Occupar Print in BLOCK lette			Signature		Date

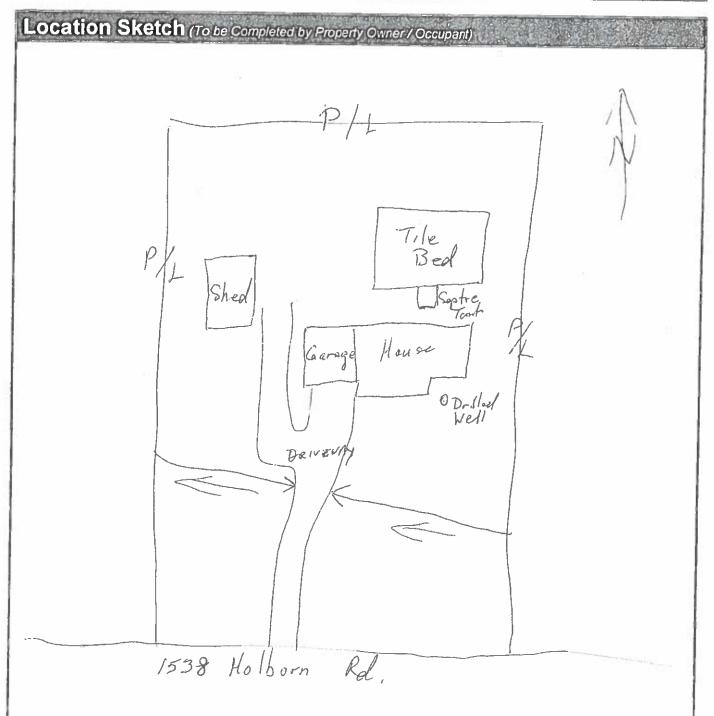
AECOM

Well I.D. #:_____

AECOM Project No.:

60036190

R#: Client Project No.:



Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).



Appendix B

Property ID #41 – 1737 Holborn Road



November 22nd, 2021

Alan & Beverley Watman 1737 Holborn Road Queensville, ON LOG 1R0

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Watman,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 6th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	1 CFU/ 100mL	0 CFU/100mL	MAC	Y
Iron	6.29 mg/L	0.3 mg/L	AO	N
Manganese	0.123 mg/L	0.05 mg/L	AO	N
Turbidity	105 NTU	5 NTU	AO	N
Hardness (as CaCO ₃)	410 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Ms. Watman on November 19^{th,} 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit 80 Bradford St. #403 Barrie, ON L4N 6S7



Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 1737 Holborn Road

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

1737 Holborn Road, Queensville, Ontario, L0G 1R0

Owner Information:

Owner Name: Alan Watman and Beverly Watman

Phone Number: 905-478-4423

Email: N/A

Well Record

Coordinates (UTM)......624420E/4890640N

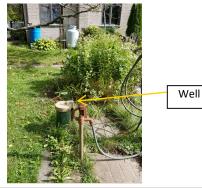
(NAD83 Zone17)

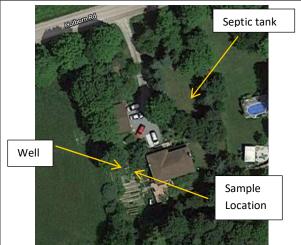
Well Location..... behind garage

Water Usage.....Residential

Water Source.....Overburden

Static Water Level.....N/A





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank..... in front of house

Treatment System.....None

Recent Test Results.....None

Water Sampled......Yes (October 6, 2021)

Sample Source...... Well pump

Appearance......clear

Comments:

- Well has hand gravity pump
- Drilled well replaced old dug well near septic
- PVC pipes added from well to house in 2020

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	1 CFU/ 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	410 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T812334

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 13, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

Total Coliforms & F. Coli (Using MI Agar)

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

rotal comornio a Li con (comg im Agai)

DATE RECEIVED: 2021-10-06 DATE REPORTED: 2021-10-13

 SAMPLE DESCRIPTION:
 1737 Halburn

 SAMPLE TYPE:
 Water

 DATE SAMPLED:
 2021-10-06

 13:17
 3061871

 Parameter
 Unit
 G / S
 RDL
 306187

 Escherichia coli
 CFU/100mL
 100
 1
 ND

 Total Coliforms
 CFU/100mL
 1
 1
 1

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061871 ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

Water Quality Assessment - PWQO (mg/L)					
DATE RECEIVED: 2021-10-06					DATE REPORTED: 2021-10-13
		SAMPLE DESCRIPTION: SAMPLE TYPE: DATE SAMPLED:		1737 Halburn Water 2021-10-06 13:17	
Parameter	Unit	G/S	RDL	3061871	
Electrical Conductivity	μS/cm		2	887	
рН	pH Units	6.5-8.5	NA	7.85	
Saturation pH (Calculated)				6.82	
Langelier Index (Calculated)				1.03	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	410	
Total Dissolved Solids	mg/L		10	584	
Alkalinity (as CaCO3)	mg/L		5	287	
Bicarbonate (as CaCO3)	mg/L		5	287	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.05	<0.05	
Chloride	mg/L		0.12	87.2	
Nitrate as N	mg/L		0.05	<0.05	
Nitrite as N	mg/L		0.05	<0.05	
Bromide	mg/L		0.05	<0.05	
Sulphate	mg/L		0.10	59.5	
Ortho Phosphate as P	mg/L		0.10	<0.10	
Ammonia as N	mg/L		0.02	<0.02	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002	
Total Phosphorus	mg/L	*	0.02	<0.02	
Total Organic Carbon	mg/L		0.5	1.0	
True Colour	TCU		5	<5	
Turbidity	NTU		0.5	105	
Total Calcium	mg/L		0.16	118	
Total Magnesium	mg/L		0.17	28.1	
Total Potassium	mg/L		0.58	1.65	
Total Sodium	mg/L		0.22	17.5	
Aluminum-dissolved	mg/L	*	0.004	<0.004	
Total Antimony	mg/L	0.020	0.001	<0.001	

Certified By:

Inis Verástegui



Certificate of Analysis

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD
SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

			٧	later Quality I	Assessment - PWQO (mg/L)
DATE RECEIVED: 2021-10-06					DATE REPORTED: 2021-10-13
		SAMI	CRIPTION: PLE TYPE: SAMPLED:	1737 Halburn Water 2021-10-06 13:17	
Parameter	Unit	G/S	RDL	3061871	
Total Arsenic	mg/L	0.1	0.003	< 0.003	
Total Barium	mg/L		0.002	0.082	
Total Beryllium	mg/L	*	0.001	<0.001	
Total Boron	mg/L	0.2	0.010	0.018	
Total Cadmium	mg/L	0.0002	0.0001	<0.0001	
Total Chromium	mg/L		0.003	< 0.003	
Total Cobalt	mg/L	0.0009	0.0005	<0.0005	
Total Copper	mg/L	0.005	0.001	0.001	
Total Iron	mg/L	0.3	0.010	6.29	
Total Lead	mg/L	*	0.001	<0.001	
Total Manganese	mg/L		0.002	0.123	
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001	
Total Molybdenum	mg/L	0.040	0.002	<0.002	
Total Nickel	mg/L	0.025	0.003	< 0.003	
Total Selenium	mg/L	0.1	0.002	<0.002	
Total Silver	mg/L	0.0001	0.0001	<0.0001	
Total Strontium	mg/L		0.005	0.324	
Total Thallium	mg/L	0.0003	0.0003	<0.0003	
Total Tin	mg/L		0.002	<0.002	
Total Titanium	mg/L		0.010	<0.010	
Total Tungsten	mg/L	0.030	0.010	<0.010	
Total Uranium	mg/L	0.005	0.002	<0.002	
Total Vanadium	mg/L	0.006	0.002	<0.002	
Total Zinc	mg/L	0.030	0.020	0.058	
Total Zirconium	mg/L	0.004	0.004	<0.004	
Lab Filtration Aluminum Dissolved				2021/10/7	
Lab Filtration mercury				2021/10/7	

Certified By:

Tris Verastegui



Certificate of Analysis

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-06 DATE REPORTED: 2021-10-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061871 Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

calculated.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Exceedance Summary

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3061871	1737 Halburn	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Iron	mg/L	0.3	6.29
3061871	1737 Halburn	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Zinc	mg/L	0.030	0.058



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

Microbiology Analysis															
RPT Date: Oct 13, 2021				UPLICAT	E		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPII	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured			Recovery	Lin	ptable nits	Recovery		ptable nits
		ld		.,			Value	Lower	Upper		Lower	Upper		Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3061729 ND ND NA <1 Total Coliforms 3061729 50 40 22.2% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

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Certified By:

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

	Water Analysis														
RPT Date: Oct 13, 2021				UPLICATE			REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
		Sample				Method Blank	Measured	Accep Measured Limi				ptable			ptable nits
PARAMETER	Batch	ld	Dup #1	Dup #2	RPD	Diank	Value		Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Water Quality Assessment - P	WQO (mg/L)														
Electrical Conductivity	3062184		40	40	0.0%	< 2	100%	90%	110%						
pH	3062184		6.69	6.73	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3060808		172	186	7.8%	< 10	98%	80%	120%						
Alkalinity (as CaCO3)	3062184		17	16	NA	< 5	87%	80%	120%						
Bicarbonate (as CaCO3)	3062184		17	16	NA	< 5	NA								
Carbonate (as CaCO3)	3062184		<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3062184		<5	<5	NA	< 5	NA								
Fluoride	3068146		< 0.05	< 0.05	NA	< 0.05	94%	70%	130%	107%	80%	120%	103%	70%	130%
Chloride	3068146		64.1	64.1	0.0%	< 0.10	93%	70%	130%	110%	80%	120%	109%	70%	130%
Nitrate as N	3068146		<0.05	<0.05	NA	< 0.05	100%	70%	130%	108%	80%	120%	108%	70%	130%
Nitrite as N	3068146		<0.05	<0.05	NA	< 0.05	102%	70%	130%	99%	80%	120%	112%	70%	130%
Bromide	3068146		< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	106%	80%	120%	107%	70%	130%
Sulphate	3068146		123	123	0.0%	< 0.10	97%	70%	130%	109%	80%	120%	106%	70%	130%
Ortho Phosphate as P	3068146		<0.10	<0.10	NA	< 0.10	100%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3062181		<0.02	<0.02	NA	< 0.02	105%	70%	130%	99%	80%	120%	90%	70%	130%
Total Phosphorus	3061760		0.87	0.89	2.3%	< 0.02	98%	70%	130%	97%	80%	120%	NA	70%	130%
Total Organic Carbon	3062196		1.3	1.3	NA	< 0.5	103%	90%	110%	103%	90%	110%	95%	80%	120%
True Colour	3051121		232	237	2.1%	< 5	105%	90%	110%						
Turbidity	3061372		42.1	44.5	5.5%	< 0.5	98%	80%	120%						
Total Calcium	3059717		40.8	40.3	1.2%	< 0.10	93%	70%	130%	94%	80%	120%	100%	70%	130%
Total Magnesium	3059717		14.1	13.8	2.2%	< 0.10	97%	70%	130%	97%	80%	120%	103%	70%	130%
Total Potassium	3059717		1.29	1.24	NA	< 0.50	94%	70%	130%	95%	80%	120%	101%	70%	130%
Total Sodium	3059717		8.59	8.44	1.8%	< 0.10	92%	70%	130%	92%	80%	120%	101%	70%	130%
Aluminum-dissolved	3057466		< 0.004	< 0.004	NA	< 0.004	110%	70%	130%	107%	80%	120%	85%	70%	130%
Total Antimony	3059717		<0.001	<0.001	NA	< 0.001	99%	70%	130%	104%	80%	120%	105%	70%	130%
Total Arsenic	3059717		<0.003	<0.003	NA	< 0.003	93%	70%	130%	116%	80%	120%	112%	70%	130%
Total Barium	3059717		0.062	0.062	0.0%	< 0.002	101%	70%	130%	103%	80%	120%	109%	70%	130%
Total Beryllium	3059717		<0.001	<0.001	NA	< 0.001	96%	70%	130%	112%	80%	120%	112%	70%	130%
Total Boron	3059717		0.023	0.026	NA	< 0.010	99%	70%	130%	103%	80%	120%	111%	70%	130%
Total Cadmium	3059717		<0.0001	<0.0001	NA	< 0.0001		70%	130%	105%	80%	120%	107%	70%	130%
Total Chromium	3059717		<0.003	<0.003	NA	< 0.003	107%	70%	130%	102%	80%	120%	107%	70%	130%
Total Cobalt	3059717		<0.0005	<0.0005	NA	< 0.0005		70%	130%	109%	80%	120%	111%	70%	130%
Total Copper	3059717		0.002	0.002	NA	< 0.000	105%	70%	130%	104%	80%	120%	110%	70%	
Total Iron	3059717		0.162	0.002	11.1%	< 0.001	102%		130%	105%	80%	120%	101%	70%	
Total Lead	3059717		<0.001	<0.001	NA	< 0.010	96%		130%	109%		120%	109%		130%
Total Manganese	3059717		0.100	0.112	11.3%	< 0.002	103%	70%	130%	109%	2 ∩0/.	120%	107%	70%	130%
Dissolved Mercury	3065987		<0.0001	<0.0001	NA	< 0.002			130%	99%	80%	120%	99%		130%
Total Molybdenum	3059717		<0.0001	<0.0001	NA	< 0.0001	106%	70%	130%	107%	80%	120%	110%	70%	130%
Total Nickel	3059717		<0.002	<0.002	NA	< 0.002	106%		130%	107%		120%	106%		130%
I OLAI INIONOI	3038111		~ 0.003	<0.003	INA	< 0.003	10470	1070	13070	103%	0070	12070	100%	1070	13070

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

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Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY: Justin Borrmann

SAMPLING SITE:Bradford	d						SAMP	LED B	Y:Justir	Borr	mann				
		1	Nate	r Ana	lysis	s (Cor	ntinu	ed)							
RPT Date: Oct 13, 2021		DUPLICATE				REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MATRIX SPIKE		IKE	
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld		·				Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3059717		<0.002	<0.002	NA	< 0.002	96%	70%	130%	113%	80%	120%	105%	70%	130%
Total Silver	3059717		<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	109%	80%	120%	106%	70%	130%
Total Strontium	3059717		0.261	0.287	9.5%	< 0.005	100%	70%	130%	107%	80%	120%	100%	70%	130%
Total Thallium	3059717		<0.0003	< 0.0003	NA	< 0.0003	96%	70%	130%	111%	80%	120%	110%	70%	130%
Total Tin	3059717		< 0.002	< 0.002	NA	< 0.002	105%	70%	130%	110%	80%	120%	106%	70%	130%
Total Titanium	3059717		<0.010	<0.010	NA	< 0.010	95%	70%	130%	107%	80%	120%	110%	70%	130%
Total Tungsten	3059717		<0.010	<0.010	NA	< 0.010	97%	70%	130%	103%	80%	120%	104%	70%	130%
Total Uranium	3059717		< 0.002	< 0.002	NA	< 0.002	93%	70%	130%	110%	80%	120%	111%	70%	130%
Total Vanadium	3059717		< 0.002	< 0.002	NA	< 0.002	107%	70%	130%	106%	80%	120%	107%	70%	130%
Total Zinc	3059717		0.029	< 0.020	NA	< 0.020	107%	70%	130%	103%	80%	120%	110%	70%	130%
Total Zirconium	3059717		< 0.004	< 0.004	NA	< 0.004	110%	70%	130%	106%	80%	120%	107%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Inis Verástegui



Method Summary

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

PROJECT: 60636190

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Godium	WE1-93-0103	modified from EPA 200.8 and EPA	
Aluminum-dissolved	MET-93-6103	3005A	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

SAMPLING SHE:Bradford		SAMPLED BY: JUSTIN BOTTMANN						
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311B	¹² CVAAS					
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION					
Lab Filtration mercury	SR-78-9001		FILTRATION					

		Well I.D.		AECOM Project No.:	60636190
		MECP WWR	#: 09237	Client Project No.:	
Well Owne	er Informatio	n:			
Property Owner	Name: Ala	41 Bevel	rley W	Latinan	
Property Addre	ss: /73		/ ' \	1 Queensvill	o OuthOGIE
Telephone:	905	478 41-23	Email:	L COGEZIIS II	01111
Name of Person Completing Sur	vey: Be	serley l	Vatma	N	
Telephone:	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Email:	¥-	
Relationship to Property Owner	1		Date of Sur Completion	vey Sept!	2 2021
Name of Origin (if known/differe					
Occupant	of Property	Served by W	Vell: (if other	than Owner!	
	or Property	Served by V	VCII. (II other	tnan Owner)	
Name:		_ W.	1		
Telephone:		Email:			
Address:					
14/-11 1	4:			71	=1 41
Well Loca	tion:			e u U	
Lot: Ptho	725 Conces	sion: Con-	3	Township: East	Jurillimburd
Well Cons	truction Det	ails:			
Well Record Available?	☑ Yes ☐ No	Date Well Constructed:	oct. 198	Well Contractor	Boadway
Well Type: (Drilled/Bored/Dug	drilled	Casing Material: (Steel, Concrete, etc.)	steel	Well Casing Diameter:	62"
Well Stick Up: (Above Ground)	129 0.36m	Well Depth: (Below Ground)	133	Water Level: (Below Ground)	136
Is Well Located in a Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)		Well Stick Up: (Above Pit Bottom)	
Is Well Flowing	☐ Yes ☐ No	Flow Rate:		Contractor:	N= <u>.</u>
Well Cap Type:	Yard Hydrunt	Does Cap Create a Good Seal?	☑ Yes □ N	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No
is the Well:	Accessible for Direct Sampling?	V Yes □ No		uried, in a Well Pit, or ther Confined Space?	☐ Yes ☐ No
Well Screen Installed?	ves □ No	If Yes, Length & Slot Size:		epth of Top of Screen: elow Ground)	133'

									1,29,6 (90)	
			V	Well I.D. #:			AECOM Pr	oject No.:	6063	6190
	₹1					707	Cllent Pr	oject No.:		
oumping Equi	pment	t:								
Pump Type:] Jet Pum	p 🗱 Sul	bmersib	ole 🗆 Pisi	ton Pump	□ Other	(please de	escribe):		
Pump Horsepower:	230	V. P	ump Ag	ge:	Oct. i	996	Pumping Capacity:		Pump	ing Rute
Pump Intake Depth: Below Ground)	701		ump Le	ocation: Well)		Pumping (If Known)	Rate:	8	G-PM Pole	
Pressure Tank: T	ype: Pe	entajo					Capacity	:	<u>-</u>	
Water Treatment: □ Chlorinator ☑ Water Softener □ Water Filter (indicate type) (if present) □ U.V. □ R.O. □ Other (please describe):										
Well Usage:	•			· · · · · · · · · · · · · · · · · · ·					-	
Primary Use(s): Don	nestic:	Yes [] N o	Livestock	:: 🗆 Yes	s 🗹 No	Lawn Wa	atering:	□ Y	es 🛭 No
# of Persons Using Well:	/ ["	of Livest Vatered:	ock			outs Tapon		Daily A		
Indoor Plumbing Fixtu (Washroom(s), Shower(s), Laundry, Pool, Spa, etc.)		өг,		haun 3 Ba	vashed clry wo ths. 3	esher Shower	0170	ıb-		
Sewage Servi	cing:									
Private Sewage System or Municipal:	Pri	vate	Sys (sep	tem Type tic tank, etc	5	eptio	3	Distan	- 1	
Well Location:	☑ Uphil	II 🗆 Do	wnhill	☐ Same	Grade					
Presence of Any Abov Potential Source(s) of (including distance on / of	Contami		Tank	or Other						
Previous Con	cerns:									
How Long Have You (Operated a Business			r	Val	y 19	180	.58	2 du	-9 w	el (when!
Have You Experience Concerns with Your V (Quantity or Quality)				Yes 🗹 N	o If Yes,	When?	No cal	ree a	drille	el (when? // sijoply /well_
Cause(s) of the Previous Concern?	1		· ·		ugging describe):	Increase	d Usage	□ Interfe	erence	

Well I.D. #:		AECOM Project No.:	60636140
MECP WWR #:	6923707	Client Project No.:	

Location S	Sketch (To be Completed by Property Owner / Occupant)
1-e3-L	Higher S Higher 1737 Holbernold.
· 分·	Idistance of Frankd. & Japine 19491
	Garage
	Well III Veg Gardon Fouse Septrelland Fouse
Include details suc	th as property lines, buildings, well, sewage system (if present), as well as any other potential sources of

		MEC	Well I.D. #:	923707	AECOM Project No.:					
Well Modif	ication / I			314 370						
Has Your Well Ever Been	Deepened?	· ·	Cleaned?	·	Reconstructed or Replaced?	V Yes □ No				
If Yes to Any of t Please Provide D		Galun:	.: Opij	De Peple	ecal with Pi	Clipe				
Other Deta	ther Details: her Details that May be Relevant to Assessing the Current Condition of Your Well Sup									
Other Details tha	t May be Rele	vant to Assessir	a the Currer	nt Condition of Yo	our Well Supply:					
		-								
Chr. John	VIION	n water	*							
										
	<u></u>		<u></u>							
·										
			<u></u>							
						·				
Property C	wner Pa	rticipation	in Moni	toring Pro	gram:					
Does the Proper and/or Sample Y	ty Owner and/ our Weil?	or Occupant Gra	nt Permissio	on for MTO/AECO	OM to Monitor	Yes No				
	Owner / Occup se Print in BLOCK		10	Joven la (l Signature	La lines 1	Sept 14/2 Date /				

		Well I.C	D.#: R#: 6923707	AECOM Pro	ect No.:	40434190
		MECP WW	1R#: 6923707	Cilent Pro	ject No.:	
Field Visit	Log (To Be Compl	leted by AECOM	Staff)			
General D	etails:					
Project Name:	BBP . Well	Suvey		Project No.:	60	636196
Address:	2023 173	10 10 10 10 10 10 10 10 10 10 10 10 10 1	n Road	Inspected By:	Hola	ler/Boman
Date:	Oct.6/21		3:00-13:40	Weather:	Sun	my/cloudy
Easting:	624240	Northing: 4	1890640	Datum:	1	フナ
Well Detai	ls:					
THE RESERVE THE PARTY OF THE PA	ble for Inspection?	✓Yes □ No	If No, Provide Re	eason:	_	
MECP Water We Record No.:	6923707	Date Well Constructed:	9/18/96	Contractor Nar	ne:	Bloodway
Well Type: (Drilled/Bored/Dug	Pilled	Well Stick Up: (Above Ground)	0.36m	Casing Materia (Steel, Concrete,		Steel
Well Located in a Well Pit?	☐ Yes 🛂 No	Well Pit Depth: (Below Ground)		Well Stick Up: (Above Pit Botton	7)	
Well Casing Diameter:	8"	Well Depth: (Below Ground)	136 Et	Groundwater L (Below Ground)	.evel:	
Pump On / Off?	⊠On □ Off	Water Level Condition:	Stable (Static)	☑Declining (Draw	wdown)	Rising (Recovery)
Flowing Well?	☐ Yes 🖫 No	Flow Rate: (Estimated)	8 6pm	Well Cap Type	•	Bolt
Well Screen Installed?	Yes □ No	If Yes, Length & Slot Size:	18 Slot	Top of Screen (Below Ground)	:	133
Is There a Dep Well Casing Ex	ression Around the kterlor?	☐ Yes MNo	Phot	o(s) of Well Obt	ained?	☐ Yes ☐ No
Observation(s)	Summary:	pump	vitz,		-	
- Well	has hard	purnp loose 11	100 10	11 1.00	1 00	
- Oralled	well refi	Laced old	ang we	near	1 29	POLC
- FVC X	ipes adelle	Provin	Well to V	house in	2	.0 20

AECOM

		Weil I.D. #:	AECOM Pro	oject No.:_ <i>6063619</i> (
		MECP WWR #: 6725	707 Client Pro	oject No.: <u>60636190</u> oject No.:
Water Quality Sa	mpling:			
Water Quality Sample Obtained?	✓ Yes □ No	If No, Provide Reason:	:	
Sampling Location:	well pump	Raw or Treated Sample	e? raw	
Disinfected Sample Port?	☑ Yes □ No		alconox +	DI
Photo of Sample Obtained (against white background)	Yes 🗆 No	If No, Provide Reason:		
Analyte Suite: 93 170	7 + F.C	Total (Coliforno	
	tolborn Samp		Number of Sample Bo	ttles: 9
Field Water Quality Parame	ters: (record unit	s)		
Temperature: 12.9°	С рн:	7.44	Conductivity:	1.08 ms clear L colourless
Turbidity:	D.O.:		Colour:	clear L Colourless
Odours?	Арре	earance/Odour:		
Type of Concern: (if applicat		☐ Water Quantity ☐ Wa (Note any differences in taste, or		518
If the concern was contami changes were apparent to		Some concern	about loc	ation.
Were there any effects of the	nis concern?			
What action was taken to o	vercome this			

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3

T: 905.886.7022 F: 905.538.8076 www.aecom.com

Canada



Appendix C

Property ID #59 – 20877 Yonge Street

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Nicholas Dargus 20877 Yonge St. East Gwillumbury, ON L9N 0J6

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Dargus,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 14th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	364 CFU/ 100mL	0 CFU/100mL	MAC	Υ
Escherichia coli (E. coli)	3 CFU/ 100 ml	0 CFU/100mL	MAC	Υ
Colour	7 TCU	5 TCU	AO	N
Manganese	0.15 mg/L	0.05 mg/L	AO	N
Hardness (as CaCO ₃)	303 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Mr. Dargus on November 19, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms and E. Coli) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit 80 Bradford St. #403 Barrie, ON L4N 6S7



Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 20877 Yonge Street

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

20877 Yonge Street, East Gwillimbury, Ontario, L7N 0J6

Owner Information:

Owner Name: Nicholas Dargus Phone Number: 905-235-2337 Email: nick.dargus@gmail.com

Well Record

Coordinates (UTM)......619969E/4888202N

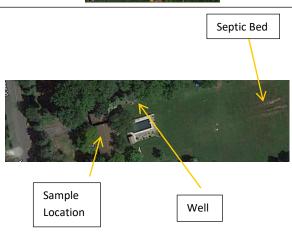
(NAD83 Zone17)

Well Location...... In front of the house

Water Usage......Residential
Water Source......Overburden

Static Water Level.....N/A





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Backyard 100' away from well

Treatment System......Water softener, (sediment/iron)filter, U.V.

Recent Test Results.....None

Water Sampled......Yes (October 14, 2021)

Sample Source...... Basement Tap

Appearance.....brown – clear after running; Sulphur

Comments:

Home owner not present for start of visit

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	364 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	303 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T815956
MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 23, 2021

PAGES (INCLUDING COVER): 12

VERSION*: 1

			lease contact vour c			

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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 12

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms	₽. ⊏	Cali	/Heina	МП	Agar)
Total Coliforms	ŒΕ.	COII	(USING	IVII	Adari

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

20887 Yonge SAMPLE DESCRIPTION: **SAMPLE TYPE:** Water DATE SAMPLED: 2021-10-14 13:25 **Parameter** Unit G/S RDL 3091522 100 3 Escherichia coli CFU/100mL

CFU/100mL

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

364

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.

3091522 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Total Coliforms

manjot Bhelly AMANJOT BHELA S CHEMIST OF



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

		***	itti Quu	nty Assessment	Dissolved Metals	i vvao (ilig/L)	
DATE RECEIVED: 2021-10-14							DATE REPORTED: 2021-10-23
		SAMPLE DES	CRIPTION:	20887 Yonge			
		SAM	PLE TYPE:	Water			
		DATE	SAMPLED:	2021-10-14			
_				13:25			
Parameter	Unit	G/S	RDL	3091522			
Electrical Conductivity	μS/cm		2	734			
pH	pH Units	6.5-8.5	NA	7.96			
Saturation pH (Calculated)				6.95			
Langelier Index (Calculated)				1.01			
Hardness (as CaCO3) (Calculated)	mg/L		0.5	303			
Total Dissolved Solids	mg/L		10	436			
Alkalinity (as CaCO3)	mg/L		5	270			
Bicarbonate (as CaCO3)	mg/L		5	270			
Carbonate (as CaCO3)	mg/L		5	<5			
Hydroxide (as CaCO3)	mg/L		5	<5			
Fluoride	mg/L		0.05	<0.05			
Chloride	mg/L		0.10	56.3			
Nitrate as N	mg/L		0.05	<0.05			
Nitrite as N	mg/L		0.05	<0.05			
Bromide	mg/L		0.05	<0.05			
Sulphate	mg/L		0.10	27.2			
Ortho Phosphate as P	mg/L		0.10	<0.10			
Ammonia as N	mg/L		0.02	0.07			
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	0.00379			
Total Phosphorus	mg/L	*	0.02	0.05			
Total Organic Carbon	mg/L		0.5	74.6			
True Colour	TCU		5	7			
Turbidity	NTU		0.5	46.0			
Dissolved Calcium	mg/L		0.25	106			
Dissolved Magnesium	mg/L		0.25	9.37			
Dissolved Potassium	mg/L		2.50	<2.50			
Dissolved Sodium	mg/L		0.25	26.1			
Aluminum-dissolved	mg/L	*	0.004	<0.004			
Dissolved Antimony	mg/L	0.020	0.001	<0.001			
	9, =	0.020	0.00.				

Certified By:

Tris Verastegui



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14					DATE REPORTED: 2021-10
			CRIPTION: PLE TYPE: SAMPLED:	20887 Yonge Water 2021-10-14 13:25	
Parameter	Unit	G/S	RDL	3091522	
Dissolved Arsenic	mg/L	0.1	0.003	<0.003	
Dissolved Barium	mg/L		0.002	0.071	
Dissolved Beryllium	mg/L	*	0.0005	<0.0005	
Dissolved Boron	mg/L	0.2	0.010	0.019	
Dissolved Cadmium	mg/L	0.0002	0.0001	<0.0001	
Dissolved Chromium	mg/L		0.003	<0.003	
Dissolved Cobalt	mg/L	0.0009	0.0005	<0.0005	
Dissolved Copper	mg/L	0.005	0.001	0.001	
Dissolved Iron	mg/L	0.3	0.010	0.014	
issolved Lead	mg/L	*	0.001	<0.001	
Dissolved Manganese	mg/L		0.002	0.150	
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001	
Dissolved Molybdenum	mg/L	0.040	0.002	<0.002	
Dissolved Nickel	mg/L	0.025	0.003	< 0.003	
Dissolved Selenium	mg/L	0.1	0.004	<0.004	
Dissolved Silver	mg/L	0.0001	0.0001	<0.0001	
Dissolved Strontium	mg/L		0.005	0.263	
Dissolved Thallium	mg/L	0.0003	0.0003	< 0.0003	
Dissolved Tin	mg/L		0.002	<0.002	
Dissolved Titanium	mg/L		0.002	<0.002	
Dissolved Tungsten	mg/L	0.030	0.010	<0.010	
Dissolved Uranium	mg/L	0.005	0.002	<0.002	
Dissolved Vanadium	mg/L	0.006	0.002	<0.002	
issolved Zinc	mg/L	0.030	0.005	0.019	
issolved Zirconium	mg/L	0.004	0.004	<0.004	
ab Filtration Aluminum Dissolved	3			2021/10/18	
Lab Filtration mercury				2021/10/18	
Lab Filtration Metals				2021/10/18	

Certified By:

Inis Verástegui



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

SAMPLED BY:

ATTENTION TO: Brian Holden

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091522 Metals analysis completed on a lab filtered sample.

Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certified By:

Yris Verastegui

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2

http://www.agatlabs.com

TEL (905)712-5100 FAX (905)712-5122



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956
ATTENTION TO: Brian Holden

PROJECT: 60636190 SAMPLING SITE:

SAMPLED BY:

	Microbiology Analysis														
RPT Date: Oct 23, 2021 DUPLICATE REFERENCE MA										ERENCE MATERIAL METHOD BLANK SPI			E MATRIX SPIKE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Accepta Limits	•	Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld					Value	Lower U	pper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3091472 3091472 ND ND NA <1 Total Coliforms 3091472 3091472 116 114 1.7% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Amanjot Bhell Amandor BHELL OCHEMIST OF CHEMIST OF CHEM

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			wate	er Ar	nalys	IS								
RPT Date: Oct 23, 2021			DUPLICATE			REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch Sam	ple Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery		ptable nits	Recovery	Lir	ptable
FANAMETER	ld	Dup#1	Dup #2	KFD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Uppe
Water Quality Assessment - D	issolved Metals - PV	VQO (mg/L)												
Electrical Conductivity	3090117	138	138	0.0%	< 2	97%	90%	110%						
рН	3090117	7.17	7.13	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3091472 309147	2 520	524	0.8%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3090117	64	62	3.2%	< 5	84%	80%	120%						
Bicarbonate (as CaCO3)	3090117	64	62	3.2%	< 5	NA								
Carbonate (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Fluoride	3091521 309152	21 <0.05	< 0.05	NA	< 0.05	94%	70%	130%	95%	80%	120%	112%	70%	130%
Chloride	3091521 309152	21 54.3	54.3	0.0%	< 0.10	96%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3091521 309152	21 4.07	4.16	2.2%	< 0.05	106%	70%	130%	106%	80%	120%	109%	70%	130%
Nitrite as N	3091521 309152	21 <0.05	<0.05	NA	< 0.05	95%	70%	130%	101%	80%	120%	110%	70%	130%
Bromide	3091521 309152	21 <0.05	< 0.05	NA	< 0.05	107%	70%	130%	104%	80%	120%	102%	70%	130%
Sulphate	3091521 309152	25.8	25.7	0.4%	< 0.10	99%	70%	130%	105%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3091521 309152	21 <0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	94%	70%	130%
Ammonia as N	3087154	<0.02	<0.02	NA	< 0.02	115%	70%	130%	99%	80%	120%	96%	70%	130%
Total Phosphorus	3090116	0.02	0.03	NA	< 0.02	97%	70%	130%	97%	80%	120%	105%	70%	130%
Total Organic Carbon	3094303	47.1	47.2	0.2%	< 0.5	99%	90%	110%	98%	90%	110%	NA	80%	120%
True Colour	3090232	31	31	0.0%	< 5	106%	90%	110%						
Turbidity	3091472 309147	2 <0.5	<0.5	NA	< 0.5	101%	80%	120%						
Dissolved Calcium	3095356	101	101	0.0%	< 0.05	95%	70%	130%	97%	80%	120%	98%	70%	130%
Dissolved Magnesium	3095356	12.2	12.2	0.0%	< 0.05	99%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Potassium	3095356	0.83	0.89	NA	< 0.50	99%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Sodium	3095356	2.75	2.72	1.1%	< 0.05	97%	70%	130%	96%	80%	120%	101%	70%	130%
Aluminum-dissolved	3091472 309147	2 <0.004	< 0.004	NA	< 0.004	104%	70%	130%	116%	80%	120%	119%	70%	130%
Dissolved Antimony	3091472 309147	′2 <0.001	<0.001	NA	< 0.001	102%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Arsenic	3091472 309147	2 <0.003	<0.003	NA	< 0.003	92%	70%	130%	103%	80%	120%	112%	70%	130%
Dissolved Barium	3091472 309147	2 0.073	0.079	7.9%	< 0.002	100%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Beryllium	3091472 309147	2 <0.0005	<0.0005	NA	< 0.0005	97%	70%	130%	109%	80%	120%	115%	70%	130%
Dissolved Boron	3091472 309147	2 0.036	0.038	NA	< 0.010	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Cadmium	3091472 309147	2 <0.0001	<0.0001	NA	< 0.0001	100%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Chromium	3091472 309147	2 <0.003	<0.003	NA	< 0.003	102%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Cobalt	3091472 309147		<0.0005	NA	< 0.0005		70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Copper	3091472 309147		0.025	17.4%	< 0.001	99%	70%	130%	105%		120%	104%		130%
Dissolved Iron	3091472 309147		<0.010	NA	< 0.010		70%	130%	106%		120%	101%	70%	130%
Dissolved Lead	3091472 309147		<0.001	NA	< 0.001	98%		130%	104%		120%	102%		130%
Dissolved Manganese	3091472 309147	′2 <0.002	0.003	NA	< 0.002	96%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Mercury	3095856	< 0.0001	<0.0001	NA	< 0.0001			130%	100%		120%	98%		130%
Dissolved Molybdenum	3091472 309147		<0.002	NA	< 0.000	104%	70%	130%	105%	80%		108%	70%	130%
Dissolved Nickel	3091472 309147		<0.002	NA	< 0.002			130%	106%		120%	103%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Water Analysis (Continued)															
RPT Date: Oct 23, 2021 DUPLICATE							REFERENCE MATERIAL		METHOD BLANK SPIKE		SPIKE	MATRIX SPIKE		KE	
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Blank Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld						Lower	Upper]	Lower	Upper	1 -1	Lower	Upper
Dissolved Selenium	3091472	3091472	<0.004	<0.004	NA	< 0.004	101%	70%	130%	108%	80%	120%	113%	70%	130%
Dissolved Silver	3091472	3091472	<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Strontium	3091472	3091472	0.249	0.253	1.6%	< 0.005	95%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Thallium	3091472	3091472	<0.0003	< 0.0003	NA	< 0.0003	97%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Tin	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	101%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Titanium	3091472	3091472	<0.002	<0.002	NA	< 0.002	100%	70%	130%	106%	80%	120%	105%	70%	130%
Dissolved Tungsten	3091472	3091472	<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	101%	70%	130%
Dissolved Uranium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	97%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Vanadium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	100%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Zinc	3091472	3091472	0.044	0.053	18.6%	< 0.005	100%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Zirconium	3091472	3091472	<0.004	<0.004	NA	< 0.004	100%	70%	130%	106%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Inis Verastegui



AGAT WORK ORDER: 21T815956

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

DADAMETED	ACATCOD	LITEDATURE REFERENCE	ANALYTICAL TECHNIQUE
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Galcidin	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Fotassium Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Sodidili	WE1-93-0103	modified from EPA 200.8 and EPA	ICF/OLS
Aluminum-dissolved	MET-93-6103	3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION
Lab Filtration mercury	SR-78-9001		FILTRATION
Lab Filtration Metals	SR-78-9001		FILTRATION

			641162 + 01		
Well Owner	· Informatio		ii	Client Project No.:_ Pa	per
Property Owner N		LAS DARGU			
Property Address				LIMBURY, ON L	9N ØJ6
Telephone:		35-2237	Email:	nick dargus @	
Name of Person Completing Surv	ey: NICH	lour Darkur		•	
Telephone:	Sam	_е	Email:		
Relationship to Property Owner:	0 w	NFR	Date of Survey Completion:	SEP 2/21	
Name of Original (if known/different	Well Owner: from above)	?	=		
Occupant o	of Property	Served by W	ell: (if other than	Owner)	П
Name:					N. C.
Telephone:		Email:			
Address:					ē .
Well Locat	ion:				
Lot: 118	Conces	sion: \ YE	PT To	wnship: EAST G	WILLIABURT
Well Const	ruction Det	ails: (cova	ACTOREGO TO	XDN HALL)	
Well Record Available?	☐ Yes ॼNo	Date Well Constructed:	unknown	Well Contractor Name:	unknown
Well Type: (Drilled/Bored/Dug)	Dua	Casing Material: (Steel, Concrete, etc.)	concrete	Well Casing Diameter:	30"
Well Stick Up: (Above Ground)	YES	Well Depth: (Below Ground)	unteres 295+	Water Level: (Below Ground)	? pretty
Is Well Located in a Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)	W.A.	Well Stick Up: (Above Pit Bottom)	- Khi
Is Well Flowing?	☑Yes ☐ No	Flow Rate:	2 FAST PECHARTEE		ζ
Well Cap Type:	Concrete	Does Cap Create a Good Seal?	☐ Yes ⊡ No	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No
is the Well:	Accessible for Direct Sampling?	☑Yes □ No		d, In a Well Pit, or Confined Space?	☐ Yes ☑ No
Well Screen	□ Voc □ Mo	If Yes, Length &	Depti	n of Top of Screen:	

(Below Ground)

Installed?

☐ Yes ☐ No

Slot Size:

	. 4
	- 4
44 1	10

			500	(well I.D. #:	6911	7 or 18	AECOM Pro	oject No.:	COG	36/90
			ME	CP WWR #:			Client Pro	oject No.:		
Pumping E	quipm	ent:								
Pump Type:	☑ Jet	Pump 🗆 S	Sübmersi	ble 🗆 Pisto	оп Ритр	☐ Othe	r (please de	scribe):		
Pump Horsepow	er: YzH	LP.	Pump A	ge:	3-4.	3-4785			2	
Pump Intake Dep (Below Ground)		4440	(If Not in	ocation: Well)	BASENE	77	Pumping (If Known)	Rate:	3	
Pressure Tank:	Туре:	PENTA	R				Capacity:	Λ	111.7	L
Water Treatment: (if present)		orinator 🗗					te type) <u>S</u> e	FOLUEN	25 +1	RON
Well Usage):									
Primary Use(s):	Domestic	: Yes	□ No	Livestock:	☐ Yes	s 🗔 No	Lawn Wat	tering:		es 🖬 No
# of Persons Using Well:	3	#of Live		٥	Other Uses:	Fill u	p pad 1	Daily An	nount:	3
Indoor Plumbing (Washroom(s), Shoot Laundry, Pool, Spa,	wer(s), Dishv etc.)		37	s'wes	noons	& Shew	er, dush	woh	, lan	3 3, pool
Private Sewage System or Munic	ipal: P	PIVATE		item Type: otic tank, etc.)	SE	PTIC		Distance from W	- 1 1	60F7+
Well Location:		Jphill 🖫 D	ownhill	🖺 Same G	rade					
Presence of Any Potential Source (including distance of	(s) of Cont	amination:	je Tank (or Other				23		1
Previous C	oncerr	ns:								
How Long Have Operated a Busir				6 YEI	ት ይና					
Have You Experi Concerns with Yo (Quantity or Quality)	our Well S			Yes ⊠ No	If Yes,	When?	3-4 cline fo	jears uled, u	ags shich	· Well · failed o
Cause(s) of the		rought 🗹 F		. – –			•_			r

vater vven		Well I.D. #:	911657 or 6911658	AECOM Project No.: Client Project No.:	
Well Modification /	Maintenan	ce:			
Has Your Well Ever Been Deepened?	☐ Yes No	Cleaned?	☐ Yes ☑∕No	Reconstructed or Replaced?	☐ Yes ☐ Yo
If Yes to Any of the Above, Please Provide Details:					
Other Details:					
Other Details that May be Rele	evant to Assessir	ng the Currer	t Condition of Yo	our Well Supply:	<u> </u>
If you could co	smoble th	a Corm	worth The	details I	3. M MUSELY
Inu The well	record]	.) ^ -	also need		rosulte
Volo lesting			Judy inform	when Also	0000
AMERICO DOIS	(العما (be video	d 0 (0	such
noxumity to a	Ree J Byon				
The state of the s					
P					
		.			
Property Owner Pa	rticipation	in Moni	toring Pro	gram:	
Does the Property Owner and and/or Sample Your Well?	l/or Occupant Gra	ant Permissi	on for MTO/AECC	OM to Monitor	☑Yes □ No
		1	(D		
NICHOLAS DARGUS		- 1	u of		ept 2/21
Property Owner / Occi (Please Print in BLOCI		1	Signature		Date

AECOM

Well I.D. #:_		AECOM Project No.:	60636190
MECP WWR #:	6911658	Client Project No.:	

Location Sketch (To be Completed by Property Owner / Occupant)
et sal
Step 2 300 C
House
DRIVE WAY
Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, bamyards, chemical/manure storage, etc.).

AECOM

Project Name:	BBP - Wel	1 Screy	~	Project No.:	60636190
Address:	BBP - Well 20877 7	longe St.		Inspected By:	Holden / Mudrak
Date:	Oct.14/21		:00 - 13:50	Weather:	Sunny
Easting:	619969	Northing:	1888 202	Datum:	171
Well Detai	ls:				
The section of the April	ble for Inspection?	Yes DiNo	if No, Provide R	eason: Pe	brs/Paves on
MECP Water We Record No.:	6911658	Date Well Constructed:	19/6/73	Contractor Na	12011166 10
Well Type: (Drilled/Bored/Dug	Pas	Well Stick Up: (Above Ground)	1611	Casing Materia (Steel, Concrete,	
Well Located in a Well Pit?	☐ Yes 🖫 No	Well Pit Depth: (Below Ground)		Well Stick Up: (Above Pit Botton	n)
Well Casing Diameter:	34	Well Depth: (Below Ground)	2981-	Groundwater i (Below Ground)	Level:
Pump On / Off?	Mon □ Off	Water Level Condition:	Stable (Static)	Declining (Dra	wdown) 🗌 Rising (Recovery)
Flowing Well?	☐ Yes ☐YNo	Flow Rate: (Estimated)	5 6PM	Well Cap Type	: Concet
Well Screen Installed?	☐ Yes 🗖 No	If Yes, Length & Slot Size:	1 -	Top of Screen (Below Ground)):
is There a Depi Well Casing Ex	ression Around the terior?	☐ Yes 🗹 No	Pho	to(s) of Well Ob	tained? Yes 🗆 No
Observation(s)		1 0	, ,	-1	1 115
- Hami	owne no	+ prese	est for	Stat o	L VIJIL

AECOM

				Well I.D. #;		AECOM Proje	act No.:_	<i>00636190</i>
				MECP WWR #:	691165	Client Proje	ect No.:_	
Water Q u	ality San	npling	j :					
Water Quality Obtained?	Sample	Y Yes	□No	If No, Provide	Reason:			
Sampling Loca	sampling Location:		nt op	Raw or Treat	ed Sample?	Raw		
Disinfected Sa			□No	Disinfection N	lethod:			
Photo of Samp (against white ba		X Yes	□No	If No, Provide	Reason:			
Analyte Suite:	93179	+	E. Co	1) Total	October 14	1/21		
Sample I.D.:				Time of ling:	13:25	Number of Sample Bott	les:	9
Field Water Qu	ıality Paramet	ers: (rec	ord unit:	s)				
Temperature:	16.7		pH:	7.34	L	Conductivity:		30
Turbidity:			D.O.:			Colour:	por	us/Clear
Odours?			Appe	arance/Odour:	Sulph	w		
Type of Conce	e rn : (if applicable	2)		☐ Water Quanti (Note any difference				
if the concern changes were				nr = 1900 mineral - 12			N. 63 (10 (10 (10 (10 (10 (10 (10 (10 (10 (10	20.0
Were there any	y effects of thi	is conce	rn?					
What action w	as taken to ov	ercome	this					

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix D

Property ID #60 – 20901 Yonge Street

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Glenn and Rebecca Duclos 20901 Yonge St. East Gwillumbury, ON L9N 0J6

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Mrs. Duclos,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 14th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Colour	7 TCU	5 TCU	AO	N
Hardness (as CaCO ₃)	50.6 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486



Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 20901 Yonge Street

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

20901 Yonge Street, East Gwillimbury, Ontario, L9N 0J6

Owner Information:

Owner Name: Glenn Duclos and Rebecca Duclos

Phone Number: 416-570-2986 Email: glennduclos@hotmail.com

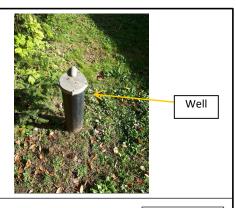
Well Record

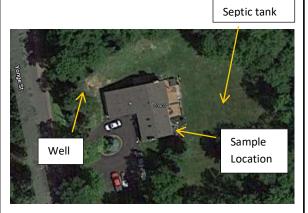
Coordinates (UTM)......619918E/4888246N

(NAD83 Zone17)

Well Location...... In front and right of house

Water Usage......Residential
Water Source.....Overburden
Static Water Level......14.63 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Backyard

Treatment System......Water softener, (reverse osmosis)filter

Recent Test Results......None

Water Sampled.....Yes (October 14, 2021)

Sample Source...... Outside Tap behind the house

Appearance......clear

Comments:

- Geothermal loop in the backyard
- Other neighbours are having water quality issues
- Concerned about water quality and quantity due to proximity to bypass

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	ND / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	50.6 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC-Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T815956

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 23, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 12

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

SAMPLE DESCRIPTION: Street
SAMPLE TYPE: Water
DATE SAMPLED: 2021-10-14
11:17

 Parameter
 Unit
 G / S
 RDL
 3091520

 Escherichia coli
 CFU/100mL
 100
 1
 ND

 Total Coliforms
 CFU/100mL
 1
 ND

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091520 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

manjot Bhells AMANJOT BHELA SCHEMIST



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

		***	ici Qua	ity A33C33iiiCiit	Dissolved Metals	i wao (ilig/L)	
DATE RECEIVED: 2021-10-14							DATE REPORTED: 2021-10-23
				20901 Yonge			
	:	SAMPLE DES	CRIPTION:	Street			
		SAM	PLE TYPE:	Water			
		DATE SAMPLED:		2021-10-14 11:17			
Parameter	Unit	G/S	RDL	3091520			
Electrical Conductivity	μS/cm		2	364			
рН	pH Units	6.5-8.5	NA	8.09			
Saturation pH (Calculated)				7.84			
Langelier Index (Calculated)				0.245			
Hardness (as CaCO3) (Calculated)	mg/L		0.5	50.6			
Total Dissolved Solids	mg/L		10	228			
Alkalinity (as CaCO3)	mg/L		5	191			
Bicarbonate (as CaCO3)	mg/L		5	191			
Carbonate (as CaCO3)	mg/L		5	<5			
Hydroxide (as CaCO3)	mg/L		5	<5			
Fluoride	mg/L		0.05	<0.05			
Chloride	mg/L		0.10	3.77			
Nitrate as N	mg/L		0.05	<0.05			
Nitrite as N	mg/L		0.05	<0.05			
Bromide	mg/L		0.05	<0.05			
Sulphate	mg/L		0.10	0.24			
Ortho Phosphate as P	mg/L		0.10	<0.10			
Ammonia as N	mg/L		0.02	0.11			
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	0.00791			
Total Phosphorus	mg/L	*	0.02	0.04			
Total Organic Carbon	mg/L		0.5	42.3			
True Colour	TCU		5	7			
Turbidity	NTU		0.5	0.9			
Dissolved Calcium	mg/L		0.05	13.2			
Dissolved Magnesium	mg/L		0.05	4.29			
Dissolved Potassium	mg/L		0.50	<0.50			
Dissolved Sodium	mg/L		0.05	5.63			
Aluminum-dissolved	mg/L	*	0.004	<0.004			

Certified By:

Iris Verastegui



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

		wa	iter Qual	ity Assessment - L	Pissolved Metals - PWQO (mg	/L)
DATE RECEIVED: 2021-10-14						DATE REPORTED: 2021-10-23
				20901 Yonge		
		SAMPLE DES	CRIPTION:	Street		
		SAM	PLE TYPE:	Water		
		DATE	SAMPLED:	2021-10-14 11:17		
Parameter	Unit	G/S	RDL	3091520		
issolved Antimony	mg/L	0.020	0.001	<0.001		
Dissolved Arsenic	mg/L	0.1	0.003	0.007		
Dissolved Barium	mg/L		0.002	0.079		
Dissolved Beryllium	mg/L	*	0.0005	<0.0005		
Dissolved Boron	mg/L	0.2	0.010	0.028		
Dissolved Cadmium	mg/L	0.0002	0.0001	<0.0001		
Dissolved Chromium	mg/L		0.003	<0.003		
Dissolved Cobalt	mg/L	0.0009	0.0005	<0.0005		
issolved Copper	mg/L	0.005	0.001	0.003		
issolved Iron	mg/L	0.3	0.010	0.013		
issolved Lead	mg/L	*	0.001	<0.001		
Dissolved Manganese	mg/L		0.002	0.015		
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001		
Dissolved Molybdenum	mg/L	0.040	0.002	0.006		
Dissolved Nickel	mg/L	0.025	0.003	< 0.003		
Dissolved Selenium	mg/L	0.1	0.004	<0.004		
Dissolved Silver	mg/L	0.0001	0.0001	<0.0001		
Dissolved Strontium	mg/L		0.005	0.163		
Dissolved Thallium	mg/L	0.0003	0.0003	<0.0003		
Dissolved Tin	mg/L		0.002	<0.002		
Dissolved Titanium	mg/L		0.002	<0.002		
Dissolved Tungsten	mg/L	0.030	0.010	<0.010		
Dissolved Uranium	mg/L	0.005	0.002	<0.002		
Dissolved Vanadium	mg/L	0.006	0.002	<0.002		
Dissolved Zinc	mg/L	0.030	0.005	<0.005		
Dissolved Zirconium	mg/L	0.004	0.004	<0.004		
_ab Filtration Aluminum Dissolved				2021/10/18		
Lab Filtration mercury				2021/10/18		

Certified By:

Inis Verastegui



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

20901 Yonge

SAMPLE DESCRIPTION: Street

SAMPLE TYPE: Water

DATE SAMPLED: 2021-10-14 11:17

 Parameter
 Unit
 G / S
 RDL
 3091520

 Lab Filtration Metals
 2021/10/18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091520 Metals analysis completed on a lab filtered sample.

Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

calculated.

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956
ATTENTION TO: Brian Holden

PROJECT: 60636190 SAMPLING SITE:

SAMPLED BY:

Microbiology Analysis															
RPT Date: Oct 23, 2021 DUPLICATE							REFEREN	ICE MATE	RIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Accepta Limits	•	Acceptable Limits		Recovery	Acceptable Limits		
		Id	d Dup#1				Value	Lower U	pper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3091472 3091472 ND ND NA <1 Total Coliforms 3091472 3091472 116 114 1.7% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Amanjot Bhell Amandor BHELL OCHEMIST OF CHEMIST OF CHEM

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			wate	er Ar	nalys	IS								
RPT Date: Oct 23, 2021			DUPLICATE			REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch Sam	ple Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery		ptable nits	Recovery	Lir	ptable
FANAMETER	ld	Dup#1	Bup#2 Ki b		Value	Lower	Upper	Recovery	Lower U	Upper	Recovery	Lower	Uppe	
Water Quality Assessment - D	issolved Metals - PV	VQO (mg/L)												
Electrical Conductivity	3090117	138	138	0.0%	< 2	97%	90%	110%						
рН	3090117	7.17	7.13	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3091472 309147	2 520	524	0.8%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3090117	64	62	3.2%	< 5	84%	80%	120%						
Bicarbonate (as CaCO3)	3090117	64	62	3.2%	< 5	NA								
Carbonate (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Fluoride	3091521 309152	21 <0.05	< 0.05	NA	< 0.05	94%	70%	130%	95%	80%	120%	112%	70%	130%
Chloride	3091521 309152	21 54.3	54.3	0.0%	< 0.10	96%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3091521 309152	21 4.07	4.16	2.2%	< 0.05	106%	70%	130%	106%	80%	120%	109%	70%	130%
Nitrite as N	3091521 309152	21 <0.05	<0.05	NA	< 0.05	95%	70%	130%	101%	80%	120%	110%	70%	130%
Bromide	3091521 309152	21 <0.05	< 0.05	NA	< 0.05	107%	70%	130%	104%	80%	120%	102%	70%	130%
Sulphate	3091521 309152	25.8	25.7	0.4%	< 0.10	99%	70%	130%	105%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3091521 309152	21 <0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	94%	70%	130%
Ammonia as N	3087154	<0.02	<0.02	NA	< 0.02	115%	70%	130%	99%	80%	120%	96%	70%	130%
Total Phosphorus	3090116	0.02	0.03	NA	< 0.02	97%	70%	130%	97%	80%	120%	105%	70%	130%
Total Organic Carbon	3094303	47.1	47.2	0.2%	< 0.5	99%	90%	110%	98%	90%	110%	NA	80%	120%
True Colour	3090232	31	31	0.0%	< 5	106%	90%	110%						
Turbidity	3091472 309147	2 <0.5	<0.5	NA	< 0.5	101%	80%	120%						
Dissolved Calcium	3095356	101	101	0.0%	< 0.05	95%	70%	130%	97%	80%	120%	98%	70%	130%
Dissolved Magnesium	3095356	12.2	12.2	0.0%	< 0.05	99%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Potassium	3095356	0.83	0.89	NA	< 0.50	99%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Sodium	3095356	2.75	2.72	1.1%	< 0.05	97%	70%	130%	96%	80%	120%	101%	70%	130%
Aluminum-dissolved	3091472 309147	2 <0.004	< 0.004	NA	< 0.004	104%	70%	130%	116%	80%	120%	119%	70%	130%
Dissolved Antimony	3091472 309147	′2 <0.001	<0.001	NA	< 0.001	102%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Arsenic	3091472 309147	2 <0.003	<0.003	NA	< 0.003	92%	70%	130%	103%	80%	120%	112%	70%	130%
Dissolved Barium	3091472 309147	2 0.073	0.079	7.9%	< 0.002	100%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Beryllium	3091472 309147	2 <0.0005	<0.0005	NA	< 0.0005	97%	70%	130%	109%	80%	120%	115%	70%	130%
Dissolved Boron	3091472 309147	2 0.036	0.038	NA	< 0.010	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Cadmium	3091472 309147	2 <0.0001	<0.0001	NA	< 0.0001	100%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Chromium	3091472 309147	2 <0.003	<0.003	NA	< 0.003	102%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Cobalt	3091472 309147		<0.0005	NA	< 0.0005		70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Copper	3091472 309147		0.025	17.4%	< 0.001	99%	70%	130%	105%		120%	104%		130%
Dissolved Iron	3091472 309147		<0.010	NA	< 0.010		70%	130%	106%		120%	101%	70%	130%
Dissolved Lead	3091472 309147		<0.001	NA	< 0.001	98%		130%	104%		120%	102%		130%
Dissolved Manganese	3091472 309147	′2 <0.002	0.003	NA	< 0.002	96%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Mercury	3095856	< 0.0001	<0.0001	NA	< 0.0001			130%	100%		120%	98%		130%
Dissolved Molybdenum	3091472 309147		<0.002	NA	< 0.000	104%	70%	130%	105%	80%		108%	70%	130%
Dissolved Nickel	3091472 309147		<0.002	NA	< 0.002			130%	106%		120%	103%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

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Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 23, 2021			UPLICATE	.		REFEREN	NCE MA	TERIAL	METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable nits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 ::	ptable nits
		lu lu					value	Lower	Upper	·	Lower	Upper	_	Lower	Upper
Dissolved Selenium	3091472	3091472	<0.004	<0.004	NA	< 0.004	101%	70%	130%	108%	80%	120%	113%	70%	130%
Dissolved Silver	3091472	3091472	<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Strontium	3091472	3091472	0.249	0.253	1.6%	< 0.005	95%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Thallium	3091472	3091472	<0.0003	< 0.0003	NA	< 0.0003	97%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Tin	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	101%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Titanium	3091472	3091472	<0.002	<0.002	NA	< 0.002	100%	70%	130%	106%	80%	120%	105%	70%	130%
Dissolved Tungsten	3091472	3091472	<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	101%	70%	130%
Dissolved Uranium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	97%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Vanadium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	100%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Zinc	3091472	3091472	0.044	0.053	18.6%	< 0.005	100%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Zirconium	3091472	3091472	<0.004	<0.004	NA	< 0.004	100%	70%	130%	106%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Inis Verastegui



AGAT WORK ORDER: 21T815956

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

DADAMETED	ACATCOD	LITEDATURE REFERENCE	ANIAL VIICAL TECHNIQUE
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION
Lab Filtration mercury	SR-78-9001		FILTRATION
Lab Filtration Metals	SR-78-9001		FILTRATION



The Ontario Water Resources Act

ATER WELL 6918208 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK X CORRECT BOX WHERE APPLICABLE ON BLOCK OUNTY OR DISTRICT EMBURY ZL ANDL LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) - FEET MOST COMMON MATERIAL GENERAL DESCRIPTION GENERAL COLOUR OTHER MATERIALS FROM то SAND BROWN GRET CAND BROWN 31 32 41 **CASING & OPEN HOLE RECORD** WATER RECORD 51 SCREEN 010 WATER FOUND AT - FEET DEPTH WALL THICKNESS INCHES KIND OF WATER MATERIAL FROM τo FRESH 3 SULPHUR
SALTY 4 MINERAL 46.5 STAINLESS 48-☐ GALVANIZE
☐ CONCRETE 188 49 0 FRESH 3 SULPHUR
SALTY 4 MINERAL 61 **PLUGGING & SEALING RECORD** STEEL (CEMENT GROUT. LEAD PACKER, ETC.) MATERIAL AND TYPE 1 FRESH 3 SULPHUR 2
2 SALTY 4 MINERAL ≤ 3 8 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 1 🗌 STEEL ☐ GALVANIZED 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 3 CONCRETE
4 OPEN HOLI 30-33 26-29 LOCATION OF WELL 71 2 Bailer 15.16 1 | PUMP IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND WATER LEVEL END OF PUMPING 22-24 1 PUMPING
2 RECOVERY STATIC LEVEL WATER LEVELS DURING PUMPING TEST GARAGE 35-37 a 9 D 1 CLEAR 2 CLOUDY RECOMMENDED 46-49 300 FEET. RATE GPM n K WATER SUPPLY **FINAL** ☐ OBSERVATION WELL ABANDONED, POOR QUALITY **STATUS** TEST HOLE
RECHARGE WELL 7 UNFINISHED OF WELL DOMESTIC 5 COMMERCIAL STOCK RRIGATION MUNICIPAL WATER PUBLIC SUPPLY USE INDUSTRIAL OTHER CABLE TOOL 6 BORING **METHOD** ROTARY (CONVENTIONAL)
ROTARY (REVERSE) 7 T DIAMOND OF JETTING ROTARY (AIR) **DRILLING** ☐ DRIVING AIR PERCUSSION DRILLERS REMARKS 100986 CONTRACTOR ONL DATE OF INSPECTION INSPECTOR USE REMARKS OFFICE 350

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506-4-77 FORM 7



				Well I.D.	#:	70<	AECC	OM Project No.:	60636196
Well Own	er Info	rmatic	on:	MEUP POPUL	#: WEIV	20	· One	int Project No	
Property Owne	ULDO-ORGANICO			. 00.		. a			
		(Hienr	\ ar	of Karreco	ca Duck	<u>25</u> _			
Property Addre	ass:	20901	Y	inge St	treet.	Ea:	st Gwi	Himbury	e hotmal.com
Telephone:	10	416.5	70-2	198C	Email:	00	glei	nnolucles i	ehotmal.com
Name of Perso Completing Su									
Telephone:		4,26	-570	Glenn 5 2986	Email:				
Relationship to Property Owne			inra		Date of S Completi		y		
Name of Origin (if known/differe					N				33
Occupant	of Pro	perty	Serv	red by W	Vell: (if oth	er th	nan Owner)		
Name:									
Telephone:		£		Email:					
Address:									
Well Loca	tion:								
Lot:		Conces	sion:			Ţ	ownship:		9
Well Cons	structic	n Det	ails:	¥ a				J	
Well Record Available?	☐ Yes	X No	Date W Constr	Vell ructed:			Well Cor Name:	ntractor	
Well Type: (Drilled/Bored/Dug	g) Drill	ed.		g Material: Concrete, etc.)	Stal		Well Cas Diamete	~	
Well Stick Up: (Above Ground)	Yus		Well Do	epth: Ground)	38 feet	+	Water Le		
is Well Located in a Well Pit?	☐ Yes	▼ No		it Depth: Ground)			Well Stic	k Up:	
ls Well Flowing?	? 🛕 Yes	□No	Flow R	tate:	Sgallor	n mir	Contract		
Well Cap Type:	encas	. lor	Does C Good S	Cap Create a Seal?	☐ Yes ☐		Is Wire (☐ Yes ☐ No
is the Well:	Accessib Direct Sa	ble for ampling?	₫Ŷ	es 📉 No	OR		ied, In a We	ell Pit, or	☐ Yes 🗹 No
Well Screen Installed?	☐ Yes	No	if Yes, Slot Si	Length &			th of Top o	of Screen:	

AECOM

			ME	Well I.D. #:	6918208		AECOM Proj	ect No.:	64 <u>3</u> 4	6190
Pumping Ed	quipme	nt:					·		<u> </u>	
Pump Type:	☑ Jet F	ump 🗆	Submersi	ible 🗆 Pisto	n Pump	□ Other	(please des	cribe):	_	
Pump Horsepowe	r: 1/3		Pump A	.ge:	15 YE	ears	Pumping Capacity:			
Pump Intake Dept (Below Ground)	h: 7		Pump L (If Not in	ocation:	Bescher	nt	Pumping F (If Known)	Rate:		
Pressure Tank:	Type:						Capacity:			
Water Treatment: (if present)	- 1			oftener 🗹 V r (please des					. 09	mosis.
Nell Usage	:						·			
Primary Use(s):	Domestic:	☐ Ye	s 🛛 No	Livestock:	☐ Yes	□ No	Lawn Wat	ering:		es 😡 No
# of Persons Using Well:	5	#of Liv			Other Uses:			Daily Am if known)		
Indoor Plumbing (Washroom(s), Shov Laundry, Pool, Spa,	ver(s), Dishw	asher,		3 show	ueus 25. agher	- (vashing pool spa	maen		·
Sewage Se	rvicing	4								
Private Sewage System or Munic	ipal:			stem Type: optic tank, etc.,	Sa	phic	Fank.	Distance from We	e oli:	·
Well Location:		lphill 🗆	Downhill	☑ Same G	Grade					
Presence of Any Potential Source (including distance of	(s) of Conta	amination	age Tank 1:	or Other		N	9 ·			
Previous C	oncerr	ıs:								
How Long Have ' Operated a Busin	You Owned	l, Reside s Propert	d, or y?	13 year	. د-					
Have You Experi Concerns with Y (Quantity or Quality)	our Well S]Yes ⊠No	if Yes,	When?	Weve	بر 	-	
Cause(s) of the Previous Concer	_	_	-	ailure 🗆 Plu	00 0	1.1	ed Usage [khway — l	Interfer	rence B	ypass.

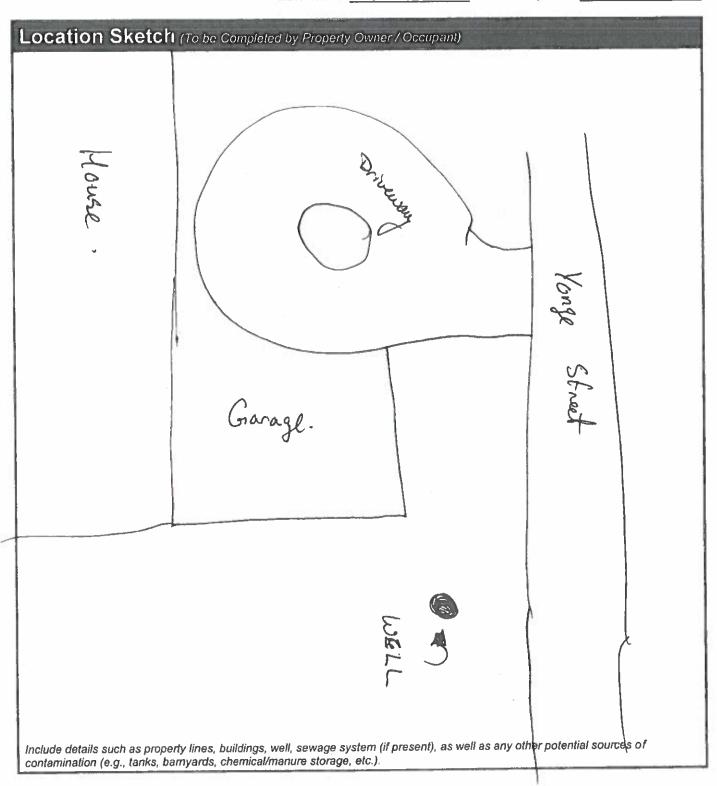
AECOM

			Well 1.D. #:		AECOM Project No.:	
Well Modif	ication / I	Ma intenan	ce:			
Has Your Well Ever Been	Deepened?	☐ Yes ☑ No	Cleaned?	☐ Yes 🔀 No	Reconstructed or Replaced?	☐ Yes ☑ No
If Yes to Any of t Please Provide E						
Other Deta	ils:	223				
Other Details tha	it May be Rele	vant to Assessin	g the Curren	t Condition of Yo	our Well Supply:	
					Đ	
		JH.				
				 -	4)	
		**				
<u></u>						
					形件	
		<u></u>				
Property O	wner Par	ticipation i	in Monit	oring Prog	ıram:	
Does the Proper and/or Sample Y		or Occupant Grai	nt Permissio	n for MTO/AECO	M to Monitor	☑Yes □ No
Glenn	Duclos		S	LDob	16	SAP21
Property (Owner / Occup	ant Name	-	Signature		Date

(Please Print in BLOCK letters)

 Well I.D. #:
 AECOM Project No.:
 \$\omega \in 36/90\$

 MECP WWR #:
 69/8708
 Client Project No.:



AECOM

		We MECP	HI I.D. #;	6918208	AI			60636190
Field Visit I	_Og (To Be Comp		100					
General De	tails:							
Project Name:	BBP- Well	Sive			Project	No.:	60	636190
Address:	20901 Youg		L		Inspect	ted By:	Hd	don Muda
Date:	H.14121	Time:	11:00	- 1/:30	Weathe	r:		nny
Easting:	619918	Northing:	4888	246	Datum:		177	_
Well Details	s:							
s Well Accessibi	e for inspection?	☐ Yes ☐ I	No If N	lo, Provide R	eason:	- 77	1	- 46
MECP Water Well Record No.:	6918208	Date Well Constructed:	1.	8/8/86	Contra	ctor Nam	e:	Pale Baani
Well Type: Drilled/Bored/Dug)	Polled.	Well Stick Up (Above Ground	o:))	2Ft		Material: oncrete, el		Steel
Vell Located in Well Pit?	☐ Yes 🇹 No	Well Pit Dept (Below Ground)		_	Well St (Above F	ick Up: Pit Bottom)		
Vell Casing Diameter:	6"	Well Depth: (Below Ground)	,	53 H.	Ground (Below G	iwater Le iround)	vel:	48 CL
Pump On / Off?	□ On 🂢 Off	Water Level Condition:		Stable (Static)	Declin	ing (Drawo	down)	☐ Rising (Recover
Flowing Well?	☐ Yes M No	Flow Rate: (Estimated)		5 GPN	Well Ca	p Type:		Seal Woll
Vell Screen nstalled?	Yes □ No	If Yes, Lengt & Slot Size:	th	10	Top of (Below G	Screen: Ground)		49 ft
s There a Depres Vell Casing Exte	sion Around the	☐ Yes 🖼	Vo	Phot	to(s) of W	ell Obtai	ned?	¥ Yes □ No
Observation(s) Si	ımmarv:				====			
	themal syst	em Clan	p) iv	bach	yard	<u> </u>		
- other		is are	1	way war	Lean	755101	25	(quality
0100	- wyniow	JUVE	m	ir-j wer		()/VU	ا تستق	operations)
33.77							_	
					-			

AECOM

				Well I.D. #:	6918208	AECOM Proje	oct No.: 60636190
			M	ECP WWR #:	0418208	Client Proje	ect No.:
Nater Qua	ality San	npling:		g a s	ty		
Water Quality S Obtained?	Sample	Yes 🗆	No I	f No, Provid	e Reason:		
Sampling Loca	tion:	Top (out	5008	Raw or Treat	ted Sample?	Rav	
Disinfected Sa	mple Port?	Yes 🗆	No I	Disinfection	Method:	Black	
Photo of Samp (against white ba		QYes □	No I	lf No, Provid	e Reason:		71 /// W
Analyte Suite:	93179	+ E	6	li / Tork	l Colifor	· ha	
Sample I.D.:	20901 7	lange. Da	te / T mplii	ime of ng:	11:17	Number of Sample Bott	des: 9
Field Water Qu	iality Paramet	ers: (record	units)				
Temperature:	16.4	OC p	H:	8.0	78	Conductivity:	647 Clea-
Turbidity:	_		.0.:			Colour:	Clean
Odours?	None	A	ppea	rance/Odou	r: No	ne.	
Type of Conce	rn: (il applicabl	(e)			tity Water ces in teste, odour,		
If the concern changes were			?	Proxiv	nity to	bypas.	
Were there an	y effects of th	is concern?					
What action w	as taken to o	vercome thi	s		2.1		

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix **E**

Property ID #66 – 20989 Yonge Street

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

C. William D. Foster 20989 Yonge St. East Gwillumbury, ON L9N 0J6

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Foster,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 13th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Hardness (as CaCO ₃)	145 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com



Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 20989 Yonge Street

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

20989 Yonge Street, East Gwillimbury, Ontario, L9N 0J6

Owner Information:

Owner Name: Charles W and Karen C Foster

Phone Number: 905-836-0663 Email: bfoste4@gmail.com

Well Record

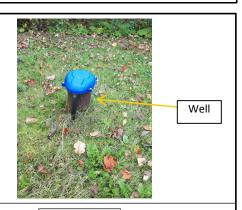
Coordinates (UTM)......620209E/4888530N

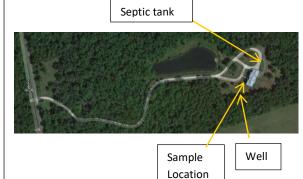
(NAD83 Zone17)

Well Location..... Left of house

Well Diameter.......N/A
Well Depth......N/A
Casing Position.....N/A
Casing Condition.....Fair

Water Usage......Residential
Water Source......Overburden
Static Water Level......9.71 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Right of property 80' from well

Treatment System......Water softener

Recent Test Results.....None

Water Sampled......Yes (October 13, 2021)

Sample Source......Outside Tap

Appearance......clear

Comments:

- Ground source heat pump in washroom (no issues)
- Well record is filed under the wrong location
- House is built on fill. 3' foundation
- Variable pump
- Notes from Owner: -Totally illegal; needs a new EA; Ravenshoe Road Provincial vs Municipal Roads

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	1 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	145 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and
 "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC-Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 20, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-13 **DATE REPORTED: 2021-10-20**

> 20989 Yonge SAMPLE DESCRIPTION: **SAMPLE TYPE:** Water DATE SAMPLED: 2021-10-13 13:48 G/S RDL 3086554

Unit CFU/100mL ND Escherichia coli CFU/100mL 0 ND Total Coliforms

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3086554 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Parameter



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment (mg/L) Groundwater

DATE RECEIVED: 2021-10-13 DATE REPORTED: 2021-10-20

			SAMPLE DE	SCRIPTION:	20989 Yonge
			SAI	MPLE TYPE:	Water
			DATE	SAMPLED:	2021-10-13
Parameter	Unit	G / S: A	G / S: B	RDL	13:48 3086554
Electrical Conductivity	μS/cm			2	569
pH	pH Units		6.5-8.5	NA	8.02
Saturation pH (Calculated)					7.40
Langelier Index (Calculated)					0.618
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	145
Total Dissolved Solids	mg/L		500	10	292[<b]< td=""></b]<>
Alkalinity (as CaCO3)	mg/L		30-500	5	185
Bicarbonate (as CaCO3)	mg/L			5	185
Carbonate (as CaCO3)	mg/L			5	<5
Hydroxide (as CaCO3)	mg/L			5	<5
Fluoride	mg/L	1.5		0.05	0.14[<a]< td=""></a]<>
Chloride	mg/L		250	0.10	71.3[<b]< td=""></b]<>
Nitrate as N	mg/L	10.0		0.05	<0.05[<a]< td=""></a]<>
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""></a]<>
Bromide	mg/L			0.05	<0.05
Sulphate	mg/L		500	0.10	<0.10[<b]< td=""></b]<>
Ortho Phosphate as P	mg/L			0.10	<0.10
Ammonia as N	mg/L			0.02	0.67
Total Phosphorus	mg/L			0.02	<0.02
Total Organic Carbon	mg/L			0.5	30.3
True Colour	TCU		5	5	<5[<b]< td=""></b]<>
Turbidity	NTU		5	0.5	0.9[<b]< td=""></b]<>
Dissolved Calcium	mg/L			0.05	23.3
Dissolved Magnesium	mg/L			0.05	21.0
Dissolved Potassium	mg/L			0.50	1.26
Dissolved Sodium	mg/L	20		0.05	53.7[>A]
Dissolved Aluminum	mg/L			0.004	0.010
Dissolved Antimony	mg/L	0.006		0.001	<0.001[<a]< td=""></a]<>
Dissolved Arsenic	mg/L	0.01		0.001	0.001[<a]< td=""></a]<>

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment (mg/L) Groundwater

			water	Quality F	Assessment (mg/L) Gro	unawater	
DATE RECEIVED: 2021-10-13				DATE REPORTED: 2021-10-20			
			SAMPLE DES	SCRIPTION:	20989 Yonge		
		SAMPLE TYPE:		Water			
			DATE SAMPLED:		2021-10-13 13:48		
Parameter	Unit	G / S: A	G / S: B	RDL	3086554		
issolved Barium	mg/L	1.0		0.002	0.198[<a]< td=""><td></td><td></td></a]<>		
Dissolved Beryllium	mg/L			0.0005	<0.0005		
Dissolved Boron	mg/L	5.0		0.010	0.093[<a]< td=""><td></td><td></td></a]<>		
Dissolved Cadmium	mg/L	0.005		0.0001	<0.0001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Chromium	mg/L	0.05		0.002	<0.002[<a]< td=""><td></td><td></td></a]<>		
Dissolved Cobalt	mg/L			0.0005	<0.0005		
Dissolved Copper	mg/L			0.001	0.002		
Dissolved Iron	mg/L			0.010	<0.010		
Dissolved Lead	mg/L	0.010		0.0005	<0.0005[<a]< td=""><td></td><td></td></a]<>		
issolved Manganese	mg/L			0.002	0.012		
Dissolved Mercury	mg/L	0.001		0.0001	<0.0001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Molybdenum	mg/L			0.002	<0.002		
Dissolved Nickel	mg/L			0.003	<0.003		
Dissolved Selenium	mg/L	0.05		0.001	<0.001[<a]< td=""><td></td><td></td></a]<>		
Dissolved Silver	mg/L			0.0001	<0.0001		
Dissolved Strontium	mg/L			0.005	0.609		
Dissolved Thallium	mg/L			0.0003	<0.0003		
Dissolved Tin	mg/L			0.002	<0.002		
Dissolved Titanium	mg/L			0.002	<0.002		
Dissolved Tungsten	mg/L			0.010	<0.010		
Dissolved Uranium	mg/L	0.02		0.0005	<0.0005[<a]< td=""><td></td><td></td></a]<>		
Dissolved Vanadium	mg/L			0.002	<0.002		
Dissolved Zinc	mg/L			0.005	0.019		
Dissolved Zirconium	mg/L			0.004	<0.004		

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Exceedance Summary

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3086554	20989 Yonge	ON 169/03 AO&OG	Water Quality Assessment (mg/L) Groundwater	Hardness (as CaCO3) (Calculated)	mg/L	80-100	145
3086554	20989 Yonge	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L) Groundwater	Dissolved Sodium	mg/L	20	53.7



Quality Assurance

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMPLING SITE:

			Mic	crobi	ology	y Ana	alysis	•							
RPT Date: Oct 20, 2021				UPLICAT	E		REFEREN	ICE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Acceptal Measured Limits		nite	Recovery	Lin	ptable nits	Recovery	Lin	eptable mits
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3085462 ND ND NA <1 Total Coliforms 3085462 ND ND NA <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Amanjot Bhells Amanus Bhells Charteres

Certified By:

AGAT WORK ORDER: 21T815177

ATTENTION TO: Brian Holden

Quality Assurance

CLIENT NAME: AECOM CANADA LTD
PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalys	is								
RPT Date: Oct 20, 2021			DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLAN	(SPIKE	MAT	RIX SPI	KE
	Sa	mple D #4			Method Blank	Measured		ptable		1 1 11	eptable mits		Lin	ptable nits
PARAMETER		ld Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	1	Recovery	Lower	1
Water Quality Assessment (n	ng/L) Groundwater	'			1	•								
Electrical Conductivity	3086235	6120	6130	0.2%	< 2	104%	90%	110%						
рН	3086235	7.42	7.44	0.3%	NA	103%	90%	110%						
Total Dissolved Solids	3086147	540	558	3.3%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3086235	689	702	1.9%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3086235	689	702	1.9%	< 5									
Carbonate (as CaCO3)	3086235	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3086235	<5	<5	NA	< 5									
Fluoride	3080984	< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	93%	80%	120%	112%	70%	130%
Chloride	3080984	59.6	58.8	1.4%	< 0.10	94%	70%	130%	101%	80%	120%	103%	70%	130%
Nitrate as N	3080984	7.76	7.58	2.3%	< 0.05	94%	70%	130%	102%	80%	120%	101%	70%	130%
Nitrite as N	3080984	<0.05	<0.05	NA	< 0.05	106%	70%	130%	103%	80%	120%	112%	70%	130%
Bromide	3080984	<0.05	<0.05	NA	< 0.05	98%		130%	92%	80%	120%	88%	70%	130%
Sulphate	3080984	27.6	27.5	0.4%	< 0.10	95%	70%	130%	99%	80%	120%	98%	70%	130%
Ortho Phosphate as P	3080984	<0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3084096	0.03	0.03	NA	< 0.02	103%	70%	130%	106%	80%	120%	89%	70%	130%
Total Phosphorus	3070594	0.03	0.03	NA	< 0.02	99%	70%	130%	96%	80%	120%	97%	70%	130%
Total Organic Carbon	3080535	11.2	11.2	0.0%	< 0.02	95%	90%	110%	100%	90%	110%	NA	80%	120%
True Colour	3095546	46	46	0.0%	< 5	100%	90%	110%	100 /6	30 /6	11076	INA	00 /6	12070
Turbidity	3089426	14.4	15.2	5.4%	< 0.5	99%	80%	120%						
Dissolved Calcium	3086543	75.0	75.2	0.3%	< 0.05	96%		130%	98%	80%	120%	97%	70%	130%
Discolus d Managarium	0000540	04.7	04.7	0.00/	0.05	000/	700/	4000/	4000/	000/	4000/	4000/	700/	4200/
Dissolved Magnesium	3086543	24.7	24.7	0.0%	< 0.05	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Potassium	3086543	2.72	2.68	1.5%	< 0.50	100%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Sodium	3086543	8.64	8.57	0.8%	< 0.05	96%	70%	130%	96%	80%	120%	102%	70%	130%
Dissolved Aluminum	3086788	0.028	0.026	7.4%	< 0.004	104%	70%	130%	110%	80%	120%	105%	70%	130%
Dissolved Antimony	3086788	< 0.001	< 0.001	NA	< 0.001	94%	70%	130%	99%	80%	120%	95%	70%	130%
Dissolved Arsenic	3086788	0.001	0.001	NA	< 0.001	96%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Barium	3086788	0.050	0.047	6.2%	< 0.002	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Beryllium	3086788	< 0.0005	< 0.0005	NA	< 0.0005	107%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Boron	3086788	0.031	0.030	NA	< 0.010	103%	70%	130%	106%	80%	120%	101%	70%	130%
Dissolved Cadmium	3086788	< 0.0001	< 0.0001	NA	< 0.0001	98%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Chromium	3086788	0.003	0.003	NA	< 0.002	99%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Cobalt	3086788	0.0008	0.0007	NA	< 0.0005	94%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Copper	3086788	< 0.001	< 0.001	NA	< 0.001	95%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Iron	3086788	5970	5440	9.3%	< 0.010	87%	70%	130%	112%	80%	120%	101%	70%	130%
Dissolved Lead	3086788	< 0.0005	< 0.0005	NA	< 0.0005	97%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Manganese	3086788	0.949	0.875	8.1%	< 0.002	95%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Mercury	3073029	<0.0001	<0.0001	NA	< 0.0001			130%	97%	80%		97%		130%
Dissolved Molybdenum	3086788	0.008	0.007	NA	< 0.002	95%		130%	102%	80%	120%	104%		130%
Dissolved Nickel	3086788	< 0.003	< 0.003	NA	< 0.003			130%	104%		120%	106%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

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Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

		١	Nate	r Anal	lysis	(Cor	ntinu	ed)							
RPT Date: Oct 20, 2021				UPLICATE	E		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SP	IKE
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		eptable mits	Recovery	Lie	ptable nits	Recovery	1 1:	eptable mits
		Id					value	Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Selenium	3086788		<0.001	0.001	NA	< 0.001	97%	70%	130%	93%	80%	120%	98%	70%	130%
Dissolved Silver	3086788		< 0.0001	< 0.0001	NA	< 0.0001	99%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Strontium	3086788		0.271	0.249	8.5%	< 0.005	94%	70%	130%	102%	80%	120%	103%	70%	130%
Dissolved Thallium	3086788		< 0.0003	< 0.0003	NA	< 0.0003	99%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Tin	3086788		< 0.002	< 0.002	NA	< 0.002	98%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Titanium	3086788		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Tungsten	3086788		< 0.010	< 0.010	NA	< 0.010	98%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	3086788		0.0013	0.0012	NA	< 0.0005	96%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Vanadium	3086788		< 0.002	< 0.002	NA	< 0.002	94%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Zinc	3086788		< 0.005	< 0.005	NA	< 0.005	100%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Zirconium	3086788		< 0.004	< 0.004	NA	< 0.004	94%	70%	130%	99%	80%	120%	100%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

CHARTERED OF MINIOTOGRAPH OF THE MINIOTOGRAPH

Certified By:



Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177 ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815177

PROJECT: 60636190 - BBP - Well Survey

ATTENTION TO: Brian Holden

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	7.07.11 0.011		7.11.01.27.12.12.11.11.12.2
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A	
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Foliassium Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Aluminum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD PROJECT: 60636190 - BBP - Well Survey

SAMPLING SITE:

AGAT WORK ORDER: 21T815177
ATTENTION TO: Brian Holden

SAMPLED BY:

SAMI LING SITE.	OAIIII EED D1.								
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311 B	² CVAAS						
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS						



MINISTRY OF THE ENVIRONMENT COPY

The Ontario Water Resources Act WATER WELL RECORD

Ontario	1. PRINT ONLY IN :	SPACES PROVIDED 11	<u> </u>	921 153	69003 Y	S.E. OI
COUNTY OR DISTRICT	A COME COME	TOWNSHIP, BOROUGH, CITY, TOWN.	VILLAGE	n bring	ON . BLOCK, TRACT, SURVEY, ETC	1/5
		Wall	and a	Paris	DATE O	5 MO 7 YR 90
, <u>-</u>		NG NG		ELEVATION RC	BASIN COE II	
1 2	M 10 12	OG OF OVERBURDEN AND		MATERIALS (SE	E INSTRUCTIONS)	
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS		GEN	ERAL DESCRIPTION	DEPTH - FEET FROM TO
Brown	sand			-		06
Dray	clay	. 01		soft		6 90
11	// 0	QUV.		nalt	*	55 137
11	//	Sanda		h	ard	137 150
Il	//	gravel		#		150 154
1/	sand	0		100	arsl	154/62
-						
				<u> </u>		
31 32 32 32 33 34 34 35 35 35 35 35				<u> </u>	}	
1 2 10	TER RECORD	51 CASING & OPEN	HOLE REC	ORD Z	SECT NO 1	45 75 40 DIAMETER 34-38 LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER	INSIDE WAL THICKN INCHES INCH	ESS	" IIO	ATERIAL AND TYPE	DEPTH TO TOP 41-44 30 OF SCREEN
154	FRESH 3 SULPHUR 4 MINERALS 6 GAS	1911 1 STEEL 12 6 1 3 GALVANIZED 18	80	156	33	156
2 [FRESH 3 SULPHUR 4 MINERALS 5ALTY 6 GAS	4 OPEN HOLE		20-23 DEP	TH SET AT - FEET MATERIAL	EALING RECORD
2 [FRESH JUSULPHUR GRANN SALTY 6 DGAS	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE 5 PLASTIC		FRO	0M 10 10-13 14-17	L AND TYPE LEAD PACKER, ETC.)
2 [☐ FRESH 3 ☐ SULPHUR 4 ☐ MINERALS ☐ SALTY 6 ☐ GAS	1 STEEL		27-30	18-21 22-25	
1 ' '	Tresh 3 □ Sulphur 34 St 4 □ Minerals □ Salty 6 □ Gas	3 CONCRETE 4 COPEN HOLE 5 CPLASTIC			26-29 30-33 40	
71 PUMPING TEST ME	THOD 10 PUMPING RAT		0 0 17-18 MINS		LOCATION OF W	7
STATIC LEVEL	PUMPING	LEVELS DURING 2 RECOVE	RY		BELOW SHOW DISTANCES OF WINDICATE NORTH BY ARROW.	ELL FROM ROAD AND
TEST / 7	50 40		5-37		1 500	~ / /
IF FLOWING GIVE RATE	38-41 PUMP INTAKE	SET AT WATER AT END OF TEST	42 CLOUDY		£1500-	^
RECOMMENDED PL		D 43-45 RECOMMENDED PUMPING RATE 2 0	46-49 GPM			γ
50-53					1	بر ا
FINAL STATUS	1 WATER SUPPLY 2 OBSERVATION WE 3 TEST HOLE	 Bandoned, insufficient Bandoned poor qualit Unfinished 			\(\frac{1}{2}\)	- - - -
OF WELL	4 RECHARGE WELL	DEWATERING 5 COMMERCIAL			3	
WATER	2 STOCK 3 IRRIGATION	6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY				\bigvee
USE	4 ☐ INDUSTRIAL ☐ OTHER ———	COOLING OR AIR CONDITIONING NOT USED				
METHOD OF	57 CABLE TOOL 2 ROTARY (CONVEN				QUEEN	SVILLE RY
	ION ROTARY (REVERS TOTARY (AIR) TOTARY (AIR)	E)	HER DR	RILLERS REMARKS		84983
NAME OF WELL	dontractor	On John Well CONT	RACTOR'S	DATA S SOURCE	CONTRACTOR 59-62 DATE REC	UL 1 0 1990 "3-"
NAME OF WE	# 2/ St	1 2000	Ž/ S	DATE OF INSPECTION	IJ 4 3 9 J	<u> </u>
NAME OF WE	LL TECHNICIAN	WELL TECH	NICIAN'S O	REMARKS		
SIGNATURE OF	F TECHNICIAN/CONTRACTOR	SUBMISSION DATE	OFFICE Sagur			
Vel	en by letter	DAY MO.	_ YR			FORM NO. 0506 (11/86) FORM 9



54		Welf I.D.	#:	, AEC	M Project No.	<u>: 6921/33</u>
		MECP WWR	#: 40636	190 E CI	ient Project No.	:
Well Own	er Informati	on:				
Property Owns		s W and Karen C Fost	ег	26		
Property Addre		Yonge St. willimbury ON			W e v E	
Telephone:	905-83		Email:	bfoste	4@gmail.com	1
Name of Person Completing Sur			161 경기 (P	¥		(2)
Telephone:			Email:			
Relationship to Property Owne			Date of Su Completion			
Name of Origin if known/differe	al Well Owner: nt from above)		£.			
)ccupant	of Property	Somed by M	V-11-			
Vame:	or Property	Served by V	Vell: (if other	than Owner)	
elephone:			<u> </u>			· · · · · · · · · · · · · · · · · · ·
ciepitotie.		Email:				
\ddress:						
Vell Locat	ion:	v a				
ot: 118	Conce	ssion: 1 East		Township:	East Gwillim	hhuny
Vell Cons	truction De	tails:				
Vell Record	☑ Yes □ No	Date Well		Well Co	ntractor	
fell Type:		Constructed: Casing Material:		Name:	-1	
Orilled / Bored / Dug)		(Steel, Concrete, etc.)		Well Car Diamete	sing r:	
Vell Stick Up: Nove Ground)		Well Depth: (Below Ground)		Water L		
Well Located a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)		(Below Gi Well Stic (Above Pi	k Up:	
Well Flowing?	☐ Yes ☐ No	Flow Rate:		Contrac		2 8
ell Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐ No	Is Wire (Conduit Well Cap?	☐ Yes ☐ No
the Well:	Accessible for Direct Sampling?	☐ Yes ☐ No	OR BI	uried, in a We	ell Pit. or	☐ Yes ☐ No
eil Screen stalled?	☐ Yes ☐ No	If Yes, Length & Slot Size:	De	opth of Top o		

AECOM

				Well I.D. #:_	C	02 1/º	<u> </u>	AECOM Pro			36190
			ME	CP WWR #:_	V	70112		Chefit Pro	yeot Hon		
Pumping E			Submers	ible 🗆 Pis	ton	Pumn	Other	/please de	scribe):		
Pump Type:	0/		Pump A			0 40		Pumping Capacity:			
Pump Intake Dep (Below Ground)			Pump I	Location:				Pumping (If Known)	Rate:	20 -	25 gallon
Pressure Tank:	Type:							Capacity		600	allow
Water Treatment: (if present)				oftener 🗆 r (please de				e type)			
Well Usage):										
Primary Use(s):	Domestic:	TYYe:	s 🗆 No	Livestoc	k:	☐ Yes	No	Lawn Wa	tering:	MY	es 🗆 No
# of Persons Using Weil:	2	#of Liv		0	- 1	Other Uses:			Daily A	mount:	
Indoor Plumbling (Washroom(s)) Sho Laundry, Pool, Spa, Sewage Se	wer(s), Dishw etc.)				7 101		30000	742			(no isru
Private Sewage System or Munk	cipal:	riva	2 S:	ystem Type eptic tank, e		E	al ((t.le)	Distar from \	Nell:	30Ct
Well Location:		Jphill 🔀	Downhill	□ Same	Gre	ade					
Presence of Any Potential Source (including distance	e(s) of Cont	aminatio	age Tan	k or Other		N	ore	ī			
Previous (Concer	ns:									
How Long Have Operated a Bus	You Owne iness on th	d, Reside is Proper	d, or ty?	33 years							
Have You Expe Concerns with ' (Quantity or Quality	Your Weli S	Previous upply?	3	☐ Yes 🛚	No	if Yes,	When?				
Cause(s) of the Previous Conce				Failure 🗆 Other (Plea			·				
Water_Wed_Survey_Form_2021-	98-30_69536190 Doca						Su	urge 19	sne di,	a f	bu protection

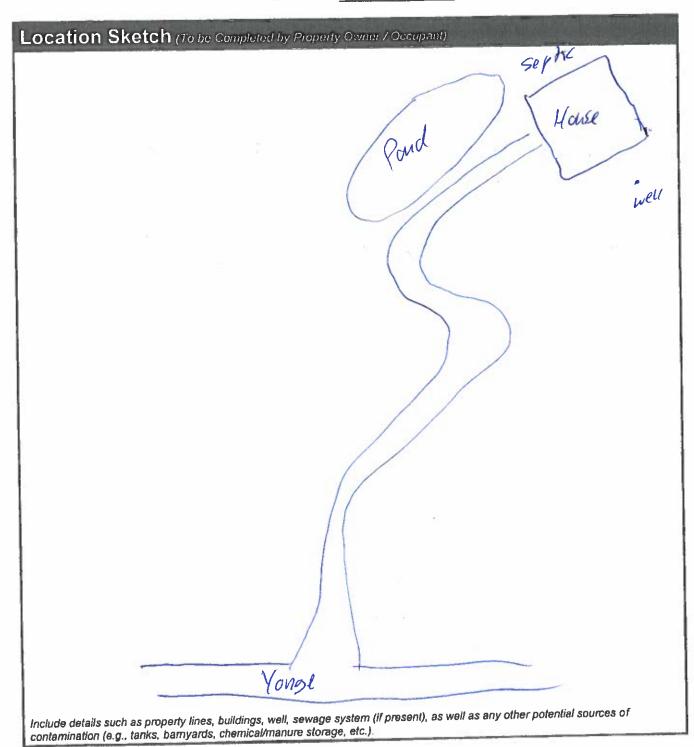
AECOM

			Well I,D. #:		AECOM Project No.: 60636/9		
		MEC	CP WWR #:	92 1/53	Client Project No.:		
/ell Modif	ication / I	Maintenan	ce:	· ''			
as Your Well ver Been	Despensed?	☐ Yes ☒ No	Cleaned?	☐ Yes ☒ No	Reconstructed or Replaced?	☐ Yes 🏻 No	
Yes to Any of tease Provide I	the Above, Details:	е п					
ther Deta	ils:						
her Details the	t May be Relev	ant to Assessin	g the Curren	t Condition of Yo	ur Well Supply:		
							
			······································				
						<u> </u>	
						<u> </u>	
				oring Prog			
es the Propert d/or Sample Yo	y Owner and/o our Well?	r Occupant Gran	t Permission	for MTO/AECON	to Monitor	Yes □ No	
		8	g:		/		
harles W Foster				/ //	1	1 1	
		mt Maure	-/	111	5	it 13/	
Property C	Wner / Occupa	INT Name	C	Signature		Date	

(Please Print in BLOCK letters)

AECOM

Well I.D. #:		AECOM Project No.: 40636	190
MECP WWR #:	692 1153	Client Project No.:	



AECOM

18.2.	4.5	, w	eli I.D.	and the second s	AECOM Pro	ject No.	60636190
		MECP	WWR	# 692115	3 Client Pro	ject No.	:
Field Visit	Log (To Be Comp	oleted by AEC	OM S	taff)			
General De							
Project Name:	BBP - WE	Il Save	7		Project No.:	Cax	X39/90
Address:	20989	Youse S	Jre	et	Inspected By:	Hole	X39/90 den Muchis
Date:	Oct. 13/21	Time:	OE.	3:00 - 13:40	Weather:	Cla	edy
Easting:	620209		_	388530	Datum:	15	77
Well Detail	ls:						
ls Well Accessib	ole for Inspection?	☐ Yes ☐	No	If No, Provide Re	eason:		
MECP Water Wel Record No.:	11 692 1153	Date Well Constructed	:	5/7/90	Contractor Nan	ne;	wilson water wells
Well Type: (Drilled/Bored/Dug)	Drilled	Well Stick Up (Above Ground		12"	Casing Materia (Steel, Concrete, e		Steel
Well Located in a Well Pit?	☐ Yes No	Well Pit Dept (Below Ground			Well Stick Up: (Above Pit Bottom)	12"
Well Casing Diameter:		Well Depth: (Below Ground	0 =	6	Groundwater L (Below Ground)	evel:	9.71m-
Pump On / Off?	Øon □ Off	Water Level Condition:		Stable (Static)	Declining (Draw	down)	Rising (Recovery)
Flowing Weil?	☐ Yes ∰No	Flow Rate: (Estimated)	n		Well Cap Type:		-
Well Screen Installed?	☐ Yes ☐ No	If Yes, Lengt & Slot Size:	th		Top of Screen: (Below Ground)		
ls There a Depre Well Casing Exte	ssion Around the erior?	☐ Yes 🎾	No	Photo	(s) of Well Obta	ined?	Yes □ No
Observation(s) S	Summary:						
- Well - house	record is	1		under 211-3ft		rong	location.
- VAIO	1.1			-11 -11	Founda	10	
			-				
							10 to

AECOM

ality Sam	pling:		MECP WWR #:		Client Pr	oject No.:_	
Sample	/	·	if No. Provide			<u></u>	
tion:			11 140, 1 104140	Reason:			
			Raw or Treater	Sample?			
mple Port?	Yes [] No	Disinfection Me	ethod:			
le Obtained? ckground)	Yes [□ No	If No, Provide	Reason:			
				0d.	3/21		
			Time of ling:	13:78	Number of Sample Bo		9
ality Paramet	ers: (reco	rd units)				
20.28	oc	рН;	7.83		Conductivity	0,421	a 5/cm
8.1 NTa	77	D.O.:			Colour:	Non	ATT TO STATE OF THE STATE OF TH
Nove		Appe	arance/Odour:	ENTRAINE	D GAS - DA	SIPATES	QUICKLY
ASSESSED STATE			/				
rn: (if applicabl	0)		M Water Quantit Note any difference:	y KI Water (a in taste, odour	Quality colour or clarity)		
was contamin	nation who vater qual	at ity?	= -7-				
y effects of th	is concer	n?					
as taken to o	vercome t	his	0.1				
			_	nead	det lacu	ior Lu	
	ality Paramet 20.78 8.1 NTA Nove em: (il applicable apparent to very effects of the	Inality Parameters: (reconstruction of the concerns of this concerns of th	Date / Samp: Date / Samp:	Date / Time of Sampling: PH: 7.83 B. / NTa D.O.: Appearance/Odour: Water Quantity (Note any differences) was contamination what apparent to water quality? y effects of this concern? ras taken to overcome this	Date / Time of Sampling: Date / Time of Sam	Date / Time of Sample Bounds 13:78 Number of Sample Bounds 13:78 Conductivity: 20:78°C pH: 7:83 Conductivity: 8:1 NTA D.O.: Colour: Nove	Date / Time of Sampling: Date / Time of Sampling: 13:28 Number of Sample Bottles:

F: 905.538.8076 www.aecom.com



Appendix F

Property ID #72 – 21044 Leslie Street

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Florence Lewis 21044 Leslie St. Queensville, ON L6G 1R0

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Ms. Lewis,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 7th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards, Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	42 CFU/ 100mL	0 CFU/100mL	MAC	Y
Hardness (as CaCO ₃)	20.4 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Ms. Lewis on November 19^{th,} 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 21044 Leslie Street

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

21044 Leslie Street, Queensville, Ontario, L0G 1R0

Owner Information:

Owner Name: Florence Lewis Phone Number: 905-478-1456 Email: donlewis 2@sympatico.ca

Well Record

Coordinates (UTM)......623484E/4889824N

(NAD83 Zone17)

Well Location..... behind the house past the pool

Well Diameter.......0.25 m

Well Depth......129.54 m

Casing Position.....N/A

Casing Condition.....Fair

Water Usage......Residential
Water Source......Overburden
Static Water Level......126.80 m



Well

Septic tank



Well

Sample Location

Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank..... in front of the house

Treatment System.....N/A

Recent Test Results.....None

Water Sampled......Yes (October 7, 2021)

Sample Source...... Side house tap

Comments:

- Owner concerned about bypass proximity to well
- Would prefer that it does not happen

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	42 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	20.4 mg/L	80 - 100 mg/L	OG

Notes:

- 1. Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC-Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 15, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

| SAMPLE DESCRIPTION: 21044 Leslie
| SAMPLE TYPE: Water |
| DATE SAMPLED: 2021-10-07 |
| 13:10 |
| Parameter | Unit | G / S | RDL | 3067646 |
| Escherichia coli | CFU/100mL | 100 | 1 | ND

CFU/100mL

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

42

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.

3067646 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Total Coliforms

CHARTERED ON THE PROPERTY OF T



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

			v	valer Quality	Assessment - F WQO (mg/L)
DATE RECEIVED: 2021-10-07					DATE REPORTED: 2021-10-15
	S		CRIPTION: IPLE TYPE: SAMPLED:	21044 Leslie Water 2021-10-07 13:10	
Parameter	Unit	G/S	RDL	3067646	
Electrical Conductivity	μS/cm		2	1240	
рН	pH Units	6.5-8.5	NA	8.08	
Saturation pH (Calculated)				8.12	
Langelier Index (Calculated)				-0.0369	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	20.4	
Total Dissolved Solids	mg/L		10	666	
Alkalinity (as CaCO3)	mg/L		5	291	
Bicarbonate (as CaCO3)	mg/L		5	291	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.05	< 0.05	
Chloride	mg/L		0.12	157	
Nitrate as N	mg/L		0.05	4.26	
Nitrite as N	mg/L		0.05	< 0.05	
Bromide	mg/L		0.05	< 0.05	
Sulphate	mg/L		0.10	83.8	
Ortho Phosphate as P	mg/L		0.10	<0.10	
Ammonia as N	mg/L		0.02	< 0.02	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002	
Total Phosphorus	mg/L	*	0.02	< 0.02	
Total Organic Carbon	mg/L		0.5	1.9	
True Colour	TCU		5	<5	
Turbidity	NTU		0.5	<0.5	
Total Calcium	mg/L		0.16	4.83	
Total Magnesium	mg/L		0.17	2.02	
Total Potassium	mg/L		0.58	3.02	
Total Sodium	mg/L		0.22	276	
Aluminum-dissolved	mg/L	*	0.004	0.006	

Certified By:



mg/L

0.020

0.001

< 0.001

Total Antimony



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

			v	vater Quality A	Assessment - PWQO (mg/L)
DATE RECEIVED: 2021-10-07					DATE REPORTED: 2021-10-15
			CRIPTION: PLE TYPE: SAMPLED:	21044 Leslie Water 2021-10-07 13:10	
Parameter	Unit	G/S	RDL	3067646	
otal Arsenic	mg/L	0.1	0.003	<0.003	
otal Barium	mg/L		0.002	<0.002	
otal Beryllium	mg/L	*	0.001	<0.001	
otal Boron	mg/L	0.2	0.010	0.059	
Total Cadmium	mg/L	0.0002	0.0001	<0.0001	
otal Chromium	mg/L		0.003	<0.003	
otal Cobalt	mg/L	0.0009	0.0005	<0.0005	
otal Copper	mg/L	0.005	0.001	0.009	
otal Iron	mg/L	0.3	0.010	0.015	
otal Lead	mg/L	*	0.001	<0.001	
otal Manganese	mg/L		0.002	0.004	
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001	
otal Molybdenum	mg/L	0.040	0.002	<0.002	
otal Nickel	mg/L	0.025	0.003	< 0.003	
otal Selenium	mg/L	0.1	0.002	<0.002	
otal Silver	mg/L	0.0001	0.0001	<0.0001	
Total Strontium	mg/L		0.005	0.011	
otal Thallium	mg/L	0.0003	0.0003	<0.0003	
otal Tin	mg/L		0.002	<0.002	
otal Titanium	mg/L		0.010	<0.010	
otal Tungsten	mg/L	0.030	0.010	<0.010	
otal Uranium	mg/L	0.005	0.002	0.002	
otal Vanadium	mg/L	0.006	0.002	<0.002	
otal Zinc	mg/L	0.030	0.020	<0.020	
Total Zirconium	mg/L	0.004	0.004	<0.004	
Lab Filtration Aluminum Dissolved				2021/10/12	
Lab Filtration mercury				2021/10/12	

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3067646 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

CHARTERED SO CHEMIST OF THE STATE OF THE STA

Certified By:



Exceedance Summary

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3067646	21044 Leslie	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Copper	mg/L	0.005	0.009



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Microbiology Analysis															
RPT Date: Oct 15, 2021			С	UPLICAT	Е		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Accept d Limit		Accepta Recovery Limits		nite	Recovery	Acceptable Limits	
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

ND Escherichia coli 3067628 3067628 ND NA < 1 **Total Coliforms** 3067628 3067628 400 400 0.0% < 1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalysi	is								
RPT Date: Oct 15, 2021		1	DUPLICATE	.		REFERENCE MATERIAL			METHOD BLANK SPIKE			MAT	RIX SPIKE	
DARAMETER	Bartal Sample	9 5 "4	D #6		Method Blank	Measured		ptable nits		1 1 1	ptable nits		Lin	ptable
PARAMETER	Batch Id	Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	
Water Quality Assessment - F	PWQO (mg/L)	•								•				•
Electrical Conductivity	3066943	558	559	0.2%	< 2	103%	90%	110%						
рН	3066943	7.69	7.78	1.2%	NA	101%	90%	110%						
Total Dissolved Solids	3067628 3067628	430	436	1.4%	< 10	100%	80%	120%						
Alkalinity (as CaCO3)	3066943	191	197	3.1%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3066943	191	197	3.1%	< 5									
Carbonate (as CaCO3)	3066943	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3066943	<5	<5	NA	< 5									
Fluoride	3080535	0.09	0.10	NA	< 0.05	95%	70%	130%	94%	80%	120%	101%	70%	130%
Chloride	3080535	6.53	6.55	0.3%	< 0.10	90%	70%	130%	97%	80%	120%	100%	70%	130%
Nitrate as N	3080535	0.52	0.51	1.9%	< 0.05	94%	70%	130%	102%	80%	120%	103%	70%	130%
Nitrite as N	3080535	<0.05	<0.05	NA	< 0.05	102%	70%	130%	100%	80%	120%	106%	70%	130%
Bromide	3080535	< 0.05	< 0.05	NA	< 0.05	97%		130%	92%	80%	120%	90%	70%	130%
Sulphate	3080535	21.1	21.2	0.5%	< 0.10	92%		130%	99%	80%	120%	99%	70%	130%
Ortho Phosphate as P	3080535	<0.10	<0.10	NA	< 0.10	94%	70%	130%	100%	80%	120%	102%	70%	130%
Ammonia as N	3067694	<0.02	<0.02	NA	< 0.02	105%	70%	130%	108%	80%	120%	99%	70%	130%
Total Phosphorus	3065782	0.04	0.05	NA	< 0.02	98%	70%	130%	97%	80%	120%	91%	70%	130%
Total Organic Carbon	3067628 3067628	2.0	2.0	NA	< 0.5	104%	90%	110%	99%	90%	110%	102%	80%	120%
True Colour	3068388	<5	<5	NA	< 5	97%	90%	110%	0070	0070	11070	10270	0070	0,0
Turbidity	3067628 3067628	0.8	0.8	NA	< 0.5	99%	80%	120%						
Total Calcium	3073029	20.9	20.3	2.9%	< 0.10	93%		130%	97%	80%	120%	98%	70%	130%
Total Magnesium	3073029	3.15	3.20	1.6%	< 0.10	97%	70%	130%	99%	80%	120%	102%	70%	130%
Total Potassium	3073029	3.71	3.69	0.5%	< 0.50	95%	70%	130%	99%	80%	120%	101%	70%	130%
Total Sodium	3073029	24.3	23.3	4.2%	< 0.10	93%	70%	130%	96%	80%	120%	100%	70%	130%
Aluminum-dissolved	3069932	0.024	0.024	0.0%	< 0.004	108%	70%	130%	112%	80%	120%	104%	70%	130%
Total Antimony	3070856	<0.024	<0.001	NA	< 0.001	104%		130%	106%	80%	120%	107%		130%
Total Arsenic	3070856	0.004	0.003	NA	< 0.003	94%	70%	130%	109%	80%	120%	108%	70%	130%
Total Barium	3070856	0.004		3.6%		96%	70%	130%		80%	120%		70%	130%
Total Beryllium	3070856	< 0.000	0.057	3.0% NA	< 0.002	97%	70%	130%	103%	80%	120%	103% 115%	70%	130%
Total Boron	3070856	0.206	<0.001 0.206	0.0%	< 0.001 < 0.010	99%	70%	130%	105% 105%	80%	120%	107%	70%	130%
Total Cadmium	3070856	<0.0001	<0.0001	NA	< 0.0001		70%	130%	109%	80%	120%	127%	70%	130%
Total Chromium	2070050	.0.000	.0.000	N1 A	. 0. 000	4000/	700/	4000/	4400/	000/	4000/	4070/	700/	12001
Total Cabalt	3070856	<0.003	<0.003	NA NA	< 0.003	103%		130%	110%	80%		107%		130%
Total Copper	3070856	<0.0005	0.0005	NA	< 0.0005			130%	113%	80%	120%	105%		130%
Total Copper	3070856	0.002	0.002	NA 0.6%	< 0.001	101%		130%	110%	80%		125%		130%
Total I cod	3070856	0.219	0.241	9.6% NA	< 0.010	105%		130%	110%	80%		105%		130%
Total Lead	3070856	<0.001	<0.001	NA	< 0.001	100%	70%	130%	108%	0 U%	120%	122%	70%	130%
Total Manganese	3070856	0.158	0.167	5.5%	< 0.002	101%		130%	106%	80%	120%	108%		130%
Dissolved Mercury	3080894	<0.0001	<0.0001	NA	< 0.0001	103%		130%	98%	80%	120%	100%		130%
Total Molybdenum	3070856	<0.002	<0.002	NA	< 0.002	106%		130%	113%	80%	120%	110%	70%	130%
Total Nickel	3070856	0.006	0.007	NA	< 0.003	100%	70%	130%	108%	80%	120%	128%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 15, 2021			С	UPLICATE	•		REFERENCE MATERIAL		METHOD	BLANK	SPIKE	МАТ	MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable mits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 10	ptable nits
		IG.					Lower	Upper		Lower	Upper		Lower	Upper	
Total Selenium	3070856		0.075	0.062	19.0%	< 0.002	101%	70%	130%	107%	80%	120%	116%	70%	130%
Total Silver	3070856		<0.0001	<0.0001	NA	< 0.0001	102%	70%	130%	109%	80%	120%	122%	70%	130%
Total Strontium	3070856		0.685	0.759	10.2%	< 0.005	105%	70%	130%	108%	80%	120%	104%	70%	130%
Total Thallium	3070856		<0.0003	< 0.0003	NA	< 0.0003	100%	70%	130%	110%	80%	120%	125%	70%	130%
Total Tin	3070856		< 0.002	< 0.002	NA	< 0.002	99%	70%	130%	108%	80%	120%	124%	70%	130%
Total Titanium	3070856		<0.010	<0.010	NA	< 0.010	97%	70%	130%	104%	80%	120%	128%	70%	130%
Total Tungsten	3070856		<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	99%	70%	130%
Total Uranium	3070856		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	105%	80%	120%	129%	70%	130%
Total Vanadium	3070856		< 0.002	< 0.002	NA	< 0.002	102%	70%	130%	111%	80%	120%	109%	70%	130%
Total Zinc	3070856		<0.020	< 0.020	NA	< 0.020	106%	70%	130%	113%	80%	120%	116%	70%	130%
Total Zirconium	3070856		<0.004	<0.004	NA	< 0.004	108%	70%	130%	111%	80%	120%	108%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

AGAT QUALITY ASSURANCE REPORT (V1)

Page 9 of 13



AGAT WORK ORDER: 21T813002

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	ANALYTICAL TECHNIQUE	
Water Analysis	·		
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
рН	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:						
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS					
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION					
Lab Filtration mercury	SR-78-9001		FILTRATION					

UTM 17 2 6 2 3 5 7 7 E 3 R 4 8 8 9 6 3 6 N Elev. 3 R 0 8 0 0 WATER WE Basin 2 2	LL REC Township, Village, Date completed Address	Town or City	ORC month CNSU/LL	SSION FWILL Tory 1962, year)
Total length of casing 23.	1			G.P.M.
Type of screen Length of screen Depth to top of screen Diameter of finished hole 34"	Pumping level Duration of test Water clear or cl Recommended	pumpingloudy at end o	f test le	al.
Well Log	TO.		Depth(s) at	Record Kind of water
Overburden and Bedrock Record	From ft.	To ft.	which water(s) found	(fresh, salty, sulphur)
Blue clay	٥	20	20	fresh
Samo	20	23		
For what purpose(s) is the water to be used? Is well on upland, in valley, or on hillside? Drilling ONTARIO V/ELL DIGGING COMPANY Address RR & NEWMARKET, ONT.	In diagram road and	lot line. Ind	of Well distances of well licate north by a	l from arrow.
Licence Number Name of Driller or Borer Address Date (Signature of Licensed Drilling or Boring Contractor) Form 7(45M-60-4138)	L.	71- 1072/ 072/ 04	E E . JE VILLE	S.S.S. \$6,



The Ontario Water Resources Act

WATER WELL RECORD

Ontario	1. PRINT ONLY IN	SPACES PROVIDED 11 6	919030 NUNICIP	·
COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC	22 23 74 2 LOT 25-27
Vank		Gwillimbury	Plan 402	TT , 23
		lan Lane Oueer	DAY 1	
		ITAG RC	ELEVATION RC BASIN CODE	
		OG OF OVERBURDEN AND BEDROCK	MATERIALS (SEE INSTRUCTIONS)	
GENERAL COLOUR	4057	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET
Brown	Clay	Stones	Sandy	0 33
Brown	Sand	Clayey	Packed	33 35
Brown	Clay	Stones	Sandy	35 42
Brown	Sand		Loose	42 63
Brown	Clay	Stones	Packed	63 65
Grey	Clay	Stones	Dense	65 70
Grey	Clay	Stones	Silty	70 149
Grey	Clay	Stones	Dense	149 201
Grey	Clay	Stones	Silty	201 230
Grey	Clay	Stones	Packed	230 335
Grey	Clay	Stones	Silty	335 361
Grey	Gravel	Sand	Cemented	361 380
Grey	Clay	Stones	Silty	380 412 412 416
Grey L	Limestone		hata	416 ,425.0
WATER FOUND	TER RECORD	51 CASING & OPEN HOLE REC	SORD SIZE(S) OF OPENING S1-33 DI	AMETER 34-38 LENGTH 39-40
AT - FEET	FRESH 3 SULPHUR	DIAM MATERIAL THICKNESS INCHES FROM	TO MATERIAL AND TYPE	DEPTH TO TOP 41-44 10 OF SCREEN
410	SALTY 4 MINERALS 6 GAS	10-11 000 STEEL 2 GALVANIZED 3 CONCRETE 188	416	Fte1
1 0	SALTY 6 GAS	5 PLASTIC	20-23 DEPTH SET AT - FEET	CEMENT COOK
	T FRESH 3 □SULPHUR 24 □ SALTY 4 □ MINERALS □ SALTY 6 □ GAS	1 DSTEEL 2 GALVANIZED 3 DCONCRETE 4 DOPEN HOLE	FROM TO MATERIAL 10-13 14-17	AND TYPE (CEMEN GROUT
_	FRESH 3 SULPHUR 29 SALTY 4 MINERALS SALTY 6 GAS	5 PLASTIC 24-25 1 DSTEEL 26	27-30 18-21 22-25	
3 1	FRESH 3 SULPHUR 34 80	2 GALVANIZED 3 GONCETE 4 GOPEN HOLE	26-29 30-33 40	
PUMPING TEST ME		5 □ PLASTIC		
71 - AJE	R _{2 D BAILER} 25	GPM 12 HOURS 50 MINS	LOCATION OF WE	
STATIC LEVEL	PUMPING	EVELS DURING PUMPING RECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF WEI LOT LINE INDICATE NORTH BY ARROW.	LL FROM ROAD AND
190 55	220			
IF FLOWING.	38-41 PUMP INTAKE S			
IF FLOWING, GIVE RATE RECOMMENDED PU	GPM RECOMMENDED	FEET 1	1	
SHALLOW	PUMP SETTING	220 FEET RATE 5 GPM		
	\$4 [
FINAL STATUS	1 M WATER SUPPLY 2 OBSERVATION WELL 3 TEST HOLE	S ☐ ABANDONED, INSUFFICIENT SUPPLY L G☐ ABANDONED POOR QUALITY T☐ UNFINISHED	est o well	115
OF WELL	4 RECHARGE WELL	9 DEWATERING	1 23 4 18	Leslie St
WATER	1 M DOMESTIC 2 STOCK 3 IRRIGATION	S COMMERCIAL B MUNICIPAL PUBLIC SUPPLY	Milan Lane	1/5
USE	4 INDUSTRIAL OTHER	COOLING OR AIR CONDITIONING D NOT USED		07
	57 CABLE TOOL	S □ BORING		
METHOD OF	2 ROTARY (CONVENTS 3 ROTARY (REVERSE)	IONAL) 7 DIAMOND		
CONSTRUCTION	ON 4 PROTARY (AIR) 5 AIR PERCUSSION	9 DRIVING DIGGING OTHER DR	HLLERS REMARKS:	13678
NAME OF WELL	CONTRACTOR	WELL CONTRACTOR'S	DAVA SA CONTRACTOR SA ST DAVE RECEN	
S ADDRESS	Boadway Ent.,			CT 1 5 1987
BOX . 397	La Sutton West	ON LOE TRO	REMAPKS	
James C	Neill TECHNICIAN/CONTRACTOR	SUBMISSION DATE DAY 12 MO 09 VR87		Í
Koge	Boadw	Tey DAY 12 NO. 09 YR87		
MINISTRY C	F THE ENVIRONM	IENT COPY		FORM NO. 0506 (11/86) FORM 9

BBP

Water Well Survey

AECOM

696 60636190

		MECP WWR #	69190	30	Client Project No.:				
Well Own	er Informatio	on:							
Property Owne	r Name: FL	ORFNEE L	EW13						
Property Addre	988: 2/0·	44 LESLIE 5	ĵ-	queon	queonsville Buy 24h L66-120				
Telephone:		478-1456				RG sympol co.			
Name of Perso Completing Su	COLUMN TO THE SECOND SE	IN EK LEWIS				200 sympateci.			
Telephone:	· Commercial	1/	Email:	Te V					
Relationship to Property Owne		chrin	Date of Sompletic	urvey on:	sen1. 10				
Name of Origin (if known/differe		WR16117 84	2 CUSPE		8				
Occupant	of Property	Served by W	ell: (if oth	er than Own	er)				
Name:									
Telephone:		Email:							
Address:									
Well Loca	tion:								
Lot:	Conces	sion:		Township	D: E 161	wen popul			
Well Cons	struction Det	ails:							
Well Record Available?		Date Well Constructed:	?	Well (Contractor				
Well Type: (Drilled/Bored/Dug	DRILLED	Casing Material: (Steel, Concrete, etc.)	Steel	Well (Casing eter:	1/4			
Well Stick Up: (Above Ground)		Well Depth: (Below Ground)		Water	Level:				
is Well Located	☐ Yes ☐ No	Well Pit Depth: (Below Ground)		Well S	Stick Up:				
ls Well Flowing	?	Flow Rate:			actor:				
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐	MA I	e Conduit to Weil Cap?	☐ Yes ☐ No			
s the Well:	Accessible for Direct Sampling?	☐ Yes ☐ No		Buried, in a Other Confi	Well Pit, or	☐ Yes ☐ No			
Well Screen	☐ Yes ☐ No	If Yes, Length & Slot Size:		Depth of To (Below Ground	pth of Top of Screen:				

AECOM

•			Well I.D. #:			AECOM Proj	ect No.:	60636196
			MECP WWR #:	641903		Client Proj	ect No.:	
umping Equ	uipmer	nt:						
ump Type:	☐ Jet Pu	mp 🗆 Subi	mersible 🗆 Pi	ston Pump	☐ Other	r (please des	cribe):	7
ump Horsepower:		Pu	mp Age:		·····	Pumping Capacity:		
Pump Intake Depth: Below Ground)			mp Location: Not in Well)			Pumping F (If Known)	Rate:	
ressure Tank:	Туре:					Capacity:		
Nater Treatment: if present)	1		ter Softener 🗆 Other (please d					
Vell Usage:								
Primary Use(s):	omestic:	☑ Yes □	No Livestoc	k: Yes	□ No	Lawn Wat	ering:	Ø Yes □ No
of Persons Using Well:	1+	#of Livesto Watered:	ck	Other Uses:			Daily Am if known)	ount:
Indoor Plumbing Fi Washroom A, 8nower aundry Pool Spa, etc	(s) Dishwa	she),	cz	ahoun	(6)			
Sewage Sen	/icing:							
Private Sewage System or Municipal:			System Type (septic tank, e	e: tc.)			Distanc from We	11/101 0
Well Location:	□ Up	ohill 🗆 Dow	ınhill 🗆 Same	e Grade				
Presence of Any Al Potential Source(s) (including distance on	of Contai	mination:	Tank or Other	40				
Previous Co	ncern	s:		· ·				
How Long Have Yo Operated a Busine	u Owned, ss on this	Resided, or Property?	105	Ybras	12	-13 yr	-¢	1€
Have You Experien Concerns with You (Quantity or Quality)			☐ Yes Ø	No If Yes,	When?		0,	
Cause(s) of the ☐ Drought ☐ Pump Failure ☐ Plugging ☐ Increased Usage ☐ Interference ☐ Contamination ☐ Other (Please describe):								

AECOM

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					A ECOM During A No.	60636190
		MEC	Well I.D. #: >P WWR #:	6919030	AECOM Project No.:	
Vell Modifi	cation / I					
las Your Well Ever Been	N	☑ Yes □ No		☑ Yes □ No	Reconstructed or Replaced?	
f Yes to Any of t Please Provide D						(163 **
Other Deta	ils:					
Other Details tha	t May be Rele	vant to Assessi	ng the Currer	nt Condition of Yo	our Well Supply:	
	Careit	list a	lot o.	into re a	uch. Know	1 4
	Į.		, ,			
dville	Ral	111-14 61	lando it . de	y rost con	Zwel-	
	THA A					
						E)
						
			· · · · · · · · · · · · · · · · · · ·	- 22		
Property O	wner Pa	rticipation	in Moni	toring Prog	gram:	
Does the Proper and/or Sample Y		or Occupant Gra	ant Permissie	on for MTO/AECC	M to Monitor	Ç∤Yes □ No
Ec	ORENCE	LEWIS		Signature	<u> </u>	dept 15/21
	Owner / Occupse Print in BLOCK			Signature		/ Date

AECOM

Well i.D. #: AECOM Project No.: 60636198

MECP WWR #: 6919030 Client Project No.:

Location Sketch	(To be Completed	by Property Owner /	Оссира	ant)			
4 hazarin da danasan		PR600327)	Mri	. Day tra	ВҮрл	OTEN PIE	10
			MY	PARPERA	Ч		
DA NON							
//*		Mulyt				Septic	-£5 A1
J							Laur
\							
	BARN	yte.					
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
include details such as proper contamination (e.g., tanks, ba	rty lines, buildings, well myards, chemical/man	l, sewage system (if pre	esent), a	s well as an	y other po	otential sources of	

AECOM

		HIERW	ell I.D.	#:	A	ECOM Pro	ect No.	60636193
		MECP	WWR	#: <u>6919030</u>	618	Client Pro	ect No.	
ield Visit L	.Og (To Be Comp	leted by AEC	OM S	Staff)				
Seneral De	tails:							
Project Name:	BRADFURA	BYFA4		<u> </u>	Projec	t No.:	606	36190
Address:	21044	Leslie	_	St.	Inspec	ted By:	Hol	Les Borner
Date: (2f 7/21	Time:	13	100 - 13:30	Weath	er:		udy
asting:	623484	Northing:	48	87824	Datum	ı:	17	T
Vell Details	:					la ox	W	λ
s Well Accessible	for inspection?	Î Yes □	No	If No, Provide Re	ason:			
MECP Water Well Record No.:	6919030	Date Well Constructed	:	12/9/87	Contra	ictor Nam	ie:	Rose Broad Lto.
Veil Type: Drilled Bored / Dug)	À	Well Stick U		0.55m		Material Concrete, e		Steel
Vell Located in Well Pit?	☐ Yes ☑ No	Well Pit Dep (Below Ground				tick Up: Pit Bottom)	V	
Vell Casing Diameter:	10"	Well Depth: (Below Ground	1)	425 Ft		dwater Le Ground)	vel:	416 Lx
ump On / Off?	☑ On □ Off	Water Level Condition:	24 2	Stable (Static)	☐ Decli	ning (Draw	down)	Rising (Recovery)
lowing Well?	☐ Yes ☑ No	Flow Rate: (Estimated)		5 6PM	Well C	ар Туре:	në H	locking cap.
Vell Screen nstalled?	☐Yes ■No	If Yes, Leng & Slot Size:				Screen: Ground)	CPR	
s There a Depress Vell Casing Exter		☐ Yes 🕝	No	Photo	o(s) of V	Vell Obtai	ined?	☑Yes ☐ No
Observation(s) Su	mmarv:							
	1 SURE A	B644 1	0 (N	1/62/				
	LLY AFFECT				nin	3 #		
INR	A Provi	VAP 4		3 30	060	P 64		
P	Coximity	10 by	035	5				mmissiad
- (6000174	- no	10	rucer in	u	50 0	lon	mmissian

AECOM

					AECOM Bro	100 No. 6063G	190
			Well I.D. #:_ MECP WWR #:	69190	30 Client Proj	ect No.: <u>60636</u> ect No.:	
Nater Qua	ality San	npling:				19 - 5	
Water Quality S Obtained?	ample	¥Yes □ No	If No, Provid	e Reason:			
Sampling Local	tion:	side hose top	Raw or Treat	ed Sample?	Raw		
Disinfected Sar	mple Port?	De Yes □ No	Disinfection	Method:	Alconer		
Photo of Samp (against white bac		Yes No	If No, Provid	e Reason:			
Analyte Suite:	93179	7 + E.C	oli/Tota	(Colifer	en		
Sample I.D.:	21044	es/re Samp	Time of ling:	13:10 Oct.	Number of Sample Bot	tties:	
Field Water Qu	ality Parame	ters: (record unit	s)				
Temperature:	15.1	pH:	7.	34	Conductivity:	1.40 Clear (Color	
Turbidity:		D.O.:			Colour:	Clear (Color	idesi
Odours?	No	Арре	arance/Odou	r: None	e	1 2000 1 -2 1 -2	
Type of Conce	rn: (if applicab	le)	₩ater Quar	ntity MWater ces in teste, odour	Quality , colour or clarity)		
if the concern changes were	was contami apparent to v	nation what water quality?	foxi	nity t	e Well	es not ho	
Were there any	y effects of th	nis concern?	World	proce	- it do	es not ho	ppe
What action w	as taken to o	vercome this				12	

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix **G**

Property ID #76 – 21145 Leslie Street



November 22nd, 2021

Bruce & Pat Newland 21145 Leslie St. Queensville, ON LOG 1R0

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Newland,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 7th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	24 CFU/ 100mL	0 CFU/100mL	MAC	Υ
Iron	0.489 mg/L	0.3 mg/L	AO	N
Turbidity	8.4 NTU	5 NTU	AO	N
Hardness (as CaCO₃)	163 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC - Maximum Acceptable Concentration; AO - Aesthetic Objective; OG - Operational Guideline.

As discussed via telephone with Mr. Newland on November 19^{th,} 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 21145 Leslie Street

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

21145 Leslie Street, Queensville, Ontario, L0G 1R0

Owner Information:

Owner Name: Bruce Newland and Pat Newland

Phone Number: 905-952-9226 Email: newlandbruce97@gmail.com

Well Record

Coordinates (UTM)......623649E/4890917N

(NAD83 Zone17)

Well Location..... behind the house

Well Diameter.......0.16 m

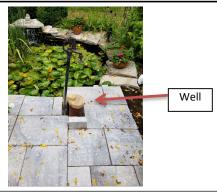
Well Depth......79.86 m

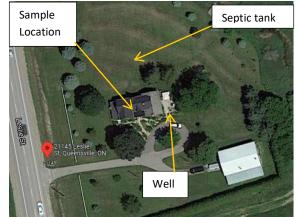
Casing Position.....N/A

Casing Condition....Fair

Water Usage......Residential
Water Source......Overburden

Static Water Level.....N/A





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... To the right of house; 110' from well Treatment System.......Water softener, Sediment filter, U.V

Recent Test Results.....None

Comments:

- Well lid is older style; Sample taken from tap near pressure tank
- Owner concerned about water quality and quantity
 - o Why? Runoff to Lake Simcoe
 - o Noise/odours from vehicles
 - o Salt impacts
 - o Bypass is too far north
 - o Better alternatives?

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	24 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	163 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and
 "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 15, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

| SAMPLE DESCRIPTION: 21145 Leslie | SAMPLE TYPE: Water |
| DATE SAMPLED: 2021-10-07 |
| 13:53 |
| Parameter | Unit | G / S | RDL | 3067647 |
| Coli | CFU/100mL | 100 | 1 | ND

 Escherichia coli
 CFU/100mL
 100
 1
 ND

 Total Coliforms
 CFU/100mL
 1
 24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3067647 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

CHARTERED S NIVINE BABILY COMMENTARY OF CHARTER OF STATES OF STATE



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

			V	vater Quality	Assessment - PWQO (mg/L)
DATE RECEIVED: 2021-10-07					DATE REPORTED: 2021-10-15
	\$		CRIPTION: PLE TYPE: SAMPLED:	21145 Leslie Water 2021-10-07 13:53	
Parameter	Unit	G/S	RDL	3067647	
Electrical Conductivity	μS/cm		2	397	
рН	pH Units	6.5-8.5	NA	7.99	
Saturation pH (Calculated)				7.35	
Langelier Index (Calculated)				0.642	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	163	
Total Dissolved Solids	mg/L		10	206	
Alkalinity (as CaCO3)	mg/L		5	186	
Bicarbonate (as CaCO3)	mg/L		5	186	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.05	0.10	
Chloride	mg/L		0.10	11.0	
Nitrate as N	mg/L		0.05	<0.05	
Nitrite as N	mg/L		0.05	< 0.05	
Bromide	mg/L		0.05	<0.05	
Sulphate	mg/L		0.10	<0.10	
Ortho Phosphate as P	mg/L		0.10	<0.10	
Ammonia as N	mg/L		0.02	0.54	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	0.0310	
Total Phosphorus	mg/L	*	0.02	<0.02	
Total Organic Carbon	mg/L		0.5	1.8	
True Colour	TCU		5	<5	
Turbidity	NTU		0.5	8.4	
Total Calcium	mg/L		0.16	33.6	
Total Magnesium	mg/L		0.17	19.2	
Total Potassium	mg/L		0.58	1.93	
Total Sodium	mg/L		0.22	30.6	
Aluminum-dissolved	mg/L	*	0.004	<0.004	
Total Antimony	mg/L	0.020	0.001	<0.001	

Certified By:





mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Total Strontium

Total Thallium

Total Titanium

Total Tungsten

Total Uranium

Total Zinc

Total Vanadium

Total Zirconium

Lab Filtration mercury

Lab Filtration Aluminum Dissolved

Total Tin

DATE RECEIVED: 2021-10-07

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

	S	SAMPLE DES	CRIPTION:	21145 Leslie
		SAM	PLE TYPE:	Water
		DATE	SAMPLED:	2021-10-07 13:53
Parameter	Unit	G/S	RDL	3067647
Total Arsenic	mg/L	0.1	0.003	< 0.003
Total Barium	mg/L		0.002	0.107
Total Beryllium	mg/L	*	0.001	<0.001
Total Boron	mg/L	0.2	0.010	0.073
Total Cadmium	mg/L	0.0002	0.0001	<0.0001
Total Chromium	mg/L		0.003	< 0.003
Total Cobalt	mg/L	0.0009	0.0005	< 0.0005
Total Copper	mg/L	0.005	0.001	0.003
Total Iron	mg/L	0.3	0.010	0.489
Total Lead	mg/L	*	0.001	<0.001
Total Manganese	mg/L		0.002	0.026
Dissolved Mercury	mg/L	0.0002	0.0001	< 0.0001
Total Molybdenum	mg/L	0.040	0.002	< 0.002
Total Nickel	mg/L	0.025	0.003	< 0.003
Total Selenium	mg/L	0.1	0.002	< 0.002
Total Silver	mg/L	0.0001	0.0001	<0.0001

0.005

0.0003

0.002

0.010

0.010

0.002

0.002

0.020

0.004

0.0003

0.030

0.005

0.006

0.030

0.004

1.08

< 0.0003

<0.002 <0.010

< 0.010

< 0.002

< 0.002

0.048

< 0.004

2021/10/12

2021/10/12

Certified By:



DATE REPORTED: 2021-10-15



Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3067647 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

CHARTERED CHEMIST

Certified By:



Exceedance Summary

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3067647	21145 Leslie	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.0310
3067647	21145 Leslie	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Iron	mg/L	0.3	0.489
3067647	21145 Leslie	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Zinc	mg/L	0.030	0.048



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Microbiology Analysis															
RPT Date: Oct 15, 2021	Е		REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE				
PARAMETER Batch		Sample Du	Dup #1	Dup #1 Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lin	ptable nits	Recovery	Lin	ptable nits
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

ND Escherichia coli 3067628 3067628 ND NA < 1 **Total Coliforms** 3067628 3067628 400 400 0.0% < 1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalysi	is								
RPT Date: Oct 15, 2021		1	DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
DARAMETER	Bartal Sample	9 5 "4	D #6		Method Blank	Measured		ptable nits		1 1 1	ptable nits		Lin	ptable
PARAMETER	Batch Id	Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	
Water Quality Assessment - F	PWQO (mg/L)	•								•				•
Electrical Conductivity	3066943	558	559	0.2%	< 2	103%	90%	110%						
рН	3066943	7.69	7.78	1.2%	NA	101%	90%	110%						
Total Dissolved Solids	3067628 3067628	430	436	1.4%	< 10	100%	80%	120%						
Alkalinity (as CaCO3)	3066943	191	197	3.1%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3066943	191	197	3.1%	< 5									
Carbonate (as CaCO3)	3066943	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3066943	<5	<5	NA	< 5									
Fluoride	3080535	0.09	0.10	NA	< 0.05	95%	70%	130%	94%	80%	120%	101%	70%	130%
Chloride	3080535	6.53	6.55	0.3%	< 0.10	90%	70%	130%	97%	80%	120%	100%	70%	130%
Nitrate as N	3080535	0.52	0.51	1.9%	< 0.05	94%	70%	130%	102%	80%	120%	103%	70%	130%
Nitrite as N	3080535	<0.05	<0.05	NA	< 0.05	102%	70%	130%	100%	80%	120%	106%	70%	130%
Bromide	3080535	< 0.05	< 0.05	NA	< 0.05	97%		130%	92%	80%	120%	90%	70%	130%
Sulphate	3080535	21.1	21.2	0.5%	< 0.10	92%		130%	99%	80%	120%	99%	70%	130%
Ortho Phosphate as P	3080535	<0.10	<0.10	NA	< 0.10	94%	70%	130%	100%	80%	120%	102%	70%	130%
Ammonia as N	3067694	<0.02	<0.02	NA	< 0.02	105%	70%	130%	108%	80%	120%	99%	70%	130%
Total Phosphorus	3065782	0.04	0.05	NA	< 0.02	98%	70%	130%	97%	80%	120%	91%	70%	130%
Total Organic Carbon	3067628 3067628	2.0	2.0	NA	< 0.5	104%	90%	110%	99%	90%	110%	102%	80%	120%
True Colour	3068388	<5	<5	NA	< 5	97%	90%	110%	0070	0070	11070	10270	0070	0,0
Turbidity	3067628 3067628	0.8	0.8	NA	< 0.5	99%	80%	120%						
Total Calcium	3073029	20.9	20.3	2.9%	< 0.10	93%		130%	97%	80%	120%	98%	70%	130%
Total Magnesium	3073029	3.15	3.20	1.6%	< 0.10	97%	70%	130%	99%	80%	120%	102%	70%	130%
Total Potassium	3073029	3.71	3.69	0.5%	< 0.50	95%	70%	130%	99%	80%	120%	101%	70%	130%
Total Sodium	3073029	24.3	23.3	4.2%	< 0.10	93%	70%	130%	96%	80%	120%	100%	70%	130%
Aluminum-dissolved	3069932	0.024	0.024	0.0%	< 0.004	108%	70%	130%	112%	80%	120%	104%	70%	130%
Total Antimony	3070856	<0.024	<0.001	NA	< 0.001	104%		130%	106%	80%	120%	107%		130%
Total Arsenic	3070856	0.004	0.003	NA	< 0.003	94%	70%	130%	109%	80%	120%	108%	70%	130%
Total Barium	3070856	0.004		3.6%		96%	70%	130%		80%	120%		70%	130%
Total Beryllium	3070856	< 0.000	0.057	3.0% NA	< 0.002	97%	70%	130%	103%	80%	120%	103% 115%	70%	130%
Total Boron	3070856	0.206	<0.001 0.206	0.0%	< 0.001 < 0.010	99%	70%	130%	105% 105%	80%	120%	107%	70%	130%
Total Cadmium	3070856	<0.0001	<0.0001	NA	< 0.0001		70%	130%	109%	80%	120%	127%	70%	130%
Total Chromium	2070050	.0.000	.0.000	N1 A	. 0. 000	4000/	700/	4000/	4400/	000/	4000/	4070/	700/	12001
Total Cabalt	3070856	<0.003	<0.003	NA NA	< 0.003	103%		130%	110%	80%		107%		130%
Total Copper	3070856	<0.0005	0.0005	NA	< 0.0005			130%	113%	80%	120%	105%		130%
Total Copper	3070856	0.002	0.002	NA 0.6%	< 0.001	101%		130%	110%	80%		125%		130%
Total I cod	3070856	0.219	0.241	9.6% NA	< 0.010	105%		130%	110%	80%		105%		130%
Total Lead	3070856	<0.001	<0.001	NA	< 0.001	100%	70%	130%	108%	0 U%	120%	122%	70%	130%
Total Manganese	3070856	0.158	0.167	5.5%	< 0.002	101%		130%	106%	80%	120%	108%		130%
Dissolved Mercury	3080894	<0.0001	<0.0001	NA	< 0.0001	103%		130%	98%	80%	120%	100%		130%
Total Molybdenum	3070856	<0.002	<0.002	NA	< 0.002	106%		130%	113%	80%	120%	110%	70%	130%
Total Nickel	3070856	0.006	0.007	NA	< 0.003	100%	70%	130%	108%	80%	120%	128%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 15, 2021 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE MATRIX S														RIX SPI	KE
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank			Acceptable Limits			ptable nits	Recovery	1 1 10	ptable nits
		IG.					value	Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3070856		0.075	0.062	19.0%	< 0.002	101%	70%	130%	107%	80%	120%	116%	70%	130%
Total Silver	3070856		<0.0001	<0.0001	NA	< 0.0001	102%	70%	130%	109%	80%	120%	122%	70%	130%
Total Strontium	3070856		0.685	0.759	10.2%	< 0.005	105%	70%	130%	108%	80%	120%	104%	70%	130%
Total Thallium	3070856		<0.0003	< 0.0003	NA	< 0.0003	100%	70%	130%	110%	80%	120%	125%	70%	130%
Total Tin	3070856		< 0.002	< 0.002	NA	< 0.002	99%	70%	130%	108%	80%	120%	124%	70%	130%
Total Titanium	3070856		<0.010	<0.010	NA	< 0.010	97%	70%	130%	104%	80%	120%	128%	70%	130%
Total Tungsten	3070856		<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	99%	70%	130%
Total Uranium	3070856		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	105%	80%	120%	129%	70%	130%
Total Vanadium	3070856		< 0.002	< 0.002	NA	< 0.002	102%	70%	130%	111%	80%	120%	109%	70%	130%
Total Zinc	3070856		<0.020	< 0.020	NA	< 0.020	106%	70%	130%	113%	80%	120%	116%	70%	130%
Total Zirconium	3070856		<0.004	<0.004	NA	< 0.004	108%	70%	130%	111%	80%	120%	108%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

AGAT QUALITY ASSURANCE REPORT (V1)

Page 9 of 13



AGAT WORK ORDER: 21T813002

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	·		
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
рН	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:						
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS					
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION					
Lab Filtration mercury	SR-78-9001		FILTRATION					

The Ontario Water Resources Act WATER WELL RECORD

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

6924647

Municipality	Con.			
69003	CON	1	0	3
10 14	15	 22	23	24

			1 2			10 14 IS	1111	22 23 24
County or District YORK	ct		p/Borough/City	_		Con block tract surve	· I .	
IORK		Address	r GWIL	PIMBUK	, 1	Date	pt	. 25
		2114	45 Les	lie St	R.R.1 Que	ensville mpleted 1	- endy⊢inac	
21	M 10	12 17	18	24	RC Elevation RC	Basin Code	<u> </u>	iv
	LO	G OF OVERBURDE	EN AND BE	DROCK MA	TERIALS (see instru	ctions)		
General colour	Most common material	0	ther materials		Gene	ral description	From	oth – feet To
Brown	Soi1				Soft		0	1
Brown	Clay				Soft		1	12
Grey	Clay	F. Grave	el, St	ones	Soft		12	47
Grey	Clay				Hard		47	74
Grey	Clay	Sand			Layered		74	138
Grey	Clay				Very Dens	se	138	153
Grey	Clay	Sand			Layered		153	183
Grey	Clay				Hard		183	244
Grey	Limestone	Clay			broken, I	ayered	244	251
Grey	Limestone				hard		251	253
Grey	Limestone				Fractured		253	262
31								البل
32 10 10 WA	14 15 21 51 51	CACINIC	OPEN HOI	43 E PECODI	54	f opening 31-33 Diameter	34-38 Length	75 80
Water found at – feet	Kind of water diar	de	Wall thickness	Depth -	(CI-ANI	Diameter	34-38 Length	feet
10-13 1		0-11 1 Steel 12	inches	From	To Solution Materia		Depth at top o	
15-18 1	☐ Salty 6 ☐ Gas ☐ Fresh 3 ☐ Sulphur 19	4 🛘 Open hole	188	+1	253			feet
2	☐ Saity 6 ☐ Gas	5 ☐ Plastic			20-23	PLUGGING & SEALING Annular space	G RECORI	
2	☐ Fresh ³ ☐ Sulphur ²⁴ 4 ☐ Minerals ☐ Salty 6 ☐ Gas	2 ☐ Galvanized 3 ☐ Concrete 4 🛣 Open hole		253	Depth set a	t – feet		· · · · · · · · · · · · · · · · · · ·
25 – 28 1	☐ Fresh ³ ☐ Sulphur ²⁹ ☐ Salty ⁴ ☐ Minerals 2:	5 ☐ Plastic	1		10-13	14-17		
30-33	☐ Fresh ³ ☐ Sulphur ³⁴ ⁶⁰	2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole			18-21	22-25		
2	☐ Salty 6 ☐ Minerals ☐ Gas	5 Plastic			Ď"	20°-33 8 Benseal		
71 Pumping test r	Pumping rate	Duration of pump			LC	DCATION OF WELL		
Static lavel	Water level end of pumping 25 Water levels during	¹ 🗽 Dumping 2	☐ Recovery	-	In diagram below show Indicate north by arrow	v distances of well from roa v.	nd and lot lir	ne. /
19-21	22-24 15 minutes 30 minu	tes 45 minutes 32-34	60 minutes 35–37]				/ _N /
60 _{fee} 6	195 _{eet} feet	feet feet Water at end of te	195 feet	╢ <u>┈</u> ┸	Holbot	n Rd.	······································	
60 _{fee} 6 If flowing give to Recommended	GPM	feet Clear 43-45 Recommended	☐ Cloudy 46-49	<u> </u>	ξÎ			
☐ Shallow	pump setting 100	numn rate	10 _{GPM}		10 K			
50-53	S OF WELL 54	icet	GI W					
FINAL STATU 1 X Water su 2 Observat	pply 5 🗍 Abandoned, insuffi				as' we'l			
3 ☐ Test hole 4 ☐ Recharge	⁷ Abandoned (Other)			\ \sigma_{ \text{'}}				
WATER USE	55-56							
1 X Domesti 2 ☐ Stock 3 ☐ Irrigation	6 🗌 Municipal	9 ☐ Not us 10 ☐ Other	ed	3				
4 🗍 Industria		tioning						
Bi .	CONSTRUCTION 57	6 D 5		1				
1 ☐ Cable to 2 🙀 Rotary (c 3 🗍 Rotary (r	conventional) 6 Boring reverse) 7 Diamond	9 ☐ Driving 10 ☐ Diggin 11 ☐ Other				1	1888	82
4 ☐ Rotary (a	air) 8 🗌 Jetting							<u> </u>
Name of Well Cont			or's Licence No.	Data source	58 Contraccto	P " 2" 100	_	63-68 80
Roger I	Boadway Ent., Lt	d. 14	13	Date o	of inspection	Inspector NOV	U 6 19	98
Box 397	7 Sutton West, O		n's Licence No	S	rks			
Phil Br	own	T00:	35	WINISTRY Remark			SS. I	FSQ
Signature of Techn	Boadway	Submission d		N N			,	
	The second second second							

2 - MINISTER OF ENVIRONMENT & ENERGY COPY



AECOM

				Well I.D.	6920	169	AECO	M Project No.:	60636190
Vell Owne	er Info	matic	n:						
Property Owner	Name:	BRUC	E 1	PAT N	VEWLAN	iD			
Property Addre	ss:	2114	5 L	ESLIE "	ST., QUE	EN	SVILL	E Lo	og iro
Telephone:	0	105-9	152	- 9226	Email:		newl	andbruce	e 97 Dgmailice
Name of Persor Completing Sur	vey:	PAT	+ B1	RUCE NE	WLAND		<u> </u>	po	be coph
Telephone:	(705-6	152	-9226	Email:		as a	above	
Relationship to Property Owner	:	SELV	les		Date of S Completion		SEP	T. 7/2	1
Name of Origina (if known/differer			CHA	RLES 1	NADDE	LL			
Occupant Name:	OI PIO	perty	Ser	ved by W	ren: (if oth	er thai	n Owner)		
Telephone:		_/		Email:					
Address:									
Well Locat	tion:								
Lot: PT.25	<u> </u>	Conces	sion:	3		To	wnship:	EAST (SWILLIMBURY
Well Cons	tructio	n Det	ails:			- J			
Well Record Available?	☑ Yes	□ No	Date \	Well tructed:	OCT. 19	198	Well Cor Name:	ntractor	RUGER BORDWAY
Nell Type: Drilled/Bored/Dug	DRILL	ED		g Material: Concrete, etc.)	STEEL		Well Cas Diamete		61/4"
Well Stick Up: Above Ground)	12	(1		Depth: Ground)	2621	=T.	Water Le		
s Well Located n a Well Pit?	☐ Yes	☑ No		Pit Depth: Ground)			Well Stic		
s Well Flowing?	☐ Yes	□ No	Flow				Contract		
Well Cap Type:	Roya	P 8		Cap Create a Seal?	☑Yes □	No	Is Wire (Tight to	Conduit Well Cap?	
s the Well:	Accessit Direct Sa	ole for impling?	Ø	Yes □ No	OR		d, In a We		☐ Yes ☐ No
Well Screen	☐ Yes	□No	If Yes	, Length &		Depth	of Top o	f Screen:	

AECOM

					Well I.D. #:	<u> </u>		AECOM Pro	ject No.:_	606	36190
				ME	CP WWR #:	9246	47		ject No.:_		
Pumping E	quipi	nei	nt:								
Pump Type:		let Pu	mp 🗹	Submers	ible 🗀 Pisto	n Pump	☐ Other	(please de	scribe):		
Pump Horsepowe	r:			Pump /	Age:	231	RS	Pumping Capacity:	keer A.S.		
Pump Intake Dep (Below Ground)	th:			Pump (If Not ii	Location:			Pumping (If Known)	1		
Pressure Tank:	Тур	в:	SCA	120-	· J			Capacity	2-119	50	US GAL.
Water Treatment: (if present)	1				Softener 🗹 V er (please des		er (indical	te type) <u>S</u>	EDIM	ENI	
Well Usage	:										
Primary Use(s):	Domes	tic:	☑ Ye:	s 🗌 No	Livestock:	☐ Yes	s 🗆 No	Lawn Wa	tering:	1	es 🗆 No
# of Persons Using Well:	2		#of Live			Other Uses:	30		Daily An		
indoor Plumbing (Washroom(s), Shot Laundry, Pool, Spa,	ver(s), Di		sher,	F:	3 W/R	WER H/W	4				
Sewage Se			1 VA TI		ystem Type:	a	EPTIC		Distanc		110 FT ±
System or Munic	(pai:			(8	eptic tank, etc.	<u>_</u>	(455.15		from W	eii:	
Well Location:		□ Up	hill 🗆	Downhill	Same G	irade —					
Presence of Any Potential Source (including distance	(s) of C	ontar	mination	age Tani I:	k or Other		0				Fit
Previous C	once	erns	s:								
How Long Have Operated a Busi	You Ow	ned, this	Resided Propert	i, or y?	18 /6	ARS					=
Have You Experi Concerns with Y (Quantity or Quality	our We				☐ Yes ☑ No	If Yes,	When?				
Cause(s) of the Previous Conce					ailure 🗆 Plu			ed Usage	☐ Interfe	erence	



			Well I.D. #:	924647	AECOM Project No.:	
Well Modif	ication / I			127011	Client Project No.:	
Has Your Well Ever Been	Deepened?		Cleaned?	☐ Yes ☐ Yo	Reconstructed or Replaced	"I I Voc IVINA
If Yes to Any of t Please Provide D						
Other Deta	ils:					
Other Details tha						
CONS	TRUCTIO	NOF	BRADFOI	ED BYPA	55	
Caula	1 offer	1 under	ground	water	supply!	
			<i></i>		0,0	
				lago.		
<u></u>						
· · · · · · · · · · · · · · · · · · ·						
					-	
	<u> </u>		<u> </u>			
			<u> </u>			
Property O	wner Par	ticipation i	in Monit	oring Prog	ram:	
Does the Propert and/or Sample Yo	y Owner and/o our Well?	r Occupant Grai	nt Permission	n for MTO/AECO	M to Monitor	☑Yes ☐ No
BRUCE A	JEW LAND		Shi	This		
BRUCE A PAT NO Property C	EWLAND Owner / Occup	ant Name	Ker	Agulta d Signature		Ppt. 7/21

(Please Print in BLOCK letters)

Well 1.D. #: AECOM Project No.: 60636190

MECP WWR #: 692 4647 Client Project No.:

_ocation Sketch	To be Completed by Property Owner / Occupant)	-> /
	THE XPTC	
	Janot Journal of the state of t	9
	I S I	
	300'	

AECOM

General D	Log (To Be Com				
		1.0		1	1
Project Name:	BBP - Well	The second secon		Project No.:	60636190
	21145 Lestr			Inspected By:	Holden Borren
Date:	Oct. 7/21		00 - 14.45	Weather:	Cloudy
Easting:	023649	Northing: 4	390157	Datum:	175
Well Detail	ls:				
ls Well Accessit	ole for Inspection?	✓Yes □No	If No, Provide R	eason:	
MECP Water Wel Record No.:	11 6924647	Date Well Constructed:	04.19198	Contractor Nan	ne: Rose Broadway
Well Type: (Drilled / Bored / Dug)	Drilled.	Well Stick Up: (Above Ground)	0.32m	Casing Material	: Clark
Well Located in a Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)	262ft	Well Stick Up: (Above Pit Bottom)	
Well Casing Diameter:	6"	Well Depth: (Below Ground)	26	Groundwater La (Below Ground)	evel:
Pump On / Off?	□ On □ Off	Water Level Condition:	Stable (Static)	Declining (Draw	down) Rising (Recovery)
Flowing Well?	☐ Yes ➡No	Flow Rate: (Estimated)	10 GPM	Well Cap Type:	Bolt
Well Screen nstalled?	✓Yes □ No	If Yes, Length & Slot Size:		Top of Screen: (Below Ground)	253 At
s There a Depre Well Casing Exte	ssion Around the erior?	☐ Yes X No	Photo	o(s) of Well Obtain	ined? Yes No
Observation(s) S	lummary:				-
- Noll	list is al	Ele Stale			
- C - d	lid is of	tas is	DOLE POSS	101 10	L

AECOM

					1007 010
		Well I.D. #: 600	12464	AECOM Pro	oject No.: <u>6063 619</u> Oject No.:
Water Quality Sar	mpling:	bypass			
Water Quality Sample Obtained?	Yes No	If No, Provide Rea		10.00	
Sampling Location:	Preserve to	Raw or Treated Sa	ample?	Raw	1
Disinfected Sample Port?	☐ Yes ☐ No	Disinfection Metho	od:	Alconex	
Photo of Sample Obtained? (against white background)	Yes No	If No, Provide Rea	son;		
Analyte Suite: 93/7	7 + E(Oli / Total C	Colifor	n	
Sample I.D.: 21/4/5	Leslip Date Samp	Time of 13	:53	Number of Sample Bot	tles: 9
Field Water Quality Rarame	ers: (record unit	s) - 1			
Temperature: 14. 7		7.91		Conductivity:	0-48
Turbidity: Turbo	I initaly D.O .:	_	(Colour:	Cloudy
Odours? None	- Appe	earance/Odour:	Non	vi	
Type of Concern: (if applicable		Water Quantity Note any differences in tas			
If the concern was contamir changes were apparent to w		Why? - Don	Bethe	r alter	chris
Were there any effects of th	s concern?	- Don	Rock	1 + 4	90/
What action was taken to ov concern?	ercome this	- Run	off to	lake S	incée vehicle
		- Sult	- impe	acti	
		- bype	PG\$ 15	s too fa	r north

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix H

Property ID #88 – 2374 Line 11

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22th, 2021

Joe Rodrigues 2374 Line 11 Bradford, ON L3Z 3M5

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Rodrigues,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 14th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	244 CFU/ 100mL	0 CFU/100mL	MAC	Y
Colour	15 TCU	5 TCU	AO	N
Hardness (as CaCO ₃)	269 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As you were informed via email on November 19th, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



Groundwater Supply Well Location 2374 Line 11 Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

2374 Line 11, Bradford, Ontario

Owner Information:

Owner Name: Joe Rodrigues

Phone Number: NA

Email: Joefariarodriguez@hotmail.com

Well Record

Coordinates (UTM).......614254E/4891173N

(NAD83 Zone17)

Constructed (year).....August 1972

Well Location...... In the Front Yard, just to the

Left of the house.

Well Diameter.......0.914 m Well Depth......9.45 m

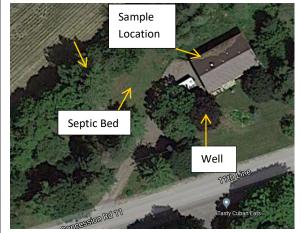
Casing Position...........0.457 m above ground;

Casing Condition.....Fair

Water Usage.......Residential
Water Source......Overburden
Static Water Level......8.83 m



Well



Water Quality & Well Testing

Past Water Quality Problems...... Homeowner's mother has noted a yellow tinge at time with the water

Potential Contamination Sources...None

Location of Septic Tank......Downgrade in the back yard

Treatment System......Water Softener, Chlorinator

Recent Test Results.....None

Water Sampled.....Yes (October 14, 2021)

Appearance......Clear, no odour

Comments:

• The well sampled is the residential well. Home was purchased less than a year ago. Currently undergoing significant renovations and homeowners are new to wells and septic tanks.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	244 CFU / 100 ml	0 CFU / 100 ml	MAC
Colour	15 TCU	5 TCU	AO
Hardness (as CaCO ₃)	269 mg/L	80 - 100 mg/L	OG

Notes:

- 1. Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T815956

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 23, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA)



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

 Parameter
 Unit
 G / S
 RDL
 309152

 Escherichia coli
 CFU/100mL
 100
 1
 ND

 Total Coliforms
 CFU/100mL
 1
 244

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091523 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Amanjot Bhells Amanor Hela of CHEMIST



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14					DATE REPORTED: 2
	s	AMPLE DES	CRIPTION:	2374 11th Line	
		SAM	PLE TYPE:	Water	
		DATE	SAMPLED:	2021-10-14 14:16	
Parameter	Unit	G/S	RDL	3091523	
Electrical Conductivity	μS/cm		2	997	
Н	pH Units	6.5-8.5	NA	8.04	
aturation pH (Calculated)				7.02	
angelier Index (Calculated)				1.02	
ardness (as CaCO3) (Calculated)	mg/L		0.5	269	
otal Dissolved Solids	mg/L		10	534	
kalinity (as CaCO3)	mg/L		5	277	
arbonate (as CaCO3)	mg/L		5	277	
oonate (as CaCO3)	mg/L		5	<5	
droxide (as CaCO3)	mg/L		5	<5	
oride	mg/L		0.05	< 0.05	
loride	mg/L		0.12	145	
ate as N	mg/L		0.05	0.74	
ite as N	mg/L		0.05	< 0.05	
mide	mg/L		0.05	< 0.05	
phate	mg/L		0.10	14.7	
tho Phosphate as P	mg/L		0.10	<0.10	
nmonia as N	mg/L		0.02	<0.02	
nmonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002	
al Phosphorus	mg/L	*	0.02	<0.02	
tal Organic Carbon	mg/L		0.5	53.4	
ue Colour	TCU		5	15	
urbidity	NTU		0.5	0.9	
issolved Calcium	mg/L		0.25	75.1	

Certified By:



mg/L

mg/L

mg/L

mg/L

mg/L

0.25

2.50

0.25

0.004

0.001

0.020

19.8

3.16

88.3

< 0.004

< 0.001

Dissolved Magnesium

Dissolved Potassium

Aluminum-dissolved

Dissolved Antimony

Dissolved Sodium



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14					DATE REPORTED: 2021-10-23
	;	SAMPLE DES	CRIPTION:	2374 11th Line	
		SAM	PLE TYPE:	Water	
		DATE	SAMPLED:	2021-10-14 14:16	
Parameter	Unit	G/S	RDL	3091523	
Dissolved Arsenic	mg/L	0.1	0.003	<0.003	
Dissolved Barium	mg/L		0.002	0.039	
Dissolved Beryllium	mg/L	*	0.0005	<0.0005	
Dissolved Boron	mg/L	0.2	0.010	0.012	
Dissolved Cadmium	mg/L	0.0002	0.0001	<0.0001	
Dissolved Chromium	mg/L		0.003	< 0.003	
Dissolved Cobalt	mg/L	0.0009	0.0005	<0.0005	
Dissolved Copper	mg/L	0.005	0.001	0.048	
Dissolved Iron	mg/L	0.3	0.010	<0.010	
Dissolved Lead	mg/L	*	0.001	0.002	
Dissolved Manganese	mg/L		0.002	<0.002	
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001	
Dissolved Molybdenum	mg/L	0.040	0.002	<0.002	
Dissolved Nickel	mg/L	0.025	0.003	< 0.003	
Dissolved Selenium	mg/L	0.1	0.004	<0.004	
Dissolved Silver	mg/L	0.0001	0.0001	<0.0001	
Dissolved Strontium	mg/L		0.005	0.165	
Dissolved Thallium	mg/L	0.0003	0.0003	<0.0003	
Dissolved Tin	mg/L		0.002	<0.002	
Dissolved Titanium	mg/L		0.002	<0.002	
Dissolved Tungsten	mg/L	0.030	0.010	<0.010	
Dissolved Uranium	mg/L	0.005	0.002	<0.002	
Dissolved Vanadium	mg/L	0.006	0.002	<0.002	
Dissolved Zinc	mg/L	0.030	0.005	0.055	
Dissolved Zirconium	mg/L	0.004	0.004	<0.004	
Lab Filtration Aluminum Dissolved				2021/10/18	
Lab Filtration mercury				2021/10/18	
Lab Filtration Metals				2021/10/18	

Certified By:

Inis Verástegui



Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091523 Metals analysis completed on a lab filtered sample.

Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

calculated.

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Tris Verástegui



Exceedance Summary

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3091523	2374 11th Line	ON PWQO	Water Quality Assessment - Dissolved Metals - PWQO (mg/L)	Dissolved Copper	mg/L	0.005	0.048
3091523	2374 11th Line	ON PWQO	Water Quality Assessment - Dissolved Metals - PWQO (mg/L)	Dissolved Zinc	mg/L	0.030	0.055



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956
ATTENTION TO: Brian Holden

PROJECT: 60636190 SAMPLING SITE:

SAMPLED BY:

	Microbiology Analysis														
RPT Date: Oct 23, 2021 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE MATRIX SPIKE									KE						
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank Measured Limits Recovery Limits Re					Recovery	Lin	ptable nits		
		ld					Value	Lower	Upper		Lower	Upper		Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3091472 3091472 ND ND NA <1
Total Coliforms 3091472 3091472 116 114 1.7% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

manjot Bhells AMANJOT BHELD CHEMIST

Certified By:

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

				Wate	er Ar	nalysi	is								
RPT Date: Oct 23, 2021			С	UPLICATE			REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	IKE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery		ptable nits	Recovery		ptable nits
TAXAMETER	Baten	ld	Dup#1	Бар #2	I D		Value	Lower	Upper	Recovery	Lower Upper		Recovery	Lower	Upper
Water Quality Assessment - Dis	ssolved Metals	- PWQ0) (mg/L)												
Electrical Conductivity	3090117		138	138	0.0%	< 2	97%	90%	110%						
рН	3090117		7.17	7.13	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3091472 30	91472	520	524	0.8%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3090117		64	62	3.2%	< 5	84%	80%	120%						
Bicarbonate (as CaCO3)	3090117		64	62	3.2%	< 5	NA								
Carbonate (as CaCO3)	3090117		<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3090117		<5	<5	NA	< 5	NA								
Fluoride	3091521 30	91521	< 0.05	< 0.05	NA	< 0.05	94%	70%	130%	95%	80%	120%	112%	70%	130%
Chloride	3091521 30	91521	54.3	54.3	0.0%	< 0.10	96%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3091521 30	91521	4.07	4.16	2.2%	< 0.05	106%	70%	130%	106%	80%	120%	109%	70%	130%
Nitrite as N	3091521 30	91521	<0.05	<0.05	NA	< 0.05	95%	70%	130%	101%	80%	120%	110%	70%	130%
Bromide	3091521 30	91521	< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	104%	80%	120%	102%	70%	130%
Sulphate	3091521 30	91521	25.8	25.7	0.4%	< 0.10	99%	70%	130%	105%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3091521 30	91521	<0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	94%	70%	130%
Ammonia as N	3087154		<0.02	<0.02	NA	< 0.02	115%	70%	130%	99%	80%	120%	96%	70%	130%
Total Phosphorus	3090116		0.02	0.03	NA	< 0.02	97%	70%	130%	97%	80%	120%	105%	70%	130%
Total Organic Carbon	3094303		47.1	47.2	0.2%	< 0.5	99%	90%	110%	98%	90%	110%	NA	80%	120%
True Colour	3090232		31	31	0.0%	< 5	106%	90%	110%						
Turbidity	3091472 30	91472	<0.5	<0.5	NA	< 0.5	101%	80%	120%						
Dissolved Calcium	3095356		101	101	0.0%	< 0.05	95%	70%	130%	97%	80%	120%	98%	70%	130%
Dissolved Magnesium	3095356		12.2	12.2	0.0%	< 0.05	99%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Potassium	3095356		0.83	0.89	NA	< 0.50	99%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Sodium	3095356		2.75	2.72	1.1%	< 0.05	97%	70%	130%	96%	80%	120%	101%	70%	130%
Aluminum-dissolved	3091472 30	91472	< 0.004	< 0.004	NA	< 0.004	104%	70%	130%	116%	80%	120%	119%	70%	130%
Dissolved Antimony	3091472 30	91472	<0.001	<0.001	NA	< 0.001	102%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Arsenic	3091472 30	91472	<0.003	< 0.003	NA	< 0.003	92%	70%	130%	103%	80%	120%	112%	70%	130%
Dissolved Barium	3091472 30	91472	0.073	0.079	7.9%	< 0.002	100%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Beryllium	3091472 30	91472	<0.0005	<0.0005	NA	< 0.0005	97%	70%	130%	109%	80%	120%	115%	70%	130%
Dissolved Boron	3091472 30	91472	0.036	0.038	NA	< 0.010	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Cadmium	3091472 30	91472	<0.0001	<0.0001	NA	< 0.0001	100%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Chromium	3091472 30	91472	<0.003	<0.003	NA	< 0.003	102%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Cobalt	3091472 30		<0.0005	<0.0005	NA	< 0.0005		70%	130%	107%		120%	104%		130%
Dissolved Copper	3091472 30		0.021	0.025	17.4%	< 0.001	99%	70%	130%	105%	80%	120%	104%		130%
Dissolved Iron	3091472 30		0.012	<0.010	NA	< 0.010	101%	70%	130%	106%	80%	120%	101%		130%
Dissolved Lead	3091472 30		<0.001	<0.001	NA	< 0.001	98%	70%	130%	104%		120%	102%		130%
Dissolved Manganese	3091472 30	91472	<0.002	0.003	NA	< 0.002	96%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Mercury	3095856		<0.0001	<0.0001	NA	< 0.0001		70%	130%	100%	80%	120%	98%		130%
Dissolved Molybdenum	3091472 30	91472	<0.002	<0.002	NA	< 0.002	104%	70%	130%	105%	80%	120%	108%		130%
Dissolved Nickel	3091472 30		< 0.003	< 0.003	NA	< 0.003	100%		130%	106%		120%	103%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

		1	Wateı	r Ana	lysis	(Cor	ntinu	ed)							
RPT Date: Oct 23, 2021	T Date: Oct 23, 2021 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE MATRIX SPIKE												KE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Blank Measured		ptable nits	Recovery	Lin	ptable nits	Recovery	1 1:-	ptable nits	
		lu lu					Value	Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Selenium	3091472	3091472	<0.004	<0.004	NA	< 0.004	101%	70%	130%	108%	80%	120%	113%	70%	130%
Dissolved Silver	3091472	3091472	<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Strontium	3091472	3091472	0.249	0.253	1.6%	< 0.005	95%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Thallium	3091472	3091472	< 0.0003	< 0.0003	NA	< 0.0003	97%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Tin	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	101%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Titanium	3091472	3091472	<0.002	<0.002	NA	< 0.002	100%	70%	130%	106%	80%	120%	105%	70%	130%
Dissolved Tungsten	3091472	3091472	<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	101%	70%	130%
Dissolved Uranium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	97%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Vanadium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	100%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Zinc	3091472	3091472	0.044	0.053	18.6%	< 0.005	100%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Zirconium	3091472	3091472	<0.004	<0.004	NA	< 0.004	100%	70%	130%	106%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Inis Verastegui



Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	1.5 5.5		
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE.		SAMPLED BT.	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311	¹² CVAAS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION
Lab Filtration mercury	SR-78-9001		FILTRATION
Lab Filtration Metals	SR-78-9001		FILTRATION





WATER WELL RECORD #745

•	varer management m	Ontario 1. PRINT ONLY IN SI 2. CHECK 🔀 CORRE	PACES PROVIDED CT BOX WHERE APPLICABLE 1 2	1	57091	54-1	5 7004	2/2	\mathcal{N}	22 23 24
C	OUNTY OR DISTRICT	COE	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE WEST GWILLIMBU		3	9 1 1	, BLOCK, TRACT, SURVEY	Y, ETC.		LOT 25-27 ₩ 016
			BOND	HEAJ	O, ON	ITARI	0.	DATE COMP	LETED Mc	48-53 YR 72
			590950		LEVATION OS 75		BASIN CODE	1 1 1	<u> </u>	<u>iv</u>
Ţ		LC	G OF OVERBURDEN AND BED	25	26	38				47
F	GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS				AL DESCRIPTION		DEPTH FROM	FEET
F		top soil							0	2
H		sandy clay							2	28
F		sand, tra,							28	31
I		Deale								
F									.	
-										
				_						
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Ĺ		2 a2 1 1 aa2	8 19528 1 10931 128 1 1	_ _						
	32 10	14 15 21	32	43		SIZE	54 (S) OF OPENING 3 IT NO.)	65 01-33 DIAME	TER 34-38	75 80 LENGTH 39-40
/ [WATER FOUND	ER RECORD	51 CASING & OPEN HO		- FEET	#			INCHES	FEET 41-44 80
\		FRESH 3 SULPHUR	DIAM. MATERIAL THICKNESS INCHES 10-11 1 □ STEEL 12	FROM	TO 13-16	SCE	ERIAL AND TYPE		OF SCREEN	41-44 80 FEET
4	15-18	SALTY 4 MINERAL 19 FRESH 3 SULPHUR	30 GALVANIZED CONCRETE	0	0031 3 4		PLUGGING 8	L SEA	LING R	
-	20-23	SALTY 4 MINERAL	4 OPEN HOLE 17-18 1 STEEL 19		20-23		SET AT - FEET MA	TERIAL AND	TVDE (CI	EMENT GROUT, PACKER, ETC.)
	25-28	FRESH 3 SULPHUR SALTY 4 MINERAL	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE				0-13 14-17			
		FRESH 3 SULPHUR SALTY 4 MINERAL	24-25 1 STEEL 26	-	27-30	1	8-21 22-25	-	ST \$100 .	
	ן י ן]FRESH ³ □ SULPHUR ³⁴ 8]SALTY ⁴ □ MINERAL	3 CONCRETE 4 OPEN HOLE			2	6-29 30-33 80			
	71 PUMPING TEST MET	ļ	E 11-14 DURATION OF PUMPING 15-16 17-			i	OCATION O	F WEI	.L	
4	STATIC	2 □ BAILER WATER LEVEL 25 END OF WATE	GPMHOURSMIN				ELOW SHOW DISTANCES (OM ROAD AND	
	LEVEL 19-21	PUMPING	30 MINUTES 45 MINUTES 60 MINUTES	37			\mathcal{N}_{1}			
ı	⊕ <u>∂</u> 22 _{геет}	FEET FE	SET AT WATER AT END OF TEST	ET I						
- 1	Z IF FLOWING, GIVE RATE	GPM.	FEET 1 CLEAR 2 CLOUDY	~						
	RECOMMENDED PUI	MP TYPE RECOMMENDED	PUMPING	11					ICROM	
	50-53	GPM./FT. SPECI	29 0002				XXX	alle	FROM	·
	FINAL	water supply observation we	5 ABANDONED, INSUFFICIENT SUPPLY	$\left \cdot \right $			3/-	3(1)	1-15-	25 F
	STATUS OF WELL	3 ☐ TEST HOLE 4 ☐ RECHARGE WELL	7 UNFINISHED	L	N -		2/	ON	11	
f	5	DOMESTIC 2 STOCK	5 COMMERCIAL				7	0 • •		
	WATER USE	3 ☐ IRRIGATION	7 □ PUBLIC SUPPLY 8 □ COOLING OR AIR CONDITIONING							
		OTHER	9 NOT USED							
	METHOD	1 CABLE TOOL 2 ROTARY (CONVEN								
	OF DRILLING	3 ☐ ROTARY (REVERS 4 ☐ ROTARY (AIR) 5 ☐ AIR PERCUSSION	E) 8 □ JETTING 9 □ DRIVING				, <			
L	NAME OF WELL		LICENCE NUMBER		DATA		CONTRACTOR 59-62	DATE RECEIVE	1072	63-68 80
	J.	F. KITCHING			DATE OF INSPEC	CTION	3109	U4.	1072	
	ADDRESS BOX	20. HOLLA	ND LANDING, ONT	- ISE	1		mor Ector			JB.
	NAME OF DRILLE		LICENCE NUMBER	1 1					€\$\$.\$8	Plan
	SIGNATURE OF		SUBMISSION DATE							11.
Ĺ	OWRC C	a Julia	DAY 31 MO 8 YR72							
	JUVEL LI	uri //								



		MECP WWR #	: 5709	1134	Client Project No.:_	·····
Well Owne	r Informatio	n:				
Property Owner	Name: Joe	Rodriaue	25			
Property Addres	s: 23°	74 Line	11 Br	$\alpha c l f$	ord, ON L	3Z 3M5
Telephone:			Email:		Joe faria rod	riques@hot
lame of Person Completing Surv	rey: Joe	Radrique	5 W =	Vi		
Telephone:		3	Email:		U.	
Relationship to Property Owner:	Č.		Date of Scompletic	urvey on:	Sept. 11/6	2021
Name of Original		unknown			ŧ	
Occupant (of Property	Served by W	/ell: (If othe	er than	Owner)	
Vame:	<u></u>					
Telephone:		Email:				
Address:						
Well Locat	ion:					
Lot:	Conces	sion:		Tov	vnship:	
Well Const	truction Det	ails:				
Well Record Available?	☐ Yes ☑ No	Date Well Constructed:	1970'5		Well Contractor Name:	introun
Nell Type: Drilled/Bored/Dug)	?	Casing Material: (Steel, Concrete, etc.)	?		Well Casing Diameter:	?
Nell Stick Up: Above Ground)	Yes	Well Depth: (Below Ground)	?		Water Level: (Below Ground)	?
s Well Located n a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)	?		Well Stick Up: (Above Pit Bottom)	Yes?
s Weil Flowing?	☑ Yes ☐ No	Flow Rate:			Contractor:	
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐	No	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No
is the Well:	Accessible for Direct Sampling?	☑ Yes ☐ No	OR		d, In a Well Pit, or Confined Space?	☐ Yes ☐ No
Well Screen	☐ Yes ☐ No	If Yes, Length &	.:		of Top of Screen:	?

Well I.D. #:

AECOM

					Well I.D. #:	6-40.0	7:0:1	AECOM Pro	ject No.:	6063	6190
–			4	ME	CP WWR #:_	01/02/99	3400	Client Pro	Ject No.:		
Pumping E		_					J. Sing				
Pump Type:	2	Jet Pu	ımp 🗆 S	Submers	ible 🗆 Pist	on Pump	☐ Other	r (please des			
Pump Horsepow	er:	1/2		Pump A	\ge:	2000	F	Pumping Capacity:	VII	10.8	15.Ce
Pump Intake Dep (Below Ground)	th:			Pump l	ocation:	Base	nent	Pumping (If Known)	Rate:		
Pressure Tank:	Ty	/pe:	Her ch	ogsl	phoeimos	J.		Capacity:			
Water Treatment: (if present)	-				oftener 🗆 r (please des			te type)			
Nell Usage):									31	
Primary Use(s):	Dom	estic:	⊈Yes	□ No	Livestock	:	s 🗆 No	Lawn Wat	ering:	kty	es 🗆 No
# of Persons Using Well:	4	-	#of Live			Other Uses:			Daily Ar	Jan Con	
Indoor Plumbing (Washroom(s), Sho Laundry, Pool, Spa,	wer(s), etc.)	Dishwa	sher,		Lan	shwa dy	Sher ———	2 +0		3	
Private Sewage System or Munic	ipal:	PI	valé		stem Type: ptic tank, etc.	, ti	le bed		Distand from W		80 ft
Well Location:		⊠ Up	hill 🗆 🛭	Downhill	☐ Same (Grade					
Presence of Any Potential Source (including distance	(s) of	Contar	nination:		or Other			0			
Previous C	one	erns	s:								
How Long Have Operated a Busi							, ¹²				
Have You Experi Concerns with Y (Quantity or Quality	our W]Yes □ No	if Yes	, When?				
Cause(s) of the Previous Conce	rn?				ilure 🗆 Plu her (Please			ed Usage 🏻] Interfe	rence	

AECOM

Well I.D. #: AECOM Project No.: 60636190

MECP WWR #: 570 9/54 Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant)
11th Line
1000 + UD) + Well Way
septic tone

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of

contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

		7000	Well I.D. #:		AECOM Project No.:	60636190
				5709154	Client Project No.:	
Well Modif	ver Been Deepened?					V2a(18€° II
Has Your Well Ever Been	Deepened?	☐ Yes ☐ No	Cleaned?	☐ Yes ☐ No	Reconstructed or Replaced?	☐ Yes ☐ No
if Yes to Any of t Please Provide D	he Above, Details:					
Other Deta	ils:			E 580		
Other Details the	it May be Relev	ant to Assessir	ng the Currer	t Condition of Yo	our Well Supply:	
Homo was	archesse	201 (029 -	than a	year ago	from 2n	d
auser.	We me	under	renova	tions on	dare ren	J F0
ulls +					Vel +0 co	
Mto	acres				that rus	
	199					
-()	renks					
<u>`</u>	8					***************************************
						M
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			-			· · · · · · · · · · · · · · · · · · ·
Property C	wner Par	ticipation	in Moni	toring Prog	gram: \	No phone By
Does the Proper and/or Sample Y	ty Owner and/o	or Occupant Gra	ant Permissio	n for MTO/AECO		¥Yes □ No
	Owner / Occup			Signature		Date

AECOM

Seneral Deta	ails:			72		
Color of the second color of the second color	3BP - Well			Project No.:		636190
Court of the Court	2374 6			Inspected By:	Holde	on Mudat
THE RESERVE TO SERVE		Time: 14		Weather:	Clou	-
asting:	014304	Northing: 4	189 1202	Datum:	17	Γ'
Vell Details:						
s Well Accessible t	for Inspection?	XYes X No	If No, Provide Re	eason: Deco	nata	e cova
MECP Water Well Record No.:	3/8/72	Date Well Constructed:	5709154	Contractor Nar	me:	JF HITCHIN
Netl Type: Drilled/Bored/Dug)	pag	Well Stick Up: (Above Ground)	18"	Casing Materia (Steel, Concrete,	il: etc.)	Conorto
Well Located in Well Pit?	☐ Yes 🌠 No	Well Pit Depth: (Below Ground)	31 ftg	Well Stick Up: (Above Pit Botton	n)	
Well Casing Diameter:	3 Pt	Well Depth: (Below Ground)	V	Groundwater L (Below Ground)	evel:	29Dt
Pump On / Off?	S On □ Off	Water Level Condition:	Stable (Static)	Declining (Draw	wdown)	Rising (Recovery)
Flowing Well?	☐ Yes 18 No	Flow Rate: (Estimated)	2 GPM	Well Cap Type		Conoclo.
Well Screen	☐ Yes ☑ No	If Yes, Length & Slot Size:	2	Top of Screen (Below Ground)	:	
s There a Depressi Well Casing Exterio		☐ Yes ▼No	Phot	o(s) of Well Obt	ained?	M Yes □ No
Observation(s) Sun	nman/					
		Cools	yellow 16			

AECOM

			Well I.D. #:_	570915	AECOM Proj	ect No.:	0636190
Nater Q ua	ality San	npling:	MECP WWR #:_	20413	Client Proj	ect No.:	
Nater Quality S Obtained?	ample	T≱+Yes □ ∧	lo If No, Provid	le Reason:	•		
Sampling Locat	tion:	Baguer	Raw or Trea	ted Sample?	Softered	, no	new opt
Disinfected San	nple Port?	M Yes □ ∧	lo Disinfection	Method:	Blanch	MEK	new opp
Photo of Sample against white back		NYes □ N	lf No, Provid	le Reason:			
Analyte Suite:	93170	7 + ,	F.Colil To	Ital Col	1 Ports		
Sample I.D.;	2374 L	inell Dat	e / Time of npling: Oct 14	14:16	Number of Sample Bot	ties:	9
Field Water Qua	ality Paramet	ers: (record u	nits)				
Temperature:	16-6	OC pH	: 7.6	12	Conductivity:	971	
Turbidity:		D.C	o.:	-	Colour:	Clea	_
Odours?	None	Ар	pearance/Odou	: Clea	- 1 colordes	4	
Type of Concer	n: (if applicable	o)	☑ Water Quan	tity			
f the concern w changes were a							
Were there any	effects of thi	is concern?			40270400		
What action wa	s taken to ov	ercome this	**			*****	

AECOM Canada Ltd.

105 Commerce Valley D

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix

Property ID #94 – 2646 8th Line



November 22nd, 2021

Don & Dell Ann Monforton 2646 8 Line Bradford, ON L3Z 4G3

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Monforton,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 7th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	400 CFU/ 100mL	0 CFU/100mL	MAC	Y
Nitrate	21.3 mg/L	10 mg/L	MAC	N
Hardness (as CaCO ₃)	346 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Mr. Monforton on November 19th, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

<u>Groundwater Supply Well Location 2646 8 Line</u> Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

2646 8 Line, Bradford, Ontario, L3Z 2A5

Owner Information:

Owner Name: Don Monforton Phone Number: 905-868-5419 Email: donm@rogers.com

Well Record

Coordinates (UTM)......613795E/4886723N

(NAD83 Zone17)

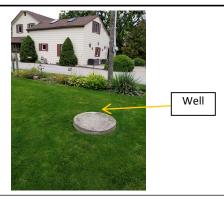
Well Location...... In front of the house

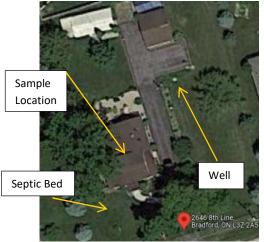
Well Diameter......0.98 m
Well Depth......17.37 m

Casing Position......0.14 m above ground;

Casing Condition.....Fair

Water Usage......Residential
Water Source.....Overburden
Static Water Level......15.24 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... 150' from well

Treatment System......Water softener

Recent Test Results......None

Water Sampled......Yes (October 7, 2021)

Sample Source...... Main feeder tap in basement.

Appearance......Clear, no odour

Comments:

- Sampled from basement tap no raw source outside
- Historical development of homes in the area has not affected the well

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	400 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	346 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 15, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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
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 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.
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 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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

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Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

SAMPLE DESCRIPTION: 2646 8 Line **SAMPLE TYPE:** Water DATE SAMPLED: 2021-10-07 10:10 **Parameter** Unit G/S RDL 3067628 ND Escherichia coli CFU/100mL 100 CFU/100mL 400 Total Coliforms 100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3067628 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

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CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

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Water Quality Assessment - PWQO (mg/L)

			V	rater Qualit	y Assessment - PWQO (mg/L)
DATE RECEIVED: 2021-10-07					DATE REPORTED: 2021-10-15
	s		CRIPTION: PLE TYPE: SAMPLED:	2646 8 Line Water 2021-10-07 10:10	
Parameter	Unit	G/S	RDL	3067628	
Electrical Conductivity	μS/cm		2	721	
pH	pH Units	6.5-8.5	NA	7.96	
Saturation pH (Calculated)				6.92	
Langelier Index (Calculated)				1.04	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	346	
Total Dissolved Solids	mg/L		10	430	
Alkalinity (as CaCO3)	mg/L		5	252	
Bicarbonate (as CaCO3)	mg/L		5	252	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.05	< 0.05	
Chloride	mg/L		0.10	16.3	
Nitrate as N	mg/L		0.05	21.3	
Nitrite as N	mg/L		0.05	< 0.05	
Bromide	mg/L		0.05	< 0.05	
Sulphate	mg/L		0.10	15.9	
Ortho Phosphate as P	mg/L		0.10	<0.10	
Ammonia as N	mg/L		0.02	< 0.02	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002	
Total Phosphorus	mg/L	*	0.02	< 0.02	
Total Organic Carbon	mg/L		0.5	2.0	
True Colour	TCU		5	<5	
Turbidity	NTU		0.5	0.8	
Total Calcium	mg/L		0.16	109	
Total Magnesium	mg/L		0.17	17.9	
Total Potassium	mg/L		0.58	2.71	
Total Sodium	mg/L		0.22	16.9	
Aluminum-dissolved	mg/L	*	0.004	0.005	
Total Antimony	mg/L	0.020	0.001	< 0.001	

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

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Water Quality Assessment - PWQO (mg/L)

			•	rater Quality	Assessment - F WQO (mg/L)
DATE RECEIVED: 2021-10-07					DATE REPORTED: 2021-1
		_	CRIPTION: PLE TYPE: SAMPLED:	2646 8 Line Water 2021-10-07 10:10	
Parameter	Unit	G/S	RDL	3067628	
Total Arsenic	mg/L	0.1	0.003	<0.003	
otal Barium	mg/L		0.002	0.065	
Total Beryllium	mg/L	*	0.001	<0.001	
Total Boron	mg/L	0.2	0.010	0.029	
Total Cadmium	mg/L	0.0002	0.0001	<0.0001	
Total Chromium	mg/L		0.003	< 0.003	
Total Cobalt	mg/L	0.0009	0.0005	< 0.0005	
Total Copper	mg/L	0.005	0.001	0.009	
otal Iron	mg/L	0.3	0.010	0.048	
otal Lead	mg/L	*	0.001	<0.001	
Total Manganese	mg/L		0.002	< 0.002	
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001	
Total Molybdenum	mg/L	0.040	0.002	< 0.002	
Total Nickel	mg/L	0.025	0.003	< 0.003	
Total Selenium	mg/L	0.1	0.002	< 0.002	
otal Silver	mg/L	0.0001	0.0001	<0.0001	
Total Strontium	mg/L		0.005	0.261	
Total Thallium	mg/L	0.0003	0.0003	< 0.0003	
Total Tin	mg/L		0.002	< 0.002	
Total Titanium	mg/L		0.010	<0.010	
Total Tungsten	mg/L	0.030	0.010	<0.010	
otal Uranium	mg/L	0.005	0.002	<0.002	
Total Vanadium	mg/L	0.006	0.002	<0.002	
Total Zinc	mg/L	0.030	0.020	0.020	
Total Zirconium	mg/L	0.004	0.004	<0.004	
Lab Filtration Aluminum Dissolved				2021/10/12	
Lab Filtration mercury				2021/10/12	

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

SAMPLED BY:

ATTENTION TO: Brian Holden

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document Comments:

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.

3067628 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certified By:

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2

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Exceedance Summary

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3067628	2646 8 Line	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Copper	mg/L	0.005	0.009



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Microbiology Analysis															
RPT Date: Oct 15, 2021 DUPLICATE							REFEREN	NCE MA	TERIAL	METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

ND Escherichia coli 3067628 3067628 ND NA < 1 **Total Coliforms** 3067628 3067628 400 400 0.0% < 1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalysi	is								
RPT Date: Oct 15, 2021		1	DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
DARAMETER	Bartal Sample	9 5 "4	D #6		Method Blank	Measured		ptable nits		1 1 1	ptable nits		Lin	ptable
PARAMETER	Batch Id	Dup #1	Dup #2	RPD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	
Water Quality Assessment - F	PWQO (mg/L)	•								•				•
Electrical Conductivity	3066943	558	559	0.2%	< 2	103%	90%	110%						
рН	3066943	7.69	7.78	1.2%	NA	101%	90%	110%						
Total Dissolved Solids	3067628 3067628	430	436	1.4%	< 10	100%	80%	120%						
Alkalinity (as CaCO3)	3066943	191	197	3.1%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3066943	191	197	3.1%	< 5									
Carbonate (as CaCO3)	3066943	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3066943	<5	<5	NA	< 5									
Fluoride	3080535	0.09	0.10	NA	< 0.05	95%	70%	130%	94%	80%	120%	101%	70%	130%
Chloride	3080535	6.53	6.55	0.3%	< 0.10	90%	70%	130%	97%	80%	120%	100%	70%	130%
Nitrate as N	3080535	0.52	0.51	1.9%	< 0.05	94%	70%	130%	102%	80%	120%	103%	70%	130%
Nitrite as N	3080535	<0.05	<0.05	NA	< 0.05	102%	70%	130%	100%	80%	120%	106%	70%	130%
Bromide	3080535	< 0.05	< 0.05	NA	< 0.05	97%		130%	92%	80%	120%	90%	70%	130%
Sulphate	3080535	21.1	21.2	0.5%	< 0.10	92%		130%	99%	80%	120%	99%	70%	130%
Ortho Phosphate as P	3080535	<0.10	<0.10	NA	< 0.10	94%	70%	130%	100%	80%	120%	102%	70%	130%
Ammonia as N	3067694	<0.02	<0.02	NA	< 0.02	105%	70%	130%	108%	80%	120%	99%	70%	130%
Total Phosphorus	3065782	0.04	0.05	NA	< 0.02	98%	70%	130%	97%	80%	120%	91%	70%	130%
Total Organic Carbon	3067628 3067628	2.0	2.0	NA	< 0.5	104%	90%	110%	99%	90%	110%	102%	80%	120%
True Colour	3068388	<5	<5	NA	< 5	97%	90%	110%	0070	0070	11070	10270	0070	0,0
Turbidity	3067628 3067628	0.8	0.8	NA	< 0.5	99%	80%	120%						
Total Calcium	3073029	20.9	20.3	2.9%	< 0.10	93%		130%	97%	80%	120%	98%	70%	130%
Total Magnesium	3073029	3.15	3.20	1.6%	< 0.10	97%	70%	130%	99%	80%	120%	102%	70%	130%
Total Potassium	3073029	3.71	3.69	0.5%	< 0.50	95%	70%	130%	99%	80%	120%	101%	70%	130%
Total Sodium	3073029	24.3	23.3	4.2%	< 0.10	93%	70%	130%	96%	80%	120%	100%	70%	130%
Aluminum-dissolved	3069932	0.024	0.024	0.0%	< 0.004	108%	70%	130%	112%	80%	120%	104%	70%	130%
Total Antimony	3070856	<0.024	<0.001	NA	< 0.001	104%		130%	106%	80%	120%	107%		130%
Total Arsenic	3070856	0.004	0.003	NA	< 0.003	94%	70%	130%	109%	80%	120%	108%	70%	130%
Total Barium	3070856	0.004		3.6%		96%	70%	130%		80%	120%		70%	130%
Total Beryllium	3070856	< 0.000	0.057	3.0% NA	< 0.002	97%	70%	130%	103%	80%	120%	103% 115%	70%	130%
Total Boron	3070856	0.206	<0.001 0.206	0.0%	< 0.001 < 0.010	99%	70%	130%	105% 105%	80%	120%	107%	70%	130%
Total Cadmium	3070856	<0.0001	<0.0001	NA	< 0.0001		70%	130%	109%	80%	120%	127%	70%	130%
Total Chromium	2070050	.0.000	.0.000	N1 A	. 0. 000	4000/	700/	4000/	4400/	000/	4000/	4070/	700/	12001
Total Cabalt	3070856	<0.003	<0.003	NA NA	< 0.003	103%		130%	110%	80%		107%		130%
Total Copper	3070856	<0.0005	0.0005	NA	< 0.0005			130%	113%	80%	120%	105%		130%
Total Copper	3070856	0.002	0.002	NA 0.6%	< 0.001	101%		130%	110%	80%		125%		130%
Total I cod	3070856	0.219	0.241	9.6% NA	< 0.010	105%		130%	110%	80%		105%		130%
Total Lead	3070856	<0.001	<0.001	NA	< 0.001	100%	70%	130%	108%	0 U%	120%	122%	70%	130%
Total Manganese	3070856	0.158	0.167	5.5%	< 0.002	101%		130%	106%	80%	120%	108%		130%
Dissolved Mercury	3080894	<0.0001	<0.0001	NA	< 0.0001	103%		130%	98%	80%	120%	100%		130%
Total Molybdenum	3070856	<0.002	<0.002	NA	< 0.002	106%		130%	113%	80%	120%	110%	70%	130%
Total Nickel	3070856	0.006	0.007	NA	< 0.003	100%	70%	130%	108%	80%	120%	128%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 15, 2021 DUPLICATE							REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable mits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 10	ptable nits
		IG.					value	Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3070856		0.075	0.062	19.0%	< 0.002	101%	70%	130%	107%	80%	120%	116%	70%	130%
Total Silver	3070856		<0.0001	<0.0001	NA	< 0.0001	102%	70%	130%	109%	80%	120%	122%	70%	130%
Total Strontium	3070856		0.685	0.759	10.2%	< 0.005	105%	70%	130%	108%	80%	120%	104%	70%	130%
Total Thallium	3070856		<0.0003	< 0.0003	NA	< 0.0003	100%	70%	130%	110%	80%	120%	125%	70%	130%
Total Tin	3070856		< 0.002	< 0.002	NA	< 0.002	99%	70%	130%	108%	80%	120%	124%	70%	130%
Total Titanium	3070856		<0.010	<0.010	NA	< 0.010	97%	70%	130%	104%	80%	120%	128%	70%	130%
Total Tungsten	3070856		<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	99%	70%	130%
Total Uranium	3070856		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	105%	80%	120%	129%	70%	130%
Total Vanadium	3070856		< 0.002	< 0.002	NA	< 0.002	102%	70%	130%	111%	80%	120%	109%	70%	130%
Total Zinc	3070856		<0.020	< 0.020	NA	< 0.020	106%	70%	130%	113%	80%	120%	116%	70%	130%
Total Zirconium	3070856		<0.004	<0.004	NA	< 0.004	108%	70%	130%	111%	80%	120%	108%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

AGAT QUALITY ASSURANCE REPORT (V1)

Page 9 of 13



AGAT WORK ORDER: 21T813002

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
Microbiology Analysis					
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration		
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration		

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
Water Analysis	·				
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE		
рН	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE		
Saturation pH (Calculated)		SM 2320 B	CALCULATION		
Langelier Index (Calculated)		SM 2330B	CALCULATION		
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION		
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE		
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE		
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH		
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA		
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION		
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER		
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER		
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA		
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER		
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS		
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS						
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION						
Lab Filtration mercury	SR-78-9001		FILTRATION						

The Ontario Water Resources Act

FORM NO. 0506-4--77 FORM 7

VATER WELL RECOR

5719105 57004 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK Z CORRECT BOX WHERE APPLICABLE COUNTY OR DISTRICT TOWNSHIP, BOROUGH, CITY, TOWN WEST 641LL BARTORO LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL DEPTH FEET GENERAL COLOUR GENERAL DESCRIPTION FROM 7 HARO 0 1320-TOP 5016 2 50 ريجه CLAY 50 5) GRILIEL JAN O7 1981 ETH con RUNE 0000160273 | 002060573 | 005020573 | 005721/73 | 31 32 **(11)** WATER RECORD CASING & OPEN HOLE RECORD 51 SCREEN DEPTH WATER FOUND AT - FEET KIND OF WATER FEET DEPTH TO TOP 1 GENERAL SULPHUR SULPHUR 2 🗍 GALVANIZED go3 > る SONCRETE 61 SALTY 4 | MINERAL **PLUGGING & SEALING RECORD** 4 🗌 OPEN HOLE I ∐ STEEL MATERIAL AND TYPE ICEMENT GROUT 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 2 GALVANIZED 70 3 CONCRETE W5 14 - 17 4 OPEN HOLE 1 | FRESH 3 | SULPHUR
2 | SALTY 4 | MINERAL 1 🗌 STEEL 2 GALVANIZED 1 | FRESH 3 | SULPHUR 2 | SALTY 4 | MINERAL 3 CONCRETE 30-33 4 | OPEN HOLE LOCATION OF WELL 15-16 30 HOURS 00 1 | PUMP 2 BAILER INIDIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND THE TIME INDICATE NORTH BY ARROW. WATER LEVEL END OF PUMPING WATER LEVELS DURING RECOVERY 0 4 9 0 4 8 FEET 050 32-34 O 5 35-37 020 04 IF FLOWING PUMP 050 43-45 RECOMMENDED □ SHALLOW BEEP WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY FINAL 2 OBSERVATION WELL # [] ABANDONED POOR QUALITY **STATUS** 7 UNFINISHED OF WELL / 4 | RECHARGE WELL , 6 -BOMESTIC 5 COMMERCIAL MUNICIPAL z 🗆 STOCK WATER ☐ IRRIGATION DUBLIC SUPPLY COOLING OR AIR CONDITIONING
 OT USED USE 01 4 🔲 INDUSTRIAL [] OTHER . ORING CABLE TOOL **METHOD** 2 T ROTARY (CONVENTIONAL) 7 DIAMOND 3 ROTARY (REVERSE) OF 005 230 4 | ROTARY (AIR)

5 | AIR PERCUSSION **DRILLING** 9 DRIVING CONTRACTOR K515 4919 CONTRACTOR USE iscorted only 1185 PK 45/7 OFFICE CSS.ES

AECOM

				Well I.D.	#: <u> </u>	2166	AECC		60636190
				MECP WWR	#: <u>5/17</u>	105	Cile	ent Project No.:	
Well Own	er Info	rmati	on:						
Property Owne	r Name:	Dow	= PA	ELL ANN	Mon	FOR	TON		
Property Addre	985:	2646	8	hINI=	BRA.	g For	De	. US	
Telephone:					Email:	- 3. - 0	down	40 ROG	ERS. COM
Name of Person Completing Su	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	DON	Moi	WFOR TON					
Telephone:		905-	868	5719	Email:				
Relationship to Property Owne			ou	NEL	Date of Comple		S	ept. 7	/21
Name of Origin (if known/differe			D.	N MONT	FORTON	_			
Occupant	of Pro	perty	Ser	ved by W	lell: (if ot	her thar	n Owner)		
Name:		A			15				
Telephone:				Email:					III.
Address:	TP .								
Well Locat	tion:								
Lot: /	4	Conces	sion:	8		Tov	vnship:	BRADI	FORP W.
Well Cons	tructio	n Det	ails:						
Weil Record Available?	☐ Yes		Date V		N/4	?	Well Con	tractor	
Nell Type: Drilled/Bored/Dug)	D4	G-		g Material: Concrete, etc.)	CONC	-	Well Cas Diameter		31
Well Stick Up: Above Ground)	YE	5	Well D	epth: Ground)			Water Le	vel:	301
s Well Located n a Well Pit?	☐ Yes	□ No	Well Pit Depth: (Below Ground)		N/	NA		k Up:	Y65
s Well Flowing?	☑ Yes	□No	Flow Rate:		NA		(Above Pit Bottom) Contractor:		7 -
Vell Cap Type:	CÉM	ENT	Does (Cap Create a Seal?	Yes [LIVO I	Is Wire C	onduit Well Cap?	Yes P1Vo
s the Well:	Accessib Direct Sa			∕es □ No	OR	Buried	l, in a We Confined	ll Pit, or	☐ Yes ☐ No
Vell Screen nstalled?	🗹 Yes	□ No	If Yes, Slot S	Length &	N/A		of Top of		

(Below Ground)



			V	Vell I.D. #:	719105		AECOM Project	ct No.: <u>4</u>	2003	36 190
umping Eq	uipmeı	nt:								<u></u>
ump Type:	□ Jet Pu	ımp 🗆 S	Submersib	ole 🗆 Pisto	n Pump (Other	(please desc	ribe):		
ump Horsepower	:		Pump Ag	je: NEW			Pumping Capacity:		_	
ump Intake Depth	1:		Pump Le	ocation: IN HOUSE			Pumping Ra (If Known)	ate:		
ressure Tank:	Type:						Capacity:			
later Treatment: f present)							e type)			
Vell Usage:						-8				
Primary Use(s):	Domestic:	☑ Yes	. □ No	Livestock:	☐ Yes	Ū∕No	Lawn Wate	ring:	☑Yes □ No	
of Persons Using Well:	2	#of Live			Other Uses:		(if	aily Am known)		
ndoor Plumbing I Washroom(s), Show aundry, Post Spa, 6	er(s), Dishwa etc.)				revs		home			
Sewage Sel Private Sewage System or Munici	P	rivale	Sy (se	stem Type: ptic tank, etc.	, У	E5/b	new ad 2021	Distance from W	ell:	150'
Well Location:	□U	phill 🗆	Downhill	☑ Same (Grade					
Presence of Any Potential Source (including distance of	s) of Conta	amination	age Tank	or Other			No			
Previous C	oncern	ıs:								C
How Long Have Operated a Busir	You Owned less on thi	l, Reside s Proper	d, or ty?		40 yr	•				
Have You Experi Concerns with Y (Quantity or Quality,	our Well Si	Previous upply?]Yes ⊈N	o If Yes,	When?				
Cause(s) of the Previous Conce	rn? □ Co	rought C	Pump Fi	ailure 🗆 P	lugging [describe)] Increas	ed Usage [ಸಂಖಕ] Interfe	erence	



7 7							
				, #:		oject No.	60636190
		MECP	WWR	1#: 5719105	Client Pro	oject No.	:
Field Visit L	OC (To Be Comp	leted by AECC	<u>) M</u> S	Staff)	. <u> </u>		
General Det			9				
Project Name:	WATER U		PRO	EY	Project No.:	-	636190
Address:	2646 81	LINE			Inspected By:	Hole	der Borrman
Date:	4-7-21	Time:		3:42-PM	Weather:	Clou	rdy
Easting:	10-7-21	Northing:	10:	04-10:30	Datum:	17	7
Well Details	613795		48	386723			
Well Details			_	The same	manager Co. r	, j.s.	=1
Is Well Accessible	for Inspection?	☐ Yes ☐	No	If No, Provide R	eason:		
MECP Water Well Record No.:	Y	Date Well Constructed		11/19/1973	Contractor Na	me:	49 19 7+8 Prilling
Well Type: (Drilled/Bored/Dug)	DUG	Well Stick Up (Above Ground		0.14	Casing Materia (Steel, Concrete,		Conocte
Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Dept (Below Ground		37	Well Stick Up: (Above Pit Botton		6"
Well Casing Diameter:	80.94	Well Depth: (Below Ground)	57	Groundwater I (Below Ground)	Level:	SO Ft
Pump On / Off?	Øon □ Off	Water Level Condition:		Stable (Static)	Declining (Dra	wdown)	Rising (Recovery)
Flowing Well?	௴Yes □ No	Flow Rate: (Estimated)	7	1	Well Cap Type		Concre 4
Well Screen Installed?	☑Yes □ No	If Yes, Leng & Slot Size:	th	NA	Top of Screen (Below Ground)	: k	37ft
ls There a Depress Well Casing Exter	sion Around the ior?	☐ Yes ☐	Ńο	Phot	o(s) of Well Obt	ained?	ØYes □ No
Observation(s) Su	ımmary:						
- Samples	1 from	top it	?	pasenont,	no ra	ربيا.	outside
taps.						3 40 40 1	
- Historia	al develop	ment a	1	homes The	9 Ra	ha	s not
alleder	well.						
				10000			
		2 - 20 - 20		- 1/1 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2			

AECOM

				Well I.D. #:			ject No.: 606-36190
				MECP WWR #:	19105	Client Pro	Ject No.:
Water Qual	ity Sam	pling	:		1 NAMES OF THE RESIDENCE OF THE RESIDENC	5	
Water Quality Sar Obtained?	mple	Yes [If No, Provide R	leason:		
Sampling Location	n:	main fe	Come	Raw or Treated	Sample?	you Ran	/
Disinfected Samp	ole Port?	Yes [□No	Disinfection Met	thod:	Hos Rau Alconer	
Photo of Sample (against white backg		Yes [□No	If No, Provide R	leason:		
Analyte Suite:	93170	î L E	. (0	Ci/Total O	ct.7/2	1	
Sample I.D.: 2	646 8	cine	Date / Samp	Time of ling:	PT. 70	Number of Sample Bot	itles: ONE 9
Field Water Qual	ity Paramet	ers: (reco	rd units	s)			
Temperature:	370	7.14.5	pH:	CASS	7-61	Conductivity:	0.84
Turbidity:			D.O.:	100-55		Colour:	CLEAR / Colombe
Odours?	NONE		Appe	earance/Odour:	_		
Type of Concern	: (if applicabl	e)		☐ Water Quantity (Note any differences i			
If the concern wa changes were ap				Nov	w.		
Were there any e	ffects of th	is concer	1?	100			
What action was concern?	taken to ov	rercome t	his	1			

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com

AECOM

		77.	Neil I.D. #:	719105	AECOM Project No.:_	
Well Modif	ication / I			719/03	Client Project No.:_	
Has Your Well Ever Been	Deepened?	,	Cleaned?	☐ Yes [☑/No	Reconstructed or Replaced?	☐ Yes ᠒⊀¶o
If Yes to Any of the Please Provide I			<u> </u>		8 .	
Other Deta	ils:		** 11		11 27	
Other Details tha	it May be Relev	ant to Assessing	g the Curren	t Condition of Yo	our Well Supply:	
			<u> </u>			
			 -			
	10					
			#7			
		<u></u>	••			
	· · · · · · · · · · · · · · · · · · ·				n	
Duna na nata 2		4 4.				
Property O						
Does the Propert and/or Sample Yo	our Weil?	r Occupant Gran	t Permissioi	1 for MTO/AECO	M to Monitor	☑Yes ☐ No
				-		
		WFORTON	£	for Mo	futor q	7-21
	Owner / Occupa Be Print in BLOCK le			Signature /		Date

____ AECOM Project No.:___ 60636 (90

MECP WWR #: 57/9/05 Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant) 1, Barn House Septic Bod. 8th Che

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).



Appendix J

Property ID #101 – 3173 Sideroad 10



November 22nd, 2021

Thomas Mayville 3173 Sideroad 10 Bradford, ON L3Z 3V4

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Mayville,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 14th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the Ontario Drinking Water Standards, Objectives and Guidelines (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	72 CFU/ 100mL	0 CFU/100mL	MAC	Υ
Chloride	1680 mg/L	250 mg/L	AO	N
Colour	10 TCU	5 TCU	AO	N
Turbidity	7.5 NTU	5 NTU	AO	N
Hardness (as CaCO ₃)	966 mg/L	80 - 100 mg/L	OG	N

MAC - Maximum Acceptable Concentration; AO - Aesthetic Objective; OG - Operational Guideline. NOTE:

As discussed via telephone with Mr. Mayville on November 19th, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the Well Aware Booklet - A Guide To Caring For Your Well created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit 80 Bradford St. #403 Barrie, ON L4N 6S7



Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

no AECOM

Water Well Survey

Groundwater Supply Well Location 3173 Sideroad 10

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

3173 Sideroad 10, Bradford, Ontario, L3Z 3V4

Owner Information:

Owner Name: Thomas Mayville Phone Number: 905-806-0882 Email: owen.mayville30@gmail.com

Well Record

Coordinates (UTM).......611514E/4886823N

(NAD83 Zone17)

Well Location..... end of driveway behind house

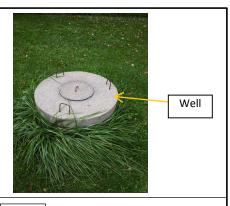
Well Diameter......0.914 m

Well Depth......NA

Casing Position.....N/A

Casing Condition.....Fair

Water Usage.......Residential
Water Source......Overburden
Static Water Level.......1.52 m





Septic Bed

Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank................. 150' away from well

Treatment System......Unknown

Recent Test Results.....None

Water Sampled.....Yes (October 14, 2021)

Comments:

- Casing in good condition
- High water level in well

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	72 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	966 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and
 "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T815956

MICROBIOLOGY ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 23, 2021

PAGES (INCLUDING COVER): 13
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 13

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

SAMPLE DESCRIPTION: 3173 SDRD 10
SAMPLE TYPE: Water

DATE SAMPLED: 2021-10-14 14:57

 Parameter
 Unit
 G / S
 RDL
 3091524

 Escherichia coli
 CFU/100mL
 100
 1
 ND

 Total Coliforms
 CFU/100mL
 1
 72

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091524 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

manjot Bhelly AMANJOT BHELA S CHEMIST OF



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

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Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

		VVa	ter Qua	lity Assessme	ent - Dissolved Metals - PWQO (mg/L)
DATE RECEIVED: 2021-10-14					DATE REPORTED: 2021-10-23
	S	SAM	CRIPTION: PLE TYPE: SAMPLED:	3173 SDRD 10 Water 2021-10-14 14:57	
Parameter	Unit	G/S	RDL	3091524	
Electrical Conductivity	μS/cm		2	5470	
рН	pH Units	6.5-8.5	NA	7.86	
Saturation pH (Calculated)				6.31	
Langelier Index (Calculated)				1.55	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	966	
Total Dissolved Solids	mg/L		10	3880	
Alkalinity (as CaCO3)	mg/L		5	401	
Bicarbonate (as CaCO3)	mg/L		5	401	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.13	<0.13	
Chloride	mg/L		1.2	1680	
Nitrate as N	mg/L		0.36	<0.36	
Nitrite as N	mg/L		0.27	<0.27	
Bromide	mg/L		0.28	<0.28	
Sulphate	mg/L		0.95	88.8	
Ortho Phosphate as P	mg/L		0.65	<0.65	
Ammonia as N	mg/L		0.02	0.02	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	0.000868	
Total Phosphorus	mg/L	*	0.02	<0.02	
Total Organic Carbon	mg/L		0.5	94.9	
True Colour	TCU		5	10	
Turbidity	NTU		0.5	7.5	
Dissolved Calcium	mg/L		0.5	263	
Dissolved Magnesium	mg/L		0.5	75.0	
Dissolved Potassium	mg/L		5.0	7.2	
Dissolved Sodium	mg/L		0.5	840	
Aluminum-dissolved	mg/L	*	0.004	<0.004	
Dissolved Antimony	mg/L	0.020	0.001	<0.001	

Certified By:

Inis Verástegui



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

		***	itti Qua	ity Assessment	t Dissolved Metals	i vvao (ilig/L)	
DATE RECEIVED: 2021-10-14							DATE REPORTED: 2021-10-23
		SAMPLE DES	CRIPTION:	3173 SDRD 10			
			PLE TYPE: SAMPLED:	Water 2021-10-14 14:57			
Parameter	Unit	G/S	RDL	3091524			
Dissolved Arsenic	mg/L	0.1	0.003	<0.003			
Dissolved Barium	mg/L		0.002	0.310			
Dissolved Beryllium	mg/L	*	0.0005	<0.0005			
Dissolved Boron	mg/L	0.2	0.010	0.021			
Dissolved Cadmium	mg/L	0.0002	0.0001	<0.0001			
Dissolved Chromium	mg/L		0.003	<0.003			
Dissolved Cobalt	mg/L	0.0009	0.0005	<0.0005			
Dissolved Copper	mg/L	0.005	0.001	0.075			
Dissolved Iron	mg/L	0.3	0.010	0.019			
Dissolved Lead	mg/L	*	0.001	0.001			
Dissolved Manganese	mg/L		0.002	0.032			
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001			
Dissolved Molybdenum	mg/L	0.040	0.002	<0.002			
Dissolved Nickel	mg/L	0.025	0.003	<0.003			
Dissolved Selenium	mg/L	0.1	0.004	<0.004			
Dissolved Silver	mg/L	0.0001	0.0001	<0.0001			
Dissolved Strontium	mg/L		0.005	0.997			
Dissolved Thallium	mg/L	0.0003	0.0003	<0.0003			
Dissolved Tin	mg/L		0.002	<0.002			
Dissolved Titanium	mg/L		0.002	<0.002			
Dissolved Tungsten	mg/L	0.030	0.010	<0.010			
Dissolved Uranium	mg/L	0.005	0.002	<0.002			
Dissolved Vanadium	mg/L	0.006	0.002	<0.002			
Dissolved Zinc	mg/L	0.030	0.005	0.071			
Dissolved Zirconium	mg/L	0.004	0.004	<0.004			
Lab Filtration Aluminum Dissolved				2021/10/18			
Lab Filtration mercury				2021/10/18			

Certified By:

Inis Verástegui

Lab Filtration Metals

2021/10/18



AGAT WORK ORDER: 21T815956

PROJECT: 60636190

SAMPLED BY:

ATTENTION TO: Brian Holden

Water Quality Assessment - Dissolved Metals - PWQO (mg/L)

DATE RECEIVED: 2021-10-14 DATE REPORTED: 2021-10-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3091524 Metals analysis completed on a lab filtered sample.

Dilution required, RDL has been increased accordingly. Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Tris Verastegui

5835 COOPERS AVENUE

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2

http://www.agatlabs.com

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Exceedance Summary

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

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CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3091524	3173 SDRD 10	ON PWQO	Water Quality Assessment - Dissolved Metals - PWQO (mg/L)	Dissolved Copper	mg/L	0.005	0.075
3091524	3173 SDRD 10	ON PWQO	Water Quality Assessment - Dissolved Metals - PWQO (mg/L)	Dissolved Zinc	mg/L	0.030	0.071



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956
ATTENTION TO: Brian Holden

PROJECT: 60636190 SAMPLING SITE:

SAMPLED BY:

Microbiology Analysis														
RPT Date: Oct 23, 2021	RPT Date: Oct 23, 2021 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE MATRIX SPIKE											KE		
PARAMETER	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Acceptable Limits		Recovery	Lin	ptable nits	Recovery	Acceptable Limits	
PARAMETER Batch Dup #1 Dup #2 RPD Draink Walue Lower Upper Lower Upper Lower Upper Lower Upper Lower Upper Upp										Upper				

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3091472 3091472 ND ND NA <1
Total Coliforms 3091472 3091472 116 114 1.7% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

manjot Bhells AMANJOT BHELD CHEMIST

Certified By:

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalys	is								
RPT Date: Oct 23, 2021			DUPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLAN	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch Sa	nple Dup #	1 Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	1 1 11	ptable nits	Recovery	Lie	ptable nits
FANAMETER	Batch	d Dup *	1 Dup #2	KFD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Water Quality Assessment - D	issolved Metals - F	WQO (mg/l						•						
Electrical Conductivity	3090117	138	138	0.0%	< 2	97%	90%	110%						
рН	3090117	7.17	7.13	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3091472 3091	472 520	524	0.8%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	3090117	64	62	3.2%	< 5	84%	80%	120%						
Bicarbonate (as CaCO3)	3090117	64	62	3.2%	< 5	NA								
Carbonate (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3090117	<5	<5	NA	< 5	NA								
Fluoride	3091521 3091	521 <0.05	< 0.05	NA	< 0.05	94%	70%	130%	95%	80%	120%	112%	70%	130%
Chloride	3091521 3091	521 54.3	54.3	0.0%	< 0.10	96%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3091521 3091	521 4.07	4.16	2.2%	< 0.05	106%	70%	130%	106%	80%	120%	109%	70%	130%
Nitrite as N	3091521 3091	521 <0.05	<0.05	NA	< 0.05	95%	70%	130%	101%	80%	120%	110%	70%	130%
Bromide	3091521 3091			NA	< 0.05	107%	70%	130%	104%	80%	120%	102%	70%	130%
Sulphate	3091521 3091		25.7	0.4%	< 0.10	99%	70%	130%	105%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3091521 3091			NA	< 0.10	105%	70%	130%	100%	80%	120%	94%	70%	130%
Ammonia as N	3087154	<0.02	<0.02	NA	< 0.02	115%	70%	130%	99%	80%	120%	96%	70%	130%
Total Phosphorus	3090116	0.02	0.03	NA	< 0.02	97%	70%	130%	97%	80%	120%	105%	70%	130%
Total Organic Carbon	3094303	47.1	47.2	0.2%	< 0.5	99%	90%	110%	98%	90%		NA	80%	120%
True Colour	3090232	31	31	0.0%	< 5	106%	90%	110%	/-					
Turbidity	3091472 3091		<0.5	NA	< 0.5	101%	80%	120%						
Dissolved Calcium	3095356	101	101	0.0%	< 0.05	95%	70%	130%	97%	80%	120%	98%	70%	130%
Dissolved Magnesium	3095356	12.2	12.2	0.0%	< 0.05	99%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Potassium	3095356	0.83	0.89	NA	< 0.50	99%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Sodium	3095356	2.75	2.72	1.1%	< 0.05	97%	70%	130%	96%	80%	120%	101%	70%	130%
Aluminum-dissolved	3091472 3091			NA	< 0.004	104%	70%	130%	116%	80%	120%	119%	70%	130%
Dissolved Antimony	3091472 3091			NA	< 0.001	102%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Arsenic	3091472 3091	472 <0.00	3 <0.003	NA	< 0.003	92%	70%	130%	103%	80%	120%	112%	70%	130%
Dissolved Barium	3091472 3091			7.9%	< 0.002	100%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Beryllium	3091472 3091			NA	< 0.0005		70%	130%	109%	80%	120%	115%	70%	130%
Dissolved Boron	3091472 3091		0.038	NA	< 0.010	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Cadmium	3091472 3091			NA	< 0.0001		70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Chromium	3091472 3091	472 <0.003	3 <0.003	NA	< 0.003	102%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Cobalt	3091472 3091			NA	< 0.0005			130%	107%	80%		104%	70%	130%
Dissolved Copper	3091472 3091		0.025	17.4%	< 0.001	99%		130%	105%		120%	104%		130%
Dissolved Iron	3091472 3091			NA	< 0.010	101%	70%	130%	106%		120%	101%	70%	130%
Dissolved Lead	3091472 3091			NA	< 0.001	98%		130%	104%	80%		102%		130%
Dissolved Manganese	3091472 3091	472 <0.002	2 0.003	NA	< 0.002	96%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Mercury	3095856	<0.000		NA	< 0.0001			130%	100%	80%		98%	70%	130%
Dissolved Molybdenum	3091472 3091			NA	< 0.002	104%		130%	105%		120%	108%	70%	130%
Dissolved Nickel	3091472 3091			NA	< 0.002			130%	106%		120%	103%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 13

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Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 23, 2021			Г	UPLICATI	.		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MATRIX SPIKE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable nits	Recovery	Lin	ptable nits	Recovery	1 :-	ptable nits
		lu lu					value	Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Selenium	3091472	3091472	<0.004	<0.004	NA	< 0.004	101%	70%	130%	108%	80%	120%	113%	70%	130%
Dissolved Silver	3091472	3091472	<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Strontium	3091472	3091472	0.249	0.253	1.6%	< 0.005	95%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Thallium	3091472	3091472	< 0.0003	< 0.0003	NA	< 0.0003	97%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Tin	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	101%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Titanium	3091472	3091472	<0.002	<0.002	NA	< 0.002	100%	70%	130%	106%	80%	120%	105%	70%	130%
Dissolved Tungsten	3091472	3091472	<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	101%	70%	130%
Dissolved Uranium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	97%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Vanadium	3091472	3091472	< 0.002	< 0.002	NA	< 0.002	100%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Zinc	3091472	3091472	0.044	0.053	18.6%	< 0.005	100%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Zirconium	3091472	3091472	<0.004	<0.004	NA	< 0.004	100%	70%	130%	106%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Inis Verastegui



Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis	1.5 5.5		
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Dissolved Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T815956 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BT:	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311	¹² CVAAS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tungsten	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION
Lab Filtration mercury	SR-78-9001		FILTRATION
Lab Filtration Metals	SR-78-9001		FILTRATION

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

	AIER WEI		CORD	#903	
2. CHECK 🗵 COR	I SPACES PROVIDED IRECT BOX WHERE APPLICABLE	57119	9 MUNICIP 57 00 H	CON.	1 08
COUNTY OR DISTRICT SIMCOE	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE WEST GWILLIMBU		CON., BLOCK, TRACT, SURVEY,	N.W. 2	OII
	x 49, Bon	DHEAD, (ONT.	DATE COMPLETED DAY 15 MO. 11	48-53 YR 74
	886,550 B	ELEVATION	RC BASIN CODE	" "	ıv l
L	OG OF OVERBURDEN AND BEDR	OCK MATERIALS	30 31		4
GENERAL COLOUR MOST COMMON MATERIAL	OTHER MATERIALS		GENERAL DESCRIPTION	DEPTH FROM	
	top soil			0	2
	stony brown clay			2	12
	stony blue clay			12	30
	course sand			30	32
a Para			The second secon		
13					
	4				
					, , , , , , , , , , , , , , , , , , ,
	2605/2 00305/2	0032 10			
32	32	43	54	65	75 80
WATER FOUND KIND OF WATER	CASING & OPEN HOLE	RECORD Z	SIZE(S) OF OPENING 31- (SLOT NO.)	33 DIAMETER 34-38 LI	ENGTH 39-40
10-13 FRESH 3 SULPHUR 14	DIAM. MATERIAL THICKNESS	ROM TO 0	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-44 80
15-18 1 FRESH 3 SULPHUR 19	30 GALVANIZED TO CONCRETE	0 0032	51 PLUGGING	& SEALING RECO	FEET
2 SALTY 4 MINERAL 20-23 1 FRESH 3 SULPHUR 24	4 ☐ OPEN HOLE 17-18 1 ☐ STEEL 19		DEPTH SET AT - FEET MAT	FRIAL: AND TYPE (CEMEN	IT GROUT.
2 SALTY 4 MINERAL 25-28 1 FRESH 3 SULPHUR 29	2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE		FROM TO 10-12 14-17	LEAD PAC	.KER. EIC.)
2 SALTY 4 MINERAL 30-33 1 FRESH 3 SULPHUR 34 80	24-25 1 STEEL 26 2 GALVANIZED	27-30	18-21 22-25		
2 SALTY 4 MINERAL	3 ☐ CONCRETE 4 ☐ OPEN HOLE		26-29 30-33 80		
71 JUMPING TEST METHOD 10 PUMPING RATE	15-16 17-18		LOCATION OF	WELL	1186
STATIC WATER LEVEL 25 LEVEL END OF WATER L	GPM HOURS MINS 1 PUMPING EVELS DURING RECOVERY	IN DIAGRAI LOT LINE.	M BELOW SHOW DISTANCES O INDICATE NORMS		
19-21 22-24 15 MINUTES 26-2	30 MINUTES 45 MINUTES 60 MINUTES 8 29-31 32-34 35-37		N		
	FEET PATE FEET FEET FEET SET AT WATER AT END OF TEST 42		E	5 met month	11/8
FEET FEET FEET FEET FEET FEET FEET FEET	FEET 1 CLEAR 2 CLOUDY 43-45 RECOMMENDED 46-49		3-1	Sminorty MME	M .
SHALLOW DEEP SETTING	930 FEET PUMPING 6 GPM.		9 I 2	YOUNE	
54	CIFIC CAPACITY		200	′	
STATUS 2	S ☐ ABANDONED, INSUFFICIENT SUPPLY L 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED	W	HWV C	9	E
OF WELL 4 RECHARGE WELL	5 COMMERCIAL			٥	
WATER O	6 MUNICIPAL 7 PUBLIC SUPPLY				
USE 4 INDUSTRIAL OTHER	8 COOLING OR AIR CONDITIONING 9 NOT USED				
METHOD / 1 CABLE TOOL 2 ROTARY (CONVENT	6 1 BORING IONAL) 7 □ DIAMOND				
OF 3 C ROTARY (REVERSE) DRILLING 4 C ROTARY (AIR)			5		
5 AIR PERCUSSION		DRILLERS REMARKS:			
	G & SON LTD. 3109	DATA SOURCE / DATE OF INSPECTION	3109 DAT	1 7027	5 63-68 80
J.F. KITCHING ADDRESS HOLLAND LANDII NAME OF DRILLER OR BORER BRICE DAILY SIGNATURE COMPAGING	NG, ONT.		INSPECTOR		<u>,</u>
NAME OF DRILLER OR BORER BRUCE DAILY	LICENCE NUMBER	HE Aug 28/	,,,,,	Pe	77
SIGNATURE OF CONTRACTOR	SUBMISSION DATE	PFICE		CSS.S8 W	₩
MINISTRY OF THE ENVIR	ONMENT COPY			FORM	



		MECP WWR	#: 571190		iom Project No.: ient Project No.:			
Well Owner	· Informatio			and the same	S			
Property Owner N		ras Mayu	11/19	Control of the second				
Property Address		3 Sideroad 1		ford, O	N L3Z3	V4		
Telephone:	905-8	06-0882-0we	√ Email:			30@gmail.com		
Name of Person Completing Surve	ADMINISTRATION OF THE PROPERTY	LMayville	yvine					
Telephone:	647-	203-3918	Email:	Ma	mayuille	aymail.com		
Relationship to Property Owner:	Son		Date of S Completi	urvey on: Sep	1-28,20	Qymail.com		
Name of Original \(if known/different i		2						
		Served by W	Iell: (# oth	or than Owner	el			
Name:	Troporty	Corred by Ti	TOTT: (II OUI	er inan Owner	')			
		ė						
Telephone:		Email:	11					
Address:		- č	5					
Nell Location	on: 3175	3 Sideraa	110		- :			
Lot:	Conces	3-92-92-93		Township:	Bradf	ord West		
Well Constr	uction Det	ails: Some Do	etails ar	c notknow		2 1		
Well Record Available?	☐ Yes ☑ No	Date Well Constructed:	197415	Well Co	ontractor	J.F. Mitchart Son Ltd.		
Well Type: (Drilled/Bored/Dug)		Casing Material: (Steel, Concrete, etc.)	X	Well Ca Diamet				
Well Stick Up: (Above Ground)		Well Depth: (Below Ground)	3.	Water I	Level:	in		
Is Well Located Yes No		Well Pit Depth: (Below Ground)	3	Well Stick Up: (Above Pit Bottom)		94		
Is Well Flowing? ☑ Yes □ No		Flow Rate:		Contra				
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐	MO I	Conduit o Well Cap?	☐ Yes ☐ No		
	Accessible for Direct Sampling?	☑ Yes ☐ No	OR	Buried, In a Well Pit, or Other Confined Space?		☐ Yes ☐ No		
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:		Depth of Top (Below Ground)	of Screen:			

AECOM

							4.0	*30 ICC
			Well I.D. #:			AECOM Project No.	600	5 36 196
			MECP WWR #:	571190	7	Client Project No.	:	
Pumping E	quipme	nt: Unk	NOWN					
Pump Type:	☐ Jet Pi	ump 🗆 Subme	ersible 🛚 Pisto	on Pump	☐ Other	r (please describe):		_
Pump Horsepowe	er:	Pum	p Age:			Pumping Capacity:	· · · · · · · <u>· </u>	
Pump Intake Dept (Below Ground)	th:		np Location: ot in Well)			Pumping Rate: (If Known)		
Pressure Tank:	Type:	.				Capacity:		
Water Treatment: (if present)	. 1		r Softener 🔲 I			te type)		
Nell Usage	•							
Primary Use(s):	Domestic:	☑ Yes □ N	lo Livestock:	☐ Yes	☑ No	Lawn Watering:		Yes Z No
# of Persons Using Well:	1-2	#of Livestock Watered:	, 0	Other Uses:	Non	e Daily A		
Indoor Plumbing (Washroom(s), Show Laundry, Pool, Spa,	ver(s), Dishwa etc.)		3 Wa 1 Lun	yell i	ms, 2 2 ott	shower/Bath Lersinks) I d.	shwasher
Sewage Se Private Sewage System or Munici	0		System Type: (septic tank, etc.)	Seci	ticTo	Distant from V		150'
Well Location:	A CONTRACTOR OF THE PARTY OF TH	<u> </u>	nill 🗆 Same G			<u>`</u>		<u> </u>
Presence of Any protection (including distance of the control of t	s) of Contai	mination:	nk or Other	Non	ę			
Previous C	oncerns	5:		_ =		2 1 a a 5		
How Long Have \ Operated a Busin			47 y	ears				
Have You Experie Concerns with Yo (Quantity or Quality)	our Well Sup		☑ Yes □ No	If Yes, V	Vhen?	unknown	瓦	
Cause(s) of the	□ Dro	ught 🗆 Pump	Failure 🗆 Plu	gging 🔲 l	Increase	ed Usage □ Interf buteria Jb	erence	ala A

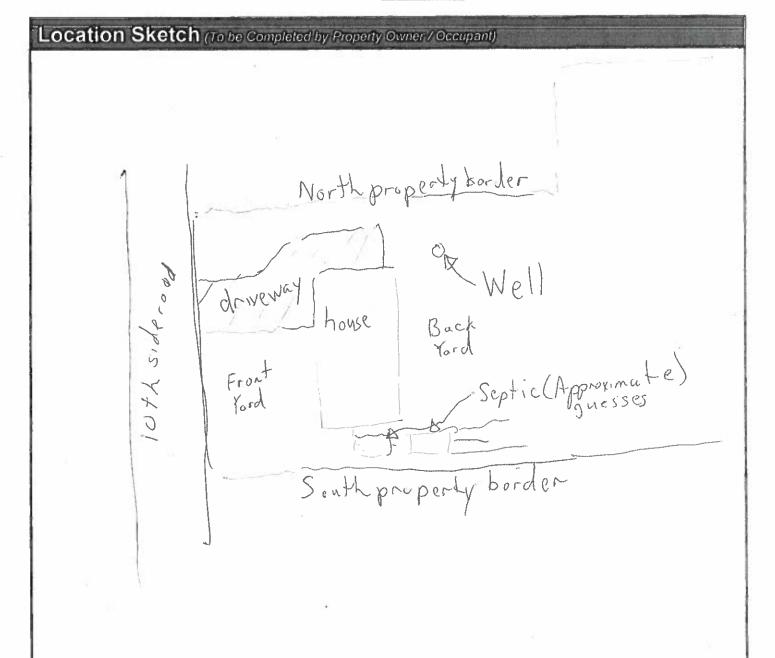


*	Ji.	MEC	Well I.D. #:	AECOM Project No.:	T	
Well Modif	ication / I	Maintenan	ce:			
Has Your Well Ever Been	Deepened?	☐ Yes ☑ No	Cleaned?	☑ Yes ☐ No	Reconstructed or Replaced?	☐ Yes ☐ No
If Yes to Any of t Please Provide D		Cleaned	with b	leech once	2	
Other Deta	ils:				8	
Other Details tha	t May be Rele	/aпt to Assessin	g the Curren	t Condition of Yo	our Well Supply:	
Thomas	Mayville	is proper	-ty ow	ner		
Garth	Lave P	nd Ower of	A Horn	lleares	ons manug.	ryp sperty
				7		
<u>S</u> ,	orry fo	erstains	74.			
	•					
· · · · · · · · · · · · · · · · · · ·						
· · · · · · · · · · · · · · · · · · ·					<u> </u>	
					<u> </u>	
121		7:	8			
						
Property O	wner Par	ticipation i	in Monit	oring Prog	ram:	
Does the Propert and/or Sample Yo	y Owner and/o our Well?	r Occupant Grai	nt Permissio	n for MTO/AECOI	M to Monitor	☑ Yes ☐ No
			11-	as Marnel	le	15
THOMAS 1	1AYVILL	E	By II	att Mount	le as POA Se	n+29.000-1
Property C	Owner / Occupa			Signature	7	Date



 Well I.D. #:
 AECOM Project No.:
 60636190

 MECP WWR #:
 \$711907
 Client Project No.:



Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

	<i>18</i> 5	· w	ell I.D.	#:	4	LECOM Pro	iect No.	606361
		MECF	WWR	#: <u>\$71/90</u>	7			··
ield Visit	Log (To Be Comp	ploted by AEC						
		neted by AEC	OIVI S	idii)		-		
Seneral De	etails:							2
Project Name:	BBP - V				Projec	t No.:	60	636190
Address:	3173 Si				Inspe	cted By:	Holo	len / Nudert
Date:	October 14,21	Time:	15	coc - 15:30	Weath	er:	C	loudy
asting:	611514.15	Northing:	48	86873,31	Datum):	17	T
Vell Detail	s:							4
GET ALL SERVICES	le for Inspection?	¥Yes □	No	If No, Provide Re	ason:		·····	<u> </u>
/IECP Water Well Record No.:	ECP Water Well 57/1907		l:	Nov. 15,	Contractor Name:		10:	J. F. Kilelen & Son Ltd
Vell Type: Orilled/Bored/Dug)	Dus	Well Stick U (Above Ground		16"	Casing Material: (Steel, Concrete, etc.)		Concrete	
Vell Located in Well Pit?	☐ Yes 🗗 No	Well Pit Dep (Below Ground		_	Well Stick Up: (Above Pit Battom)			
Vell Casing Plameter:	361	Well Depth: (Below Ground	1)	_	Groundwater Level: (Below Ground)		evel:	SA.
ump On / Off?	□ On 🖾 Off	Water Level Condition:		Stable (Static)	Declining (Drawdown)		down)	Rising (Recovery
lowing Well?	☐ Yes ₩ No	Flow Rate: (Estimated)		-66Am	Well C	ар Туре:		
Vell Screen nstalled?	☐ Yes █ No	If Yes, Leng & Slot Size:	th	To		Top of Screen: (Below Ground)		= /
There a Depres	ssion Around the rior?	☐ Yes 🖏	No	Photo	(s) of V	Vell Obta	ined?	Yes 🗆 No
bservation(s) S	ummary:							
- Casing	in good a	and iton	V	igh water	10	vel 1	5	well
10				8				
				30,7				
	0							

AECOM

			Well I.D. #:	7/10/7	AECOM Proj	ect No.: 60636790
_			MECP WWR #: _ S	711907	Client Proj	ect No.:
Water Qua	ality San	ipling:				
Water Quality S Obtained?	Sample	Tp Yes □ N	o If No, Provide R	leason:		
Sampling Location: Disinfected Sample Port?		Kitchen taj	Raw or Treated	Sample?	Ran Bleach	
		₩ Yes 🗆 N	Disinfection Me	thod:	Bleach	
Photo of Samp (against white bac	le Obtained? ckground)	Yes 🗆 N	o If No, Provide R	leason:		
Analyte Suite:	Routine	Portas	e Code: 93	3179 1	F. Colil	Total Coliforns
Sample I.D.:	3173 9	SDRVIU Date San	e / Time of \mathcal{OC}	14:57	Number of Sample Bot	tles: 9
Field Water Qu	ality Paramet	ers: (record u	nits)			
Temperature:	18.1	рН	7.00	7	Conductivity:	73999
Turbidity:		D.0	D.:		Colour:	Clear
Odours?		Ар	pearance/Odour:	Cda	· ler-	
Type of Conce	rn: (if applicabl	v)	Water Quantity (Note any differences	√ ☐ Water (in taste, odour,	Quality colour or clarity)	
If the concern changes were	was contamin apparent to v	nation what vater quality?	Nσ	COV	noens	
Were there any	effects of th	is concern?				
What action w	as taken to o	ercome this		100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 -	74.2	

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix K

Property ID #105 – 3223 Sideroad 10

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Ben Dalimonte 3223 10th Sideroad Bradford, ON L3z 4G3

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Dalimonte,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 6th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	42 CFU/ 100mL	0 CFU/100mL	MAC	Y
Hardness (as CaCO ₃)	425 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC - Maximum Acceptable Concentration; AO - Aesthetic Objective; OG - Operational Guideline.

As discussed via telephone with Ms. Dalimonte on November 19th, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 3223 Sideroad 10

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

3223 Sideroad 10, Bradford, Ontario, L3Z 4G3

Owner Information:

Owner Name: Ben Dalimonte Phone Number: 416-990-9843 Email: bendalimonte@hotmail.com

Well Record

Coordinates (UTM)......611485E/4887034N

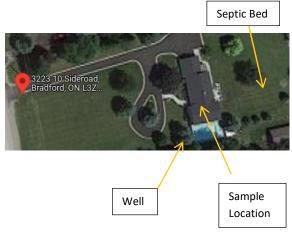
(NAD83 Zone17)

Well Location...... In front of the house

Well Diameter.......0.914 m
Well Depth......12.50 m
Casing Position.....N/A
Casing Condition....Fair

Water Usage......Residential
Water Source......Overburden
Static Water Level......5.79 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Backyard 80' away from well

Treatment System......Water softener, filter, U.V.

Recent Test Results.....None

Water Sampled......Yes (October 6, 2021)

Comments:

- Decorative well cover
- Declining water levels

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	42 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	425 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and
 "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T812334

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 13, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 12

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

Total Coliforms & E. Coli (Using MI Agar)

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

	 		<u> </u>	J- ,		

DATE RECEIVED: 2021-10-06

DATE REPORTED: 2021-10-13

SAMPLE DESCRIPTION: 3223 sdrd 10

SAMPLE TYPE: Water DATE SAMPLED: 2021-10-06 15:18 **Parameter** Unit G/S RDL 3061873 ND Escherichia coli CFU/100mL 100 CFU/100mL 42 Total Coliforms

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061873 ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

Water Quality Assessment - PWQO (mg/L)							
DATE RECEIVED: 2021-10-06					DATE REPORTED: 2021-10-13		
	S	SAMPLE DESCRIPTION: SAMPLE TYPE: DATE SAMPLED:		3223 sdrd 10 Water 2021-10-06 15:18			
Parameter	Unit	G/S	RDL	3061873			
Electrical Conductivity	μS/cm		2	1000			
pH	pH Units	6.5-8.5	NA	7.78			
Saturation pH (Calculated)				6.74			
Langelier Index (Calculated)				1.04			
Hardness (as CaCO3) (Calculated)	mg/L		0.5	425			
Total Dissolved Solids	mg/L		10	598			
Alkalinity (as CaCO3)	mg/L		5	332			
Bicarbonate (as CaCO3)	mg/L		5	332			
Carbonate (as CaCO3)	mg/L		5	<5			
Hydroxide (as CaCO3)	mg/L		5	<5			
Fluoride	mg/L		0.05	<0.05			
Chloride	mg/L		0.12	99.4			
Nitrate as N	mg/L		0.05	7.36			
Nitrite as N	mg/L		0.05	<0.05			
Bromide	mg/L		0.05	< 0.05			
Sulphate	mg/L		0.10	29.7			
Ortho Phosphate as P	mg/L		0.10	<0.10			
Ammonia as N	mg/L		0.02	<0.02			
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002			
Total Phosphorus	mg/L	*	0.02	<0.02			
Total Organic Carbon	mg/L		0.5	1.5			
True Colour	TCU		5	<5			
Turbidity	NTU		0.5	<0.5			
Total Calcium	mg/L		0.16	129			
Total Magnesium	mg/L		0.17	25.0			
Total Potassium	mg/L		0.58	1.60			
Total Sodium	mg/L		0.22	33.7			
Aluminum-dissolved	mg/L	*	0.004	<0.004			
Total Antimony	mg/L	0.020	0.001	<0.001			

Certified By:

Inis Verástegui



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD ATTENTION TO: Brian Holden SAMPLING SITE:Bradford SAMPLED BY: Justin Borrmann

Water Quality Assessment - PWQO (mg/L)								
DATE RECEIVED: 2021-10-06					DATE REPORTED: 2021-10-13			
	;	SAMPLE DESC	CRIPTION:	3223 sdrd 10				
		SAMPLE TYPE: DATE SAMPLED:		Water 2021-10-06 15:18				
Parameter	Unit	G/S	RDL	3061873				
Total Arsenic	mg/L	0.1	0.003	< 0.003				
Total Barium	mg/L		0.002	0.071				
Γotal Beryllium	mg/L	*	0.001	<0.001				
Total Boron	mg/L	0.2	0.010	0.035				
Total Cadmium	mg/L	0.0002	0.0001	<0.0001				
Total Chromium	mg/L		0.003	< 0.003				
Total Cobalt	mg/L	0.0009	0.0005	<0.0005				
Total Copper	mg/L	0.005	0.001	0.003				
Total Iron	mg/L	0.3	0.010	0.024				
Total Lead	mg/L	*	0.001	<0.001				
Total Manganese	mg/L		0.002	<0.002				
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001				
Total Molybdenum	mg/L	0.040	0.002	<0.002				
Total Nickel	mg/L	0.025	0.003	< 0.003				
Total Selenium	mg/L	0.1	0.002	< 0.002				
Total Silver	mg/L	0.0001	0.0001	<0.0001				
Total Strontium	mg/L		0.005	0.326				
Total Thallium	mg/L	0.0003	0.0003	<0.0003				
Total Tin	mg/L		0.002	<0.002				
Total Titanium	mg/L		0.010	<0.010				
Total Tungsten	mg/L	0.030	0.010	<0.010				
Total Uranium	mg/L	0.005	0.002	<0.002				
Total Vanadium	mg/L	0.006	0.002	<0.002				
Total Zinc	mg/L	0.030	0.020	<0.020				
Total Zirconium	mg/L	0.004	0.004	<0.004				
Lab Filtration Aluminum Dissolved	-			2021/10/7				
Lab Filtration mercury				2021/10/7				

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-06 DATE REPORTED: 2021-10-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061873 Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

calculated.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

Microbiology Analysis															
RPT Date: Oct 13, 2021				UPLICAT	E		REFEREN	ICE MAT	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER Batch Sample Dup #1 Dup #2					RPD	Method Blank	Measured		ptable nits Recove		Lir	ptable nits	Recovery	Lin	ptable nits
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3061729 ND ND NA <1 Total Coliforms 3061729 50 40 22.2% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

ONOTE

Juin Basil

Certified By:

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

Water Analysis														
RPT Date: Oct 13, 2021			DUPLICAT	E		REFERE	NCE MA	TERIAL	METHOD BLANK SPIKE			MAT	RIX SPI	IKE
24244555	Sa	nple D			Method Blank	Measured		ptable nits		1 1:	eptable mits			eptable mits
PARAMETER		d Dup#	p #1 Dup #2	RPD		Value	Lower		Recovery	Lower	1	Recovery	Lower	
Water Quality Assessment - F	PWQO (mg/L)										1			
Electrical Conductivity	3062184	40	40	0.0%	< 2	100%	90%	110%						
рН	3062184	6.69	6.73	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3060808	172	186	7.8%	< 10	98%	80%	120%						
Alkalinity (as CaCO3)	3062184	17	16	NA	< 5	87%	80%	120%						
Bicarbonate (as CaCO3)	3062184	17	16	NA	< 5	NA								
Carbonate (as CaCO3)	3062184	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3062184	<5	<5	NA	< 5	NA								
Fluoride	3068146	< 0.05	< 0.05	NA	< 0.05	94%	70%	130%	107%	80%	120%	103%	70%	130%
Chloride	3068146	64.1	64.1	0.0%	< 0.10	93%	70%	130%	110%	80%	120%	109%	70%	130%
Nitrate as N	3068146	<0.05	<0.05	NA	< 0.05	100%	70%	130%	108%	80%	120%	108%	70%	130%
Nitrite as N	3068146	<0.05	<0.05	NA	< 0.05	102%	70%	130%	99%	80%	120%	112%	70%	130%
Bromide	3068146	< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	106%	80%	120%	107%	70%	130%
Sulphate	3068146	123	123	0.0%	< 0.10	97%	70%	130%	109%	80%	120%	106%	70%	130%
Ortho Phosphate as P	3068146	<0.10	<0.10	NA	< 0.10	100%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3062181	<0.02	<0.02	NA	< 0.02	105%	70%	130%	99%	80%	120%	90%	70%	130%
Total Phosphorus	3061760	0.87	0.89	2.3%	< 0.02	98%	70%	130%	97%	80%	120%	NA	70%	130%
Total Organic Carbon	3062196	1.3	1.3	NA	< 0.5	103%	90%	110%	103%	90%	110%	95%	80%	120%
True Colour	3051121	232	237	2.1%	< 5	105%	90%	110%						
Turbidity	3061372	42.1	44.5	5.5%	< 0.5	98%	80%	120%						
Total Calcium	3059717	40.8	40.3	1.2%	< 0.10	93%	70%	130%	94%	80%	120%	100%	70%	130%
Total Magnesium	3059717	14.1	13.8	2.2%	< 0.10	97%	70%	130%	97%	80%	120%	103%	70%	130%
Total Potassium	3059717	1.29	1.24	NA	< 0.50	94%	70%	130%	95%	80%	120%	101%	70%	130%
Total Sodium	3059717	8.59	8.44	1.8%	< 0.10	92%	70%	130%	92%	80%	120%	101%	70%	130%
Aluminum-dissolved	3057466	< 0.004	<0.004	NA	< 0.004	110%	70%	130%	107%	80%	120%	85%	70%	130%
Total Antimony	3059717	<0.001	<0.001	NA	< 0.001	99%	70%	130%	104%	80%	120%	105%	70%	130%
Total Arsenic	3059717	<0.003	<0.003	NA	< 0.003	93%	70%	130%	116%	80%	120%	112%	70%	130%
Total Barium	3059717	0.062	0.062	0.0%	< 0.002	101%	70%	130%	103%	80%	120%	109%	70%	130%
Total Beryllium	3059717	<0.001	< 0.001	NA	< 0.001	96%	70%	130%	112%	80%	120%	112%	70%	130%
Total Boron	3059717	0.023	0.026	NA	< 0.010	99%	70%	130%	103%	80%	120%	111%	70%	130%
Total Cadmium	3059717	<0.000	< 0.0001	NA	< 0.0001	100%	70%	130%	105%	80%	120%	107%	70%	130%
Total Chromium	3059717	<0.003	<0.003	NA	< 0.003	107%	70%	130%	102%	80%	120%	107%	70%	130%
Total Cobalt	3059717	<0.000	<0.0005	NA	< 0.0005	107%	70%	130%	109%	80%	120%	111%	70%	130%
Total Copper	3059717	0.002	0.002	NA	< 0.001	105%	70%	130%	104%	80%	120%	110%	70%	130%
Total Iron	3059717	0.162	0.181	11.1%	< 0.010	102%	70%	130%	105%	80%	120%	101%	70%	130%
Total Lead	3059717	<0.001	<0.001	NA	< 0.001	96%	70%	130%	109%	80%	120%	109%	70%	130%
Total Manganese	3059717	0.100	0.112	11.3%	< 0.002	103%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Mercury	3065987	<0.000	< 0.0001	NA	< 0.0001	99%	70%	130%	99%	80%	120%	99%	70%	130%
Total Molybdenum	3059717	< 0.002		NA	< 0.002	106%	70%	130%	107%	80%	120%	110%	70%	130%
Total Nickel	3059717	< 0.003	< 0.003	NA	< 0.003	104%	70%	130%	105%	80%	120%	106%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY: Justin Borrmann

SAMPLING SITE:Bradford	d						SAMP	LED B	Y:Justir	Borr	mann				
		1	Nate	r Ana	lysis	s (Cor	ntinu	ed)							
RPT Date: Oct 13, 2021		DUPLICATE			REFERENCE MATERIAL			L METHOD BLANK SPIKE			E MATRIX SPIKE				
PARAMETER	Batch	Sample	Dup #1	Dup #2	Method Blank M	Plank	Acceptable Limits		Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 1 1	eptable mits	
		ld		·			Value	Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3059717		<0.002	<0.002	NA	< 0.002	96%	70%	130%	113%	80%	120%	105%	70%	130%
Total Silver	3059717		<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	109%	80%	120%	106%	70%	130%
Total Strontium	3059717		0.261	0.287	9.5%	< 0.005	100%	70%	130%	107%	80%	120%	100%	70%	130%
Total Thallium	3059717		<0.0003	< 0.0003	NA	< 0.0003	96%	70%	130%	111%	80%	120%	110%	70%	130%
Total Tin	3059717		< 0.002	< 0.002	NA	< 0.002	105%	70%	130%	110%	80%	120%	106%	70%	130%
Total Titanium	3059717		<0.010	<0.010	NA	< 0.010	95%	70%	130%	107%	80%	120%	110%	70%	130%
Total Tungsten	3059717		<0.010	<0.010	NA	< 0.010	97%	70%	130%	103%	80%	120%	104%	70%	130%
Total Uranium	3059717		< 0.002	< 0.002	NA	< 0.002	93%	70%	130%	110%	80%	120%	111%	70%	130%
Total Vanadium	3059717		< 0.002	< 0.002	NA	< 0.002	107%	70%	130%	106%	80%	120%	107%	70%	130%
Total Zinc	3059717		0.029	< 0.020	NA	< 0.020	107%	70%	130%	103%	80%	120%	110%	70%	130%
Total Zirconium	3059717		< 0.004	< 0.004	NA	< 0.004	110%	70%	130%	106%	80%	120%	107%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Tris Verástegui



Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334 ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
Water Analysis					
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE		
рН	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE		
Saturation pH (Calculated)		SM 2320 B	CALCULATION		
Langelier Index (Calculated)		SM 2330B	CALCULATION		
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION		
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE		
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE		
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH		
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA		
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION		
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER		
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER		
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA		
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER		
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS		
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

SAMPLING SITE. Bradioid		SAMIFLED BT.JUSTIII BOITIIIdiiii								
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE							
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS							
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS							
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION							
Lab Filtration mercury	SR-78-9001		FILTRATION							

MINISTRY OF THE ENVIRONMENT

The Ontario Water Resources Act

31045 ER WELL RECORD ₹585716995 57004 2. CHECK X CORRECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH, CITY, OUNTY OR DISTRICT SIMCOE Conc. 8 011 _Gwillimbury West DATE COMPLETED DAY 09 Simcoe Road, Bradford, Ont. <u>06</u> yr.80 0925 LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS) MOST COMMON MATERIAL - FEET GENERAL COLOUR DEPTH OTHER MATERIALS GENERAL DESCRIPTION Topsoil 0 1 Brown stony clay 1 19 Blue stony clay 19 41 31 32 (51) **WATER RECORD CASING & OPEN HOLE RECORD** SCREEN ATER FOUND AT - FEET DEPTH - FFET KIND OF WATER MATERIAL AND TYPE FROM то DEPTH TO TOP OF SCREEN 41-44 80 T FRESH 3 | SULPHUR 1 🗆 STEEL 2 SALTY 4 MINERAL 301 2 D GALVANIZED **ø**19 0041 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL #3' 0 3 X CONCRETE **PLUGGING & SEALING RECORD** 61 4 C OPEN HOLE FEET I 🗍 STEEL MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.) 2 [] GALVANIZED FROM 3 CONCRETE 1 FRESH 3 SULPHUR
2 SALTY 4 MINERAL 4 OPEN HOLE 27-30 18-21 22.25 I 🗍 FRESH 3 🗍 SULPHUR 3 CONCRETE 26-25 30-33 80 2 SALTY 4 MINERAL 4 🗀 OPEN HOLE LOCATION OF WELL 1 D PUMP 2 5 BAILER 12 15-16 00 WATER LEVEL END OF PUMPING IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND WATER LEVELS DURING INDICATE NORTH BY ARROW LOT LINE K RECOVERY 15 MINUTES | 30 MINUTES 22-24 N 26-28 14 f 29-31 018 FEET PUMP INTAKE SET AT 1 CLEAR RECOMMENDED
PUMP
SETTING 039 SHALLOW TEEP FEET RATE 000 3 GPM./FT. SPECIFIC CAPACITY 1 WATER SUPPLY
2 OBSERVATION V 5 ABANDONED, INSUFFICIENT SUPPLY **FINAL** OBSERVATION WELL 6 ABANDONED POOR QUALITY **STATUS** 3 TEST HOLE 7 🗌 UNFINISHED E OF WELL 4 🔲 RECHARGE WELL 1 X DOMESTIC 5 COMMERCIAL 2 STOCK
3 INFIGATION
4 INDUSTRIAL 6 MUNICIPAL **WATER** 7 | PUBLIC SUPPLY USE Of 8 COOLING OR AIR CONDITIONING CI OTHER 9 🗌 NOT USED HWY 88 METHOD 6 1 CABLE TOOL BORING 2 | ROTARY (CONVENTIONAL)
3 | ROTARY (REVERSE) 7 DIAMOND 4 ROTARY (AIR)

S AIR PERCUSSION DRILLING DRILLERS REMARKS: NAME OF WELL CONTRACTOR LICENCE NUMBER 3109 ONLY F. KITCHING & SON LTD. USE 1, Queensville, Ont. OFFICE BRUCE DAILY CSS.BS DAY мо. 09

UNISTRY OF THE ENVIRONMENT COPY

FORM 7 MOE 07-091



AECOM Project No.: 60636/96

		MECP	/// #:_	571699	S Ctie	nt Project No.:	
Vell Owner	Informatio	n:					
Property Owner N	ame: BEK	V DALIN	70N:	12:			
Property Address		310ERU					5 9
Telephone:		909843		Email:	BENL	PALIMONT	EgHOTMAIL.C
Name of Person Completing Surve	y: Same	<i>K</i> -					
Telephone:	Total Capital		1 4 10 20	Email:	rike);		
Relationship to Property Owner:				Date of Sur Completion	vey 55 p	76/2	/
Name of Original (if known/different i	Well Owner: from above)	JOHN EL	IAN	5		/	2 2 1 2
Occupant o	f Property	Served b	y We	ell: (if other	than Owner)		18 Ju
Name:						-	
Telephone:		E	mail:	ΔX	_		
Address:		11	U.				
Well Locati	on:						
Lot:	Conces	asion:	5		Township:	Ţ	8
Well Const	100				24		*
Well Record		Date Well Constructed:		***	Well Co	entractor	
Weil Type: (Drilled/Bored/Dug)		Casing Mater (Steel, Concrete	ial:	CONCRETU	Well Ca Diamete		3 55
Well Stick Up: (Above Ground)	3 FT	Well Depth: (Below Ground)		30-40 F	Water L (Below G		
is Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Depti (Below Ground)			Well Sti (Above F	ick Up: Pit Bottom)	
ls Well Flowing?	☑ Yes □ No	Flow Rate:	g 1		Contrac		
Well Cap Type:	CONCRETE	Does Cap Cre Good Seal?	ate a	✓ Yes □ N		Conduit Well Cap?	☑ Yes □ No
is the Well:	Accessible for Direct Sampling	? ✓ Yes 🗆	No		Burled, In a W Other Confine		☐ Yes ☐ No
Well Screen	☐ Yes ☐ No	If Yes, Lengt	h &		Depth of Top	of Screen:	

Well I.D. #:_

					Well I.D. #:			AECOM Pr	oject No.:	60630	6190
				ME	CP WWR #:	57169	95	Client Pr	oject No.:		
Pumping E	qui	pme	nt:								
Pump Type:] Jet Pu	ımp 🗹	Submers	ible 🗆 Pisto	п Ритр	☐ Other	(please de	scribe):		
Pump Horsepowe	er:		r jerre	Pump A	Age:			Pumping Capacity		ć	
Pump Intake Dep (Below Ground)	th:			Pump Location: (If Not in Well) Pumping Rate: (If Known)							
Pressure Tank:	T	уре:	STE	F				Capacity	:		
Water Treatment: (if present)											
Well Usage								19		OCCA.	SIONAL
Primary Use(s):	Don	nestic:	☐ Yes	☑ No	Livestock:	☐ Yes	□No	Lawn Wa	tering:	□ Y	es 🗆 No
# of Persons Using Well:	-	7	#of Live			Other Uses:			Daily Ar		W
Indoor Plumbing (Washroom(s), Shov Laundry, Pool, Spa,	ver(s)		sher,		5 WASH 2 LACK 2 DISH	ROOPMS RRY WASHE	# S			·	
Sewage Se	rvi	cing:									
Private Sewage System or Munic	ipal:				stem Type: ptic tank, etc.)	V			Distant from W		80'
Well Location:		図 Up	hill 🗆 🛭	Downhill	☐ Same Gr	rade					
Presence of Any Potential Source (including distance of	(s) of	Contan	nination:		or Other	NO	7				
Previous C	one	cerns	:								
How Long Have \ Operated a Busin					- YEARS	<u> </u>					
Have You Experie Concerns with Yo (Quantity or Quality)	оиг V				Yes No	If Yes, V	When?				
Cause(s) of the Previous Concer	n?	1	_	•	ilure □ Plug her (Please d			d Usage [☐ Interfe	гепсе	

					Well I.D. #:			AECOM P	roject No.:	(0)	6361	190
				ME	CP WWR #:	5716	995	Client P	roject No.:_	, Care		
Pumping E	quip	me	nt:									
Pump Type:		Jet P	ump 🗹 :	Submers	ible 🗆 Pisto	on Pump	☐ Othe	er (please de	escribe):			
Pump Horsepow	er:		-	Pump A				Pumping Capacity				
Pump Intake Dep (Below Ground)	th:			Pump l	Location:			Pumping (If Known)	Rate:		-	
Pressure Tank:	Typ	oe:	STE	1-2				Capacity				
Water Treatment: (if present)		Chlori U.V.	nator □ R.O.	Water S □ Other	oftener 🗹 v (please desi	Vater Filte cribe):	r (indica	te type)				
Well Usage	;									DECA.	SIONA	1
Primary Use(s):	Dome	stic:	☐ Yes	₫No	Livestock:	☐ Yes	□No	Lawn Wa	(A) 7" E ST. R. F.		es 🗆 No	
# of Persons Using Well:	7		#of Live: Watered			Other Uses:			Daily Am	ount:		
Indoor Plumbing (Washroom(s), Show Laundry, Pool, Spa,	ver(s), D etc.)	ishwas	sher,		3' WASH 2 LASN 2 DISH	ROOFAS RRY WASHE	<i>\$</i>					
Private Sewage System or Munici				Sys (sep	stem Type: otic tank, etc.)	V			Distance from We) 	FO'	
Well Location:		☑ Upi	hill 🗆 D	ownhill	☐ Same Gr	ade						
Presence of Any A Potential Source((including distance of	s) of C	ontan	nination:	e Tank	or Other	NO	,					
Previous Co	once	erns	;									
How Long Have Y Operated a Busin	ou Ow ess on	ned, I this I	Resided, Property?	or s	YEAR S							
Have You Experie Concerns with Yo (Quantity or Quality)	nced A ur Wei	ny <u>Pr</u> I Sup	revious ply?		Yes ☑ No	If Yes, V	Vhen?					
Cause(s) of the Previous Concerr	— 1				iure 🏻 Plug er (Please de		ncrease	d Usage [] Interfere	nce		

			Well I.D. #:		AECOM Project No.:	0005017
		ME	CP WWR #:	5716995	Client Project No.:	
f = 11 Bd = -1:6:	" 41 / 1					
veii woaiti	ication / i	Maintenan	ce:			
as Your Well ver Been	Deepened?	☐ Yes ☑ No	Cleaned?	☐ Yes ☐ No	Reconstructed or Replaced?	☐ Yes No
Yes to Any of t lease Provide D						
ther Deta	ils:					
ther Details tha	t Mav be Rele	vant to Assessi	na the Currer	nt Condition of Y	our Well Supply:	
	-		-3			· · · · · · · · · · · · · · · · · · ·
		<u>. </u>				
						<u> </u>
			-			
- 4				=		
		,			 -	
					· · · · · · · · · · · · · · · · · · ·	
					<u>.</u>	
						
		53		_		
		4.				
roperty O	wner Pai	rticipation	in Moni	toring Pro	gram:	
oes the Properl nd/or Sample Y		or Occupant Gra	ınt Permissio	on for MTO/AECO	OM to Monitor	✓ Yes □ No
Mr.	או מונות	PONTE		1/1	11	cipali
Property (Owner / Occup	oant Name		Signature		Date
(Pleas	e Print in BLOCK I	letters)				

AECOM

Well I,D. #: AECOM Project No.: 60636/96

MECP WWR #: 57/6995 Client Project No.:

Location S	 Completed by Property C	Dwner / Occupant
	Movse	

() / Ell

STRUCKT

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

Well I.D. #:		AECOM Project No.:	60636190
MECP WWR #:	5716995	Cilent Project No.:	

	MECP WWR #;	S// Cilent Pi	oject No.:
Location Sketch (To	be Completed by Property (Dwner / Occupant)	
/	SEPTIL		
	HOUSE		
		•	O VELL

STRUCT

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

ield Visit L	${f .0g}$ (To Be Comp	oleted by AEC	OM S	Staff)					
Seneral De	tails:								
roject Name:	BBP- Wel	1 Suve	9	76	Project	No.: 6	0636190		
ddress:	3273 Sid	leroad 1	0		Inspect	ed By:	olden / Borrma		
ate: (Oct 6/21			00-15:30	Weathe	r: S	nnny / Claudy		
asting:	611485	Northing:	48	38 7034	Datum:	1	フナ		
Vell Details	s:								
Well Accessible	e for Inspection?	☐ Yes 🔽	No	If No, Provide Re	ason:	Dorontiv	(aver		
IECP Water Well secord No.:	5716995	Date Well Constructed			Contractor Name:		If Kitching & Son Cte		
Vell Type: Orilled / Bored / Dug)	Dug	Well Stick Up: (Above Ground)		NA		Material: oncrete, etc.)	Concreto		
/ell Located in Well Pit?	☐ Yes ☒ No	Well Pit Depth: (Below Ground)		41ft	Well Stick Up: (Above Pit Bottom)				
/ell Casing iameter:	3,64	Well Depth: (Below Ground,)	_	Ground (Below G	water Level: round)	19 Ct		
ump On / Off?	128°On □ Off	Water Level Condition:		☐ Stable (Static)	Declini	ing (Drawdown)	☐ Rising (Recovery)		
lowing Well?	☐ Yes 🏋 No	Flow Rate: (Estimated)		36PM	Well Ca	p Type:	concreto		
/ell Screen estalled?	☐ Yes A No	If Yes, Lengt & Slot Size:	h		Top of S	Screen: round)			
There a Depres		□ Yes X	Vo	Photo	o(s) of W	ell Obtained	Yes 🗆 No		
bservation(s) Su	ımmary:				1310				
- Pecoro	store hel	1 con	er.						
						E			

AECOM

			W	all I.D. #:		AECOM Proje	ect No.: 60636190
			MECP	WWR #:	71690	95 Client Proje	ect No.: <u>60636/90</u>
Water Qua	ality Sam	npling:	9				
Water Quality S Obtained?	Sample	Yes 🗆	No If No	o, Provide R	eason:		180
Sampling Location:		Pump va	Raw	or Treated	Sample?	Raw Alconer	
Disinfected Sar	mple Port?	X Yes □	No Disi	nfection Met	hod:	Alconer	
Photo of Samp (against white bac		M Yes □	No If N	o, Provide R	eason:		
Analyte Suite:							
Sample I.D.:	3225 5		te / Time impling:	of	5:18	Number of Sample Bot	tles: 9
Field Water Qu	ality Paramet	ters: (record	units)				
Temperature:	14.8	р	H:	7.3		Conductivity:	1.14 Clear/Colorle
Turbidity:	_	D	.0.:	-		Colour:	Clear Colorles
Odours?	-	A	ppearan	ce/Odour:	No	ne	
Type of Conce	rn: (if applicabl	(v)	□ Wa	ater Quantity any differences i	☐ Water	r Quality r, colour or clarity)	
If the concern changes were	was contaminated apparent to v	nation what vater quality	13 /	Vone.			
Were there any	y effects of th	is concern?					
What action w	as taken to o	vercome thi	S				

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix L

Property ID #108 – 3241 Sideroad 10

AECOM Canada Ltd. 55 Cedar Pointe Drive, Suite 620 Barrie, ON, Canada L4M 5R7 www.aecom.com

705.721.9222 tel 905.734.0764 fax

November 22nd, 2021

Ric & Sue Bourgeois 3241 10th Sideroad Bradford, ON L3z 4G3

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Bourgeois,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 6th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards, Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Total Coliforms	200 CFU/ 100mL	0 CFU/100mL	MAC	Υ
Hardness (as CaCO ₃)	297 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC – Maximum Acceptable Concentration; AO – Aesthetic Objective; OG – Operational Guideline.

As discussed via telephone with Mr. Bourgeois on November 19^{th,} 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 3241 Sideroad 10

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

3241 Sideroad 10, Bradford, Ontario, L3Z 4G3

Owner Information:

Owner Name: Ric Bourgeois and Sue Bourgeois

Phone Number: 905-252-6806 Email: bourgeois.ric@gmail.com

Well Record

Coordinates (UTM)......614423E/4887107N

(NAD83 Zone17)

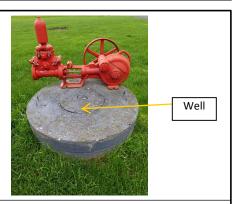
Well Location...... In front of the house

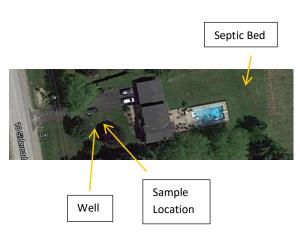
Well Diameter......0.914 m
Well Depth......16.74 m

Casing Position............0.30 m above ground;

Casing Condition.....Fair

Water Usage......Residential
Water Source.....Overburden
Static Water Level......13.72 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Backyard 100' away from house

Treatment System......Water softener, filter, U.V.

Recent Test Results.....None

Water Sampled......Yes (October 7, 2021)

Comments:

- The well sampled is the residential well and has been used for 34 years. No history of well issues.
- Concern about bypass construction influences
- Extreme drought conditions observed

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	200 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	297 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Oct 15, 2021

PAGES (INCLUDING COVER): 12 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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.
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 services.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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 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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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CFU/100mL

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

| SAMPLE DESCRIPTION: 3241 Sdrd 10 |
| SAMPLE TYPE: Water |
| DATE SAMPLED: 2021-10-07 |
| 11:08 |
| Parameter Unit G / S RDL 3067645 |
| CFU/100mL 100 1 ND

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

100

200

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.

3067645 If RDL >1 indicates dilutions of the sample.

ND - Not Detected.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Escherichia coli

Total Coliforms

CHARTERED S NIVINE BASILY O CHEMIST



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-07				
	S	AMPLE DES	CRIPTION:	3241 Sdrd 10
		SAM	PLE TYPE:	Water
		DATE	SAMPLED:	2021-10-07
		0.40		11:08
Parameter	Unit	G/S	RDL	3067645
Electrical Conductivity	μS/cm		2	673
рН	pH Units	6.5-8.5	NA	7.99
Saturation pH (Calculated)				6.99
Langelier Index (Calculated)				0.999
Hardness (as CaCO3) (Calculated)	mg/L		0.5	297
Total Dissolved Solids	mg/L		10	376
Alkalinity (as CaCO3)	mg/L		5	249
Bicarbonate (as CaCO3)	mg/L		5	249
Carbonate (as CaCO3)	mg/L		5	<5
Hydroxide (as CaCO3)	mg/L		5	<5
Fluoride	mg/L		0.05	< 0.05
Chloride	mg/L		0.10	20.9
Nitrate as N	mg/L		0.05	9.81
Nitrite as N	mg/L		0.05	< 0.05
Bromide	mg/L		0.05	< 0.05
Sulphate	mg/L		0.10	16.4
Ortho Phosphate as P	mg/L		0.10	<0.10
Ammonia as N	mg/L		0.02	<0.02
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	< 0.000002
Total Phosphorus	mg/L	*	0.02	< 0.02
Total Organic Carbon	mg/L		0.5	3.1
True Colour	TCU		5	<5
Turbidity	NTU		0.5	<0.5
Total Calcium	mg/L		0.16	106
Total Magnesium	mg/L		0.17	7.86
Total Potassium	mg/L		0.58	1.87
Total Sodium	mg/L		0.22	18.2
	J.,			

Certified By:



Aluminum-dissolved

Total Antimony

mg/L

mg/L

0.005

< 0.001

0.004

0.001

0.020



mg/L

0.1

0.0001

0.0003

0.030

0.005

0.006

0.030

0.004

0.002

0.0001

0.005

0.0003

0.002

0.010

0.010

0.002

0.002

0.020

0.004

< 0.002

< 0.0001

0.196

< 0.0003

< 0.002

< 0.010

< 0.010

< 0.002

< 0.002

< 0.020

< 0.004

2021/10/12

2021/10/12

SAMPLE DESCRIPTION: 3241 Sdrd 10

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Total Selenium

Total Strontium

Total Thallium

Total Titanium

Total Tungsten

Total Uranium

Total Zinc

Total Vanadium

Total Zirconium

Lab Filtration mercury

Lab Filtration Aluminum Dissolved

Total Tin

Total Silver

DATE RECEIVED: 2021-10-07

Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

		SAM	PLE TYPE:	Water
		DATE	SAMPLED:	2021-10-07 11:08
Parameter	Unit	G/S	RDL	3067645
Total Arsenic	mg/L	0.1	0.003	<0.003
Total Barium	mg/L		0.002	0.026
Total Beryllium	mg/L	*	0.001	<0.001
Total Boron	mg/L	0.2	0.010	0.016
Total Cadmium	mg/L	0.0002	0.0001	<0.0001
Total Chromium	mg/L		0.003	< 0.003
Total Cobalt	mg/L	0.0009	0.0005	< 0.0005
Total Copper	mg/L	0.005	0.001	0.001
Total Iron	mg/L	0.3	0.010	0.013
Total Lead	mg/L	*	0.001	< 0.001
Total Manganese	mg/L		0.002	< 0.002
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001
Total Molybdenum	mg/L	0.040	0.002	< 0.002
Total Nickel	mg/L	0.025	0.003	< 0.003

Certified By:



DATE REPORTED: 2021-10-15



Certificate of Analysis

AGAT WORK ORDER: 21T813002

PROJECT: 60636110

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-07 DATE REPORTED: 2021-10-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3067645 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

CHARTERED CHEMIST

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Microbiology Analysis														
RPT Date: Oct 15, 2021 DUPLICATE							REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER			Measured			Recovery	Acceptable Limits		Recovery	Lin	ptable nits				
		ld	.,	.,.			Value	Lower	Upper	,		Upper	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Upper

Total Coliforms & E. Coli (Using MI Agar)

ND Escherichia coli 3067628 3067628 ND NA < 1 **Total Coliforms** 3067628 3067628 400 400 0.0% < 1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Water Analysis														
RPT Date: Oct 15, 2021			DUPLICATE	.		REFERE	NCE MA	TERIAL	METHOD	BLAN	(SPIKE	MAT	RIX SPI	IKE
PARAMETER	Batch Sampl	e D #4	Dun #2	RPD	Method Blank	Measured	Acceptable Limits		Recovery	Acceptable Limits		Bassyan	Acceptable Limits	
PARAWETER	Batch Id	Dup #1	Dup #2	KPD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Uppe
Water Quality Assessment - P	WQO (mg/L)	•												
Electrical Conductivity	3066943	558	559	0.2%	< 2	103%	90%	110%						
рН	3066943	7.69	7.78	1.2%	NA	101%	90%	110%						
Total Dissolved Solids	3067628 3067628	430	436	1.4%	< 10	100%	80%	120%						
Alkalinity (as CaCO3)	3066943	191	197	3.1%	< 5	85%	80%	120%						
Bicarbonate (as CaCO3)	3066943	191	197	3.1%	< 5									
Carbonate (as CaCO3)	3066943	<5	<5	NA	< 5									
Hydroxide (as CaCO3)	3066943	<5	<5	NA	< 5									
Fluoride	3080535	0.09	0.10	NA	< 0.05	95%	70%	130%	94%	80%	120%	101%	70%	130%
Chloride	3080535	6.53	6.55	0.3%	< 0.10	90%	70%	130%	97%	80%	120%	100%	70%	130%
Nitrate as N	3080535	0.52	0.51	1.9%	< 0.05	94%	70%	130%	102%	80%	120%	103%	70%	130%
Nitrite as N	3080535	<0.05	<0.05	NA	< 0.05	102%	70%	130%	100%	80%	120%	106%	70%	130%
Bromide	3080535	< 0.05	< 0.05	NA	< 0.05	97%		130%	92%	80%	120%	90%	70%	130%
Sulphate	3080535	21.1	21.2	0.5%	< 0.10	92%	70%	130%	99%	80%	120%	99%	70%	130%
Ortho Phosphate as P	3080535	<0.10	<0.10	NA	< 0.10	94%	70%	130%	100%	80%	120%	102%	70%	130%
Ammonia as N	3067694	<0.02	<0.02	NA	< 0.02	105%	70%	130%	108%	80%	120%	99%	70%	130%
Total Phosphorus	3065782	0.04	0.05	NA	< 0.02	98%	70%	130%	97%	80%	120%	91%	70%	130%
Total Organic Carbon	3067628 3067628		2.0	NA	< 0.5	104%	90%	110%	99%	90%		102%	80%	120%
True Colour	3068388	<5	<5	NA	< 5	97%	90%	110%			,.			
Turbidity	3067628 3067628		0.8	NA	< 0.5	99%	80%	120%						
Total Calcium	3073029	20.9	20.3	2.9%	< 0.10	93%		130%	97%	80%	120%	98%	70%	130%
Total Magnesium	3073029	3.15	3.20	1.6%	< 0.10	97%	70%	130%	99%	80%	120%	102%	70%	130%
Total Potassium	3073029	3.71	3.69	0.5%	< 0.50	95%	70%	130%	99%	80%	120%	101%	70%	130%
Total Sodium	3073029	24.3	23.3	4.2%	< 0.10	93%	70%	130%	96%	80%	120%	100%	70%	130%
Aluminum-dissolved	3069932	0.024	0.024	0.0%	< 0.004	108%	70%	130%	112%	80%	120%	104%	70%	130%
Total Antimony	3070856	<0.001	<0.001	NA	< 0.001	104%	70%	130%	106%	80%	120%	107%	70%	130%
Total Arsenic	3070856	0.004	0.003	NA	< 0.003	94%	70%	130%	109%	80%	120%	108%	70%	130%
Total Barium	3070856	0.055	0.057	3.6%	< 0.002	96%	70%	130%	103%	80%	120%	103%	70%	130%
Total Beryllium	3070856	<0.001	<0.001	NA	< 0.001	97%	70%	130%	105%	80%	120%	115%	70%	130%
Total Boron	3070856	0.206	0.206	0.0%	< 0.010	99%	70%	130%	105%	80%	120%	107%	70%	130%
Total Cadmium	3070856	<0.0001	<0.0001	NA	< 0.0001	104%	70%	130%	109%	80%	120%	127%	70%	130%
Total Chromium	3070856	<0.003	<0.003	NA	< 0.003	103%	70%	130%	110%	80%	120%	107%	70%	130%
Total Cobalt	3070856	< 0.0005	0.0005	NA	< 0.0005			130%	113%	80%		105%	70%	130%
Total Copper	3070856	0.002	0.002	NA	< 0.001	101%		130%	110%		120%	125%	70%	130%
Total Iron	3070856	0.219	0.241	9.6%	< 0.010	105%		130%	110%		120%	105%	70%	130%
Total Lead	3070856	<0.001	<0.001	NA	< 0.001	100%		130%	108%	80%		122%		130%
Total Manganese	3070856	0.158	0.167	5.5%	< 0.002	101%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Mercury	3080894	<0.0001	<0.0001	NA	< 0.0001			130%	98%	80%		100%	70%	130%
Total Molybdenum	3070856	<0.002	<0.002	NA	< 0.002	106%		130%	113%	80%		110%	70%	130%
Total Nickel	3070856	0.006	0.007	NA	< 0.003	100%		130%	108%		120%	128%		130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 12

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Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

	Water Analysis (Continued)														
RPT Date: Oct 15, 2021			С	UPLICATE	•		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable mits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 10	ptable nits
		IG.					value	Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3070856		0.075	0.062	19.0%	< 0.002	101%	70%	130%	107%	80%	120%	116%	70%	130%
Total Silver	3070856		<0.0001	<0.0001	NA	< 0.0001	102%	70%	130%	109%	80%	120%	122%	70%	130%
Total Strontium	3070856		0.685	0.759	10.2%	< 0.005	105%	70%	130%	108%	80%	120%	104%	70%	130%
Total Thallium	3070856		<0.0003	< 0.0003	NA	< 0.0003	100%	70%	130%	110%	80%	120%	125%	70%	130%
Total Tin	3070856		< 0.002	< 0.002	NA	< 0.002	99%	70%	130%	108%	80%	120%	124%	70%	130%
Total Titanium	3070856		<0.010	<0.010	NA	< 0.010	97%	70%	130%	104%	80%	120%	128%	70%	130%
Total Tungsten	3070856		<0.010	<0.010	NA	< 0.010	96%	70%	130%	99%	80%	120%	99%	70%	130%
Total Uranium	3070856		< 0.002	< 0.002	NA	< 0.002	96%	70%	130%	105%	80%	120%	129%	70%	130%
Total Vanadium	3070856		< 0.002	< 0.002	NA	< 0.002	102%	70%	130%	111%	80%	120%	109%	70%	130%
Total Zinc	3070856		<0.020	< 0.020	NA	< 0.020	106%	70%	130%	113%	80%	120%	116%	70%	130%
Total Zirconium	3070856		<0.004	<0.004	NA	< 0.004	108%	70%	130%	111%	80%	120%	108%	70%	130%

Comments: NA Signifies Not Applicable.

Duplicate NA: results are less than 5X the RDL and RPD will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:



Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636110

AGAT WORK ORDER: 21T813002

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
	AGAT 5.0.P	LITERATURE REFERENCE	ANALTTICAL TECHNIQUE		
Water Analysis	INIOD 00 0000		DO TITO ATE		
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE		
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE		
Saturation pH (Calculated)		SM 2320 B	CALCULATION		
Langelier Index (Calculated)		SM 2330B	CALCULATION		
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION		
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE		
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE		
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE		
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH		
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA		
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION		
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER		
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER		
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA		
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER		
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total oddidiii		modified from EPA 200.8 and EPA			
Aluminum-dissolved	MET-93-6103	3005A	ICP-MS		
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 21T813002 PROJECT: 60636110 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:							
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE						
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 31 B	¹² CVAAS						
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS						
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION						
Lab Filtration mercury	SR-78-9001		FILTRATION						



The Ontario Water Resources Act WATER WELL RECORD

FORM NO. 0506 (11/86) FORM 9

Ontario	1. PRINT ONLY IN : 2. CHECK 🔀 CORR	SPACES PROVIDED ECT BOX WHERE APPLICABLE	11	57226	17 MUNICIP	14 15		
COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CE	_	1	CON. BLOCK, TRAC	T, SUBVEY, ETC		LOT 25-27
		/2 /			•	DATE COM	PLETED	- P
		10		EL EVATION	NE BASIN CODE	1 1 1 1		
i z	* 10 12 LC	OG OF OVERBURDE	N AND BEDRO	CK MATERIA	LS (SEE INSTRUCTION	WS)	## h .	1 1 1 1 1 1 1
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MA			GENERAL DESCRIP		DEPTH FROM	- FEET
BROWN	70P So10				(VSR)	<u></u>	0	(1
BROWN	CLAY				1.		1	20'
GREY	C-17, S,	0~0 - 44	ERS		ų,		වර	55
							1	
	1 1 1 1	1 1 1 1 1 1	1: 1 1 1	1 1 1	<u>. </u>			
31	 							
41 WATE	R RECORD	51 CASING &	OPEN HOLE	RECORD	SIZE(S) QF OPENING	31-33 DIAME	TER 34-38	75 80 LENGTH 39-40
AI - FEEI	KIND OF WATER	INSIDE DIAM MATERIAL INCHES	THICKNESS	DEPTH - FEET	MATERIAL AND TYP	PE	DEPTH TO TOP	FEET 41-44 30
	E Pas	10-11 1 STEEL 2 GALVANIZED 3 DONCRETE	2	0 7.5				FEET
40 7.6°	v =1	4 □ OPEN HOLE 5 □ PLASTIC	ا و ح	0 35	61 PLU	GGING & SEA		ORD
20-23 1 📙 F 2 📋 5	SALTY 4 MINERALS 6 GAS	3 GONCRETE 4 GOPEN HOLE	" 16 CAUGE 3	5 55	FROM 10	MATERIAL AN	LEAD P	ACKER ETC)
25-28 1 F 2 S		5 □ PLASTIC 24-25 1 □ STEEL 2 □ GALVANIZED	25	27-30	18-21 27	7-25		
30-33 F		3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC			25-29 30	0-33 80		
71 PUMPING TEST METHOD		, ,	5-16 - 17-18		LOCATI	ON OF WEL	L	
<u> </u>	WATER LEVEL 25	THE CHICAGO	DURS MINS PUMPING RECOVERY	✓ IN DIA	GRAM BELOW SHOW D		FROM ROAD A	IND
1EST / O	22-24 15 MINUTES	1 30 MINUTES 45 MINUTE	ES 60 MINUTES 35-37	Ac.	. ·			:
	FEET FEET PUMP INTAKE		FEET TO PEN		,	1	1	
FEET FLOWING. GIVE RATE RECOMMENDED PUMP TO				s .	3 1		1	•
SHALLOW -	DEEP SETTING	So FEET PUMPING	3 GPM			è	0	200 M
FINAL	1 WATER SUPPLY	8 ABANDONED, INS					Jy no	F T
STATUS OF WELL	2 OBSERVATION WELL 3 TEST HOLE 4 RECHARGE WELL	L 6 ABANDONED POO 7 UNFINISHED 9 DEWATERING	OR QUALITY	1				
55-56		5 COMMERCIAL 6 MUNICIPAL				Jin		
WATER USE	3 IRRIGATION 4 INDUSTRIAL	7 PUBLIC SUPPLY a COOLING OR AIR CON		BOLGO.	#-	#		>
57	C) OTHER	, L BORING	OT USED	Vi h			E	is prop
METHOD OF	CABLE TOOL ROTARY (CONVENT ROTARY (REVERSE	TIONAL) 7 DIAMON) & DETTING	Mara			-		
CONSTRUCTION	A ROTARY (AIR) S AIR PERCUSSION	• 🔲 DRIVING	4919 G П ОТНЕЯ	DRILLERS REMARI	ks 3 House	S076	o F178	369
NAME OF WELL CO		rell WE	LL CONTRACTOR'S ENCE NUMBER	DATA	58 CONTRACTOR	53-62 DATE RECEIVE		
ADDRESS NAME OF WELL 1	· +-			SOURCE O DATE OF INSPE	CTION INS	PECTOR		
NAME OF WELL	TECHNICIAN		ELL TECHNICIAN'S	S REMARKS	<u> </u>			
SIGNATURE OF TE	CHNICIAN/CONTRACTOR	SUBMISSION DATE	×919	OFFICE				
1 1/1/2.	/(-0	DAY M	n ve‴	- O	-		CSGI	70

AECOM

		Well I.D. #:			AECOM Project No.:	0636190
		Well I.D. #:	57220	17	Client Project No.:	
Well Owner	Informatio	n:				
Property Owner N	lame: Ric	; SUR	BOURG	560	060ND, L	
Property Address	: 324	1 5105-1204	0 10,			
Telephone:	905-2	52-6806	Email:		toargeois.ric e	gmest.com
Name of Person Completing Surve	y: Rie				1	
Telephone:	904-25	2-6806	Email:		V	
Relationship to Property Owner:	000	ner	Date of Su Completion		Pepy 5/2	, <u> </u>
Name of Original (if known/different		Re's	Bouge	عدع		
Occupant o	of Property	Served by W	lell: (if othe	er than	Owner)	
Name:		•				
Telephone:		Email:				
Address:						
Well Locati	on:	17 00	esi ((:/\J:	B	
Lot:	Conces	sion:		Tov	wnship:	
Well Const	ruction Det	ails:				III
Well Record Available?	☐ Yes ☑ No	Date Well Constructed:	1987		Well Contractor Name:	74B Well
Well Type: (Drilled / Bored / Dug)	DUG	Casing Material: (Steel, Concrete, etc.)	1987 CUNCRE	14	Well Casing Diameter:	_
Well Stick Up: (Above Ground)	12 110.2	Weil Depth: (Below Ground)	5/5	1	Water Level: (Below Ground)	10'
Is Well Located	☐ Yes ☑ No	Well Pit Depth: (Below Ground)		-	Well Stick Up: (Above Pit Bottom)	
Is Well Flowing?	☐ Yes ☐ No	Flow Rate:			Contractor:	
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐	No	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No
is the Weil:	Accessible for Direct Sampling?	☑ Yes □ No	OR		d, In a Well Pit, or Confined Space?	☐ Yes ☐ No
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:	The section		of Top of Screen:	

AECOM

			,	Well I.D. #:			AECOM P	roject No.:	6063	6190
			MEC	:P WWR #:	12201	7	Client P	roject No.:		
Pumping Equ	uipme	nt:								
Pump Type:	☐ Jet Pu	ımp 🗹 Subr	nersit	ole 🗆 Pisto	n Pump	☐ Other	(please de	escribe):		
Pump Horsepower:		Pump Ag			199	5	Pumping Capacity:			
Pump Intake Depth: (Below Ground)	45			Location:			Pumping Rate: (If Known)			
Pressure Tank:	Type:				,		Capacity	: 5		
Water Treatment: (if present)		nator 🖭 Wal				•	e type)			
Well Usage:					cc					96
Primary Use(s): D	omestic:	☑ Yes □	No	Livestock:	☐ Yes	IZ No	Lawn Wa	tering:	ΠY	es PNo
# of Persons Using Well:	3	#of Livestor Watered:	k		Other Uses:			Daily Ar		
Indoor Plumbing Fix (Washroom(s), Shower Laundry, Pool, Spa, etc	(s), Dishwa	sher,		Disk	wate wate ndry	ب	ms	P	Bo-(
Sewage Serv	vicing:	Bac	kyc	od -			awa	4		
Private Sewage System or Municipa	il:			stem Type: eptic tank, etc.)			Distance from Well:			
Well Location:	□ Up	hill 🗆 Dowi	nhill	☐ Same G	rade			7/		d d sec
Presence of Any Alt Potential Source(s) (including distance on /	of Contar	nination:	ank o	or Other	:			A 1	89.	
Previous Co	ncerns	s:								
How Long Have You Operated a Busines				198	7 1	we bu	ilt r	eside	nce	
Have You Experience Concerns with You (Quantity or Quality)				Yes 🖬 No	If Yes, \	When?				
Cause(s) of the Previous Concern?	. [ught □ Pum tamination □	*						егепсе	

assel to actel Javey

13,105,000		Well	I.D. #:	AECO		60030190
*		MECP W	WR#: 5/226()	Clien	nt Project No.:	
eld Visit L	₋Og (To Be Comp	leted by AECOI	M Staff)			
eneral De	tails:					
oject Name:	BBP - WI	11/ Surve	oys.	Project No	: 600	636190
idress:	3241 SIDER	6AD 10,	BRADFORD	Inspected		Idan / Bol
ate:	Oct - 6, 2021	Jime:	14:30 am	Weather:	Su	nny / Son
sting:	611423	Northing: 4	4887107	Datum:	- 17	'T'
ell Details	s:					
Well Accessible	e for Inspection?	IVYes □ No	o If No, Provide R	eason:		-
ECP Water Well ecord No.:	5722617	Date Well Constructed:	1987	Contractor Name:		Drilling
ell Type: rilled/Bored/Dug)	DUG	Well Stick Up: (Above Ground)	12"	Casing Material: (Steel, Concrete, etc.)		CONCRETA
ell Located in Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)	SSPL	Well Stick Up: (Above Pit Bottom)		
ell Casing ameter:	3 St.	Well Depth: (Below Ground)	55'	Groundwater Level: (Below Ground)		45'
ımp On / Off?	Øon □ Off	Water Level Condition:	Stable (Static)	Declining ((Drawdown)	Rising (Recover
owing Well?	☐ Yes ☑ No	Flow Rate: (Estimated)	36PM	Well Cap T	ype:	HOLE
ell Screen stalled?	☐ Yes No	If Yes, Length & Slot Size:		Top of Screen: (Below Ground)		
There a Depres	sion Around the	□ Yes 🗹 No	Photo	o(s) of Well	Obtained?	Yes Wo
bservation(s) Su				162		
- Extiem		cond it	ious			
LK101K	Cheeses	LUTIU IV				<u>.</u>
		_ <u></u>			·	

AECOM

Nater Quality Sa	mpling:			
Water Quality Sample Obtained?	▼Yes □ No	If No, Provide Reason:		
Sampling Location:	Well Tar	Raw or Treated Sample	17 Raw	<u> </u>
Disinfected Sample Port?	Yes □ No	Disinfection Method:	Alconey	
Photo of Sample Obtained (against white background)	? ☐ Yes ☐ No	If No, Provide Reason:	- 20 - 17	
Analyte Suite: 93	129 +	F. Coli/Total	Collerm	
Sample I.D.: 3241 S		Time of Oct 7/2	Number of	9
	Gamp	oling:	Sample Bott	es:
Field Water Quality Param			Sample Bott	es: /
10	eters: (record unit		Conductivity:	0.84
	eters: (record unit	7.65		
Temperature: 16.5	eters: (record unit	7.65	Conductivity:	0.84
Temperature: 16.5	pH: D.O.	earance/Odour: Water Quantity Water (Note any differences in taste, or	Conductivity: Colour: Lew - ater Quality dour, colour or clarity)	0.84 Clear / color
Temperature: 16.5 Turbidity: — Odours?	pH: D.O. Appointed	earance/Odour: Water Quantity Water (Note any differences in taste, or	Conductivity: Colour: Lew - ater Quality dour, colour or clarity)	0.84 Clear / color
Temperature: /6.5 Turbidity: — Odours? Type of Concern: (if applied) If the concern was contar	pH: D.O. Appointie) nination what water quality?	earance/Odour: Water Quantity Water (Note any differences in taste, or	Conductivity: Colour: Lew - ater Quality dour, colour or clarity)	0.84

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com sa There is the act of a section.

AECOM

Well I.D. #:		AECOM Project No.: 60036190
MECP WWR #:_	5722017	Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant)	
	at 3 V. NAVCA
510 EKOAO 10	ATDS W
well 70	
How) 1.	

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

		1	Well I.D. #;	AECOM Project No.:	60636190			
		MEC	:P WWR #:	722017	Client Project No.:			
Vell Modif	ication / I	Maintenan	ce:					
las Your Well Ever Been	Deepened?	☐ Yes ☑No	Cleaned?	☐ Yes ☑ No	Reconstructed or Replaced?	☐ Yes ☑ No		
Yes to Any of the Please Provide [
Other Deta	ils:							
her Details the	at May be Rele	vant to Assessin	g the Curren	t Condition of Y	our Well Supply:			
					Ø.			
					mi			
					<u> </u>			
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				·····				
		11.8						
N-10-10-1								
-			12					
roperty C	wner Par	ticipation	in Monit	toring Prog	gram:			
Does the Proper and/or Sample Y		or Occupant Gra	nt Permissio	n for MTO/AECC	M to Monitor	Tes □ No		
			0			×		
Fin B	ourges.	ر،	180		<u>/</u>	8-40 Y 5/2		
Property	Owner / Occup	ant Name		Signature		Date /		

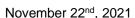
(Please Print in BLOCK letters)



Appendix V

Property ID #109 – 3247 Sideroad 10





Marie A. Pearson 3247 10th Sideroad Bradford, ON L3Z 4G3

60636190 **Project No:**

AECOM Imagine it. Delivered.

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Ms. Pearson,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on October 6th, 2021. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the Ontario Drinking Water Standards, Objectives and Guidelines (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Total Coliforms	148 CFU/ 100mL	0 CFU/100mL	MAC	Υ
Iron	0.464 mg/L	0.3 mg/L	AO	N
Turbidity	5.8 NTU	5 NTU	AO	N
Hardness (as CaCO ₃)	411 mg/L	80 - 100 mg/L	OG	N

NOTE: MAC - Maximum Acceptable Concentration; AO - Aesthetic Objective; OG - Operational Guideline.

As discussed via telephone with Ms. Pearson on November 19th, 2021, following receipt of the water quality testing results, the presence of bacteriological parameters (Total Coliforms) in your drinking water may represent an immediate health concern. It is recommended that you discuss this exceedance with your Local Public Health Unit.

For your information, the Well Aware Booklet - A Guide To Caring For Your Well created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO

AECOM

Water Well Survey

Groundwater Supply Well Location 3247 Sideroad 10

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

3247 Sideroad 10, Bradford, Ontario, L3Z 4G3

Owner Information:

Owner Name: Marie A. Pearson Phone Number: 905-830-4856 Email: marie.pearson@sympatico.ca

Well Record

Coordinates (UTM)......611429E/4887134N

(NAD83 Zone17)

Well Location...... In front of the house

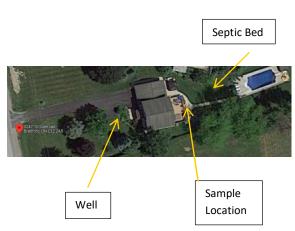
Well Diameter......0.914 m
Well Depth......16.91 m

Casing Position............0.30 m above ground;

Casing Condition.....Fair

Water Usage.......Residential
Water Source......Overburden
Static Water Level......12.19 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank...... Rear of property

Treatment System......Water softener

Recent Test Results.....None

Water Sampled......Yes (October 6, 2021)

Comments:

• Concerned about water supply – What happens if the well goes dry?

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Coliforms	148 CFU / 100 ml	0 CFU / 100 ml	MAC
Hardness (as CaCO ₃)	411 mg/L	80 - 100 mg/L	OG

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. MAC- Maximum Acceptable Concentration (health related)
- 4. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 5. NDOGT No data; sample overgrown with target bacteria; over-crowding microbial growth
- 6. CFU Colony forming units
- 7. **Bold** test result exceeding guideline/standard.





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 21T812334

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Oct 13, 2021

PAGES (INCLUDING COVER): 20 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 20

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

Total Coliforms & E. Coli (Using MI Agar)

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

			J	J /	

DATE RECEIVED: 2021-10-06 DATE REPORTED: 2021-10-13

Escherichia coli CFU/100mL 100 1 ND
Total Coliforms CFU/100mL 1 148

Unit

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061872 ND - Not Detected.

Parameter

Analysis performed at AGAT Toronto (unless marked by *)

ON CHARTERED STATES OF CHARTER OF



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

			٧	later Quality	Assessment - PWQO (mg/L)
DATE RECEIVED: 2021-10-06					DATE REPORTED: 2021-10-13
	s		CRIPTION: PLE TYPE: SAMPLED:	3247 sdrd 10 Water 2021-10-06 14:14	
Parameter	Unit	G/S	RDL	3061872	
Electrical Conductivity	μS/cm		2	1380	
pH	pH Units	6.5-8.5	NA	7.93	
Saturation pH (Calculated)				6.86	
Langelier Index (Calculated)	_			1.07	
Hardness (as CaCO3) (Calculated)	mg/L		0.5	411	
Total Dissolved Solids	mg/L		10	930	
Alkalinity (as CaCO3)	mg/L		5	270	
Bicarbonate (as CaCO3)	mg/L		5	270	
Carbonate (as CaCO3)	mg/L		5	<5	
Hydroxide (as CaCO3)	mg/L		5	<5	
Fluoride	mg/L		0.05	<0.05	
Chloride	mg/L		0.12	269	
Nitrate as N	mg/L		0.05	9.80	
Nitrite as N	mg/L		0.05	<0.05	
Bromide	mg/L		0.05	<0.05	
Sulphate	mg/L		0.10	16.6	
Ortho Phosphate as P	mg/L		0.10	<0.10	
Ammonia as N	mg/L		0.02	<0.02	
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.000002	<0.000002	
Total Phosphorus	mg/L	*	0.02	<0.02	
Total Organic Carbon	mg/L		0.5	1.2	
True Colour	TCU		5	<5	
Turbidity	NTU		0.5	5.8	
Total Calcium	mg/L		0.16	134	
Total Magnesium	mg/L		0.17	18.5	
Total Potassium	mg/L		0.58	1.59	
Total Sodium	mg/L		0.22	101	
Aluminum-dissolved	mg/L	*	0.004	<0.004	
Total Antimony	mg/L	0.020	0.001	<0.001	

Certified By:

Inis Verastegui



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD
SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

			٧	later Quality Assessment -	· PWQO (mg/L)	
DATE RECEIVED: 2021-10-06					DATE REPORTED: 20	021-10-13
		SAMPLE DES	CRIPTION:	3247 sdrd 10		
		_	PLE TYPE: SAMPLED:	Water 2021-10-06 14:14		
Parameter	Unit	G/S	RDL	3061872		
otal Arsenic	mg/L	0.1	0.003	<0.003		
otal Barium	mg/L		0.002	0.082		
Total Beryllium	mg/L	*	0.001	<0.001		
Total Boron	mg/L	0.2	0.010	0.049		
Total Cadmium	mg/L	0.0002	0.0001	<0.0001		
Total Chromium	mg/L		0.003	<0.003		
Total Cobalt	mg/L	0.0009	0.0005	0.0007		
otal Copper	mg/L	0.005	0.001	0.013		
otal Iron	mg/L	0.3	0.010	0.458		
Total Lead	mg/L	*	0.001	<0.001		
otal Manganese	mg/L		0.002	0.005		
Dissolved Mercury	mg/L	0.0002	0.0001	<0.0001		
otal Molybdenum	mg/L	0.040	0.002	<0.002		
Total Nickel	mg/L	0.025	0.003	<0.003		
Total Selenium	mg/L	0.1	0.002	<0.002		
Total Silver	mg/L	0.0001	0.0001	<0.0001		
Total Strontium	mg/L		0.005	0.393		
Total Thallium	mg/L	0.0003	0.0003	<0.0003		
Total Tin	mg/L		0.002	<0.002		
Total Titanium	mg/L		0.010	<0.010		
otal Tungsten	mg/L	0.030	0.010	<0.010		
otal Uranium	mg/L	0.005	0.002	<0.002		
otal Vanadium	mg/L	0.006	0.002	<0.002		
Total Zinc	mg/L	0.030	0.020	0.083		
Total Zirconium	mg/L	0.004	0.004	<0.004		
Lab Filtration Aluminum Dissolved				2021/10/7		
Lab Filtration mercury				2021/10/7		

Certified By:

Iris Verastegui



AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

Water Quality Assessment - PWQO (mg/L)

DATE RECEIVED: 2021-10-06 DATE REPORTED: 2021-10-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to PWQO * Variable - refer to guideline reference document

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.

3061872 Dilution required, RDL has been increased accordingly.

Un-ionized Ammonia detection limit is a calculated RDL. The calculation of Un-ionized Ammonia is based on lab measured parameters (ammonia as N, pH and temperature). Values are reported as

calculated.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Exceedance Summary

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PACKAGE PARAMETER		GUIDEVALUE	RESULT
3061872	3247 sdrd 10	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Copper	mg/L	0.005	0.013
3061872	3247 sdrd 10	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Iron	mg/L	0.3	0.458
3061872	3247 sdrd 10	ON PWQO	Water Quality Assessment - PWQO (mg/L)	Total Zinc	mg/L	0.030	0.083



AGAT WORK ORDER: 21T812334

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE:Bradford SAMPLED BY:Justin Borrmann

Microbiology Analysis														
RPT Date: Oct 13, 2021 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE MATRIX SPIKE							KE							
PARAMETER Batch Sample			Dup #1 Dup #2	RPD	Method Blank	Measured	Acceptable Limits	Recovery	Lir	ptable nits	Recovery		ptable nits	
		ld					Value	Lower Uppe		Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3061729 ND ND NA <1 Total Coliforms 3061729 50 40 22.2% <1

Comments: ND - Not Detected, NA - % RPD Not Applicable.

CHARTERED ON NIVINE BASILY OF CHEMIST

Certified By:

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

Water Analysis															
RPT Date: Oct 13, 2021			C	UPLICATE			REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	MATRIX SPIKE	
PARAMETER	Batch Sample Dup #1 Dup #2 RPD Method Blank Measured		Blank Mossured Limite		d Limits			ptable nits	Recovery		ptable nits				
PARAMETER	Batch	ld	Dup #1	Dup #2	KFD		Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Uppe
Water Quality Assessment - P	WQO (mg/L)														
Electrical Conductivity	3062184		40	40	0.0%	< 2	100%	90%	110%						
pH	3062184		6.69	6.73	0.6%	NA	102%	90%	110%						
Total Dissolved Solids	3060808		172	186	7.8%	< 10	98%	80%	120%						
Alkalinity (as CaCO3)	3062184		17	16	NA	< 5	87%	80%	120%						
Bicarbonate (as CaCO3)	3062184		17	16	NA	< 5	NA								
Carbonate (as CaCO3)	3062184		<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3062184		<5	<5	NA	< 5	NA								
Fluoride	3068146		< 0.05	< 0.05	NA	< 0.05	94%	70%	130%	107%	80%	120%	103%	70%	130%
Chloride	3068146		64.1	64.1	0.0%	< 0.10	93%	70%	130%	110%	80%	120%	109%	70%	130%
Nitrate as N	3068146		<0.05	<0.05	NA	< 0.05	100%	70%	130%	108%	80%	120%	108%	70%	130%
Nitrite as N	3068146		<0.05	<0.05	NA	< 0.05	102%	70%	130%	99%	80%	120%	112%	70%	130%
Bromide	3068146		< 0.05	< 0.05	NA	< 0.05	107%	70%	130%	106%	80%	120%	107%	70%	130%
Sulphate	3068146		123	123	0.0%	< 0.10	97%	70%	130%	109%	80%	120%	106%	70%	130%
Ortho Phosphate as P	3068146		<0.10	<0.10	NA	< 0.10	100%	70%	130%	100%	80%	120%	100%	70%	130%
Ammonia as N	3062181		<0.02	<0.02	NA	< 0.02	105%	70%	130%	99%	80%	120%	90%	70%	130%
Total Phosphorus	3061760		0.87	0.89	2.3%	< 0.02	98%	70%	130%	97%	80%	120%	NA	70%	130%
Total Organic Carbon	3062196		1.3	1.3	NA	< 0.5	103%	90%	110%	103%	90%	110%	95%	80%	120%
True Colour	3051121		232	237	2.1%	< 5	105%	90%	110%						
Turbidity	3061372		42.1	44.5	5.5%	< 0.5	98%	80%	120%						
Total Calcium	3059717		40.8	40.3	1.2%	< 0.10	93%	70%	130%	94%	80%	120%	100%	70%	130%
Total Magnesium	3059717		14.1	13.8	2.2%	< 0.10	97%	70%	130%	97%	80%	120%	103%	70%	130%
Total Potassium	3059717		1.29	1.24	NA	< 0.50	94%	70%	130%	95%	80%	120%	101%	70%	130%
Total Sodium	3059717		8.59	8.44	1.8%	< 0.10	92%	70%	130%	92%	80%	120%	101%	70%	130%
Aluminum-dissolved	3057466		<0.004	< 0.004	NA	< 0.004	110%	70%	130%	107%	80%	120%	85%	70%	130%
Total Antimony	3059717		<0.001	<0.001	NA	< 0.001	99%	70%	130%	104%	80%	120%	105%	70%	130%
Total Arsenic	3059717		<0.003	<0.003	NA	< 0.003	93%	70%	130%	116%	80%	120%	112%	70%	130%
Total Barium	3059717		0.062	0.062	0.0%	< 0.002	101%	70%	130%	103%	80%	120%	109%	70%	130%
Total Beryllium	3059717		<0.001	< 0.001	NA	< 0.001	96%	70%	130%	112%	80%	120%	112%	70%	130%
Total Boron	3059717		0.023	0.026	NA	< 0.010	99%	70%	130%	103%	80%	120%	111%	70%	130%
Total Cadmium	3059717	<	<0.0001	<0.0001	NA	< 0.0001	100%	70%	130%	105%	80%	120%	107%	70%	130%
Total Chromium	3059717		<0.003	<0.003	NA	< 0.003	107%	70%	130%	102%	80%	120%	107%	70%	130%
Total Cobalt	3059717		<0.0005	<0.0005	NA	< 0.0005		70%	130%	109%		120%	111%	70%	130%
Total Copper	3059717		0.002	0.002	NA	< 0.001	105%	70%	130%	104%	80%	120%	110%	70%	130%
Total Iron	3059717		0.162	0.181	11.1%	< 0.010	102%		130%	105%		120%	101%	70%	
Total Lead	3059717		<0.001	<0.001	NA	< 0.001	96%		130%	109%		120%	109%		130%
Total Manganese	3059717		0.100	0.112	11.3%	< 0.002	103%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Mercury	3065987	<	<0.0001	<0.0001	NA	< 0.0001	99%		130%	99%	80%	120%	99%	70%	
Total Molybdenum	3059717		<0.002	< 0.002	NA	< 0.002	106%	70%	130%	107%	80%	120%	110%	70%	130%
Total Nickel	3059717		<0.003	< 0.003	NA	< 0.003	104%	70%		105%		120%	106%	70%	1200/

AGAT QUALITY ASSURANCE REPORT (V1)

Page 8 of 20

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 SAMPLING SITE:Bradford AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY: Justin Borrmann

SAMPLING SITE:Bradford								SAMP	LED B	Y:Justir	Borr	mann			
		1	Nate	r Ana	lysis	s (Cor	ntinu	ed)							
RPT Date: Oct 13, 2021				DUPLICATE	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	IKE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		eptable mits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 1 1	eptable mits
		ld		·			Value	Lower	Upper		Lower	Upper	1	Lower	Upper
Total Selenium	3059717		<0.002	<0.002	NA	< 0.002	96%	70%	130%	113%	80%	120%	105%	70%	130%
Total Silver	3059717		<0.0001	<0.0001	NA	< 0.0001	99%	70%	130%	109%	80%	120%	106%	70%	130%
Total Strontium	3059717		0.261	0.287	9.5%	< 0.005	100%	70%	130%	107%	80%	120%	100%	70%	130%
Total Thallium	3059717		<0.0003	< 0.0003	NA	< 0.0003	96%	70%	130%	111%	80%	120%	110%	70%	130%
Total Tin	3059717		< 0.002	< 0.002	NA	< 0.002	105%	70%	130%	110%	80%	120%	106%	70%	130%
Total Titanium	3059717		<0.010	<0.010	NA	< 0.010	95%	70%	130%	107%	80%	120%	110%	70%	130%
Total Tungsten	3059717		<0.010	<0.010	NA	< 0.010	97%	70%	130%	103%	80%	120%	104%	70%	130%
Total Uranium	3059717		< 0.002	< 0.002	NA	< 0.002	93%	70%	130%	110%	80%	120%	111%	70%	130%
Total Vanadium	3059717		< 0.002	< 0.002	NA	< 0.002	107%	70%	130%	106%	80%	120%	107%	70%	130%
Total Zinc	3059717		0.029	< 0.020	NA	< 0.020	107%	70%	130%	103%	80%	120%	110%	70%	130%
Total Zirconium	3059717		< 0.004	< 0.004	NA	< 0.004	110%	70%	130%	106%	80%	120%	107%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Tris Verástegui



Time Markers

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
3061845	24 Grandview	Water	06-OCT-2021	06-OCT-2021

Total Coliforms & E. Coli (Using MI Agar)

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	07-OCT-2021	08-OCT-2021	SJM
Total Coliforms	07-OCT-2021	08-OCT-2021	SJM

Water Quality Assessment - PWQO (mg/L)

Tracer quanty /1000000mont 1 Trace (mg/2)			
Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity	07-OCT-2021	07-OCT-2021	ND
pH	07-OCT-2021	07-OCT-2021	ND
Saturation pH (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Langelier Index (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Hardness (as CaCO3) (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Total Dissolved Solids	12-OCT-2021	13-OCT-2021	VD
Alkalinity (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Bicarbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Carbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Hydroxide (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Fluoride	08-OCT-2021	08-OCT-2021	LC
Chloride	08-OCT-2021	08-OCT-2021	LC
Nitrate as N	08-OCT-2021	08-OCT-2021	LC
Nitrite as N	08-OCT-2021	08-OCT-2021	LC
Bromide	08-OCT-2021	08-OCT-2021	LC
Sulphate	08-OCT-2021	08-OCT-2021	LC
Ortho Phosphate as P	08-OCT-2021	08-OCT-2021	LC
Ammonia as N	08-OCT-2021	08-OCT-2021	SK
Ammonia-Un-ionized (Calculated)	08-OCT-2021	08-OCT-2021	SYS
Total Phosphorus	07-OCT-2021	07-OCT-2021	XL
Total Organic Carbon	08-OCT-2021	08-OCT-2021	ND
True Colour	12-OCT-2021	12-OCT-2021	NK
Turbidity	07-OCT-2021	07-OCT-2021	NK
Total Calcium	13-OCT-2021	13-OCT-2021	AA
Total Magnesium	13-OCT-2021	13-OCT-2021	AA
Total Potassium	13-OCT-2021	13-OCT-2021	AA
Total Sodium	13-OCT-2021	13-OCT-2021	AA
Aluminum-dissolved	08-OCT-2021	08-OCT-2021	DW
Total Antimony	09-OCT-2021	09-OCT-2021	DW
Total Arsenic	09-OCT-2021	09-OCT-2021	DW
Total Barium	09-OCT-2021	09-OCT-2021	DW
Total Beryllium	09-OCT-2021	09-OCT-2021	DW
Total Boron	09-OCT-2021	09-OCT-2021	DW
Total Cadmium	09-OCT-2021	09-OCT-2021	DW



Sample Description

Sample ID

Time Markers

AGAT WORK ORDER: 21T812334

Date Received

PROJECT: 60636190

Date Sampled

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

3061845	24 Grandview	Water 06-	OCT-2021	06-OCT-2021	
	Water Quality Assessment - PWQO (mg/L)				
	Parameter	Date Prepared	Date Analyzed	Initials	
	Total Chromium	09-OCT-2021	09-OCT-2021	DW	
	Total Cobalt	09-OCT-2021	09-OCT-2021	DW	
	Total Copper	09-OCT-2021	09-OCT-2021	DW	
	Total Iron	09-OCT-2021	09-OCT-2021	DW	
	Total Lead	09-OCT-2021	09-OCT-2021	DW	
	Total Manganese	09-OCT-2021	09-OCT-2021	DW	
	Dissolved Mercury	08-OCT-2021	08-OCT-2021	DL	
	Total Molybdenum	09-OCT-2021	09-OCT-2021	DW	
	Total Nickel	09-OCT-2021	09-OCT-2021	DW	
	Total Selenium	09-OCT-2021	09-OCT-2021	DW	
	Total Silver	09-OCT-2021	09-OCT-2021	DW	
	Total Strontium	09-OCT-2021	09-OCT-2021	DW	
	Total Thallium	09-OCT-2021	09-OCT-2021	DW	
	Total Tin	09-OCT-2021	09-OCT-2021	DW	
	Total Titanium	09-OCT-2021	09-OCT-2021	DW	
	Total Tungsten	09-OCT-2021	09-OCT-2021	DW	
	Total Uranium	09-OCT-2021	09-OCT-2021	DW	
	Total Vanadium	09-OCT-2021	09-OCT-2021	DW	
	Total Zinc	09-OCT-2021	09-OCT-2021	DW	
	Total Zirconium	09-OCT-2021	09-OCT-2021	DW	
	Lab Filtration Aluminum Dissolved				

Sample Type

3061871 1737 Halburn Water (06-OCT-2021	06-OCT-2021
------------------------------	-------------	-------------

Total Coliforms & E. Coli (Using MI Agar)

Lab Filtration mercury

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	07-OCT-2021	08-OCT-2021	SJM
Total Coliforms	07-OCT-2021	08-OCT-2021	SJM

Water Quality Assessment - PWQO (mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity	07-OCT-2021	07-OCT-2021	ND
pH	07-OCT-2021	07-OCT-2021	ND
Saturation pH (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Langelier Index (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Hardness (as CaCO3) (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Total Dissolved Solids	12-OCT-2021	13-OCT-2021	VD
Alkalinity (as CaCO3)	07-OCT-2021	07-OCT-2021	ND



Time Markers

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
3061871	1737 Halburn	Water	06-OCT-2021	06-OCT-2021

Water Quality Assessment - PWQO (mg/L)			
Parameter	Date Prepared	Date Analyzed	Initials
Bicarbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Carbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Hydroxide (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Fluoride	08-OCT-2021	08-OCT-2021	LC
Chloride	08-OCT-2021	08-OCT-2021	LC
Nitrate as N	08-OCT-2021	08-OCT-2021	LC
Nitrite as N	08-OCT-2021	08-OCT-2021	LC
Bromide	08-OCT-2021	08-OCT-2021	LC
Sulphate	08-OCT-2021	08-OCT-2021	LC
Ortho Phosphate as P	08-OCT-2021	08-OCT-2021	LC
Ammonia as N	08-OCT-2021	08-OCT-2021	SK
Ammonia-Un-ionized (Calculated)	08-OCT-2021	08-OCT-2021	SYS
Total Phosphorus	07-OCT-2021	07-OCT-2021	XL
Total Organic Carbon	07-OCT-2021	07-OCT-2021	ND
True Colour	12-OCT-2021	12-OCT-2021	NK
Turbidity	07-OCT-2021	07-OCT-2021	NK
Total Calcium	13-OCT-2021	13-OCT-2021	AA
Total Magnesium	13-OCT-2021	13-OCT-2021	AA
Total Potassium	13-OCT-2021	13-OCT-2021	AA
Total Sodium	13-OCT-2021	13-OCT-2021	AA
Aluminum-dissolved	08-OCT-2021	08-OCT-2021	DW
Total Antimony	09-OCT-2021	09-OCT-2021	DW
Total Arsenic	09-OCT-2021	09-OCT-2021	DW
Total Barium	09-OCT-2021	09-OCT-2021	DW
Total Beryllium	09-OCT-2021	09-OCT-2021	DW
Total Boron	09-OCT-2021	09-OCT-2021	DW
Total Cadmium	09-OCT-2021	09-OCT-2021	DW
Total Chromium	09-OCT-2021	09-OCT-2021	DW
Total Cobalt	09-OCT-2021	09-OCT-2021	DW
Total Copper	09-OCT-2021	09-OCT-2021	DW
Total Iron	09-OCT-2021	09-OCT-2021	DW
Total Lead	09-OCT-2021	09-OCT-2021	DW
Total Manganese	09-OCT-2021	09-OCT-2021	DW
Dissolved Mercury	08-OCT-2021	08-OCT-2021	DL
Total Molybdenum	09-OCT-2021	09-OCT-2021	DW
Total Nickel	09-OCT-2021	09-OCT-2021	DW
Total Selenium	09-OCT-2021	09-OCT-2021	DW
Total Silver	09-OCT-2021	09-OCT-2021	DW
Total Strontium	09-OCT-2021	09-OCT-2021	DW

Time Markers

AGAT WORK ORDER: 21T812334

06-OCT-2021

PROJECT: 60636190

06-OCT-2021

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date	Sampled	Date Received
3061871	1737 Halburn	Water	06-OCT-2021		06-OCT-2021
	Water Quality Assessment - PWQO (mg/L)				
	Parameter	Date Pre	pared	Date Analyze	d Initials
	Total Thallium	09-OCT	2021	09-OCT-2021	I DW
	Total Tin	09-OCT	2021	09-OCT-202	I DW
	Total Titanium	09-OCT	2021	09-OCT-202	I DW
	Total Tungsten	09-OCT	2021	09-OCT-202	1 DW
	Total Uranium	09-OCT	2021	09-OCT-202	I DW
	Total Vanadium	09-OCT	2021	09-OCT-202	1 DW
	Total Zinc	09-OCT	2021	09-OCT-202	I DW
	Total Zirconium	09-OCT	2021	09-OCT-202	I DW
	Lab Filtration Aluminum Dissolved				
	Lab Filtration mercury				

Total Coliforms & E. Coli (Using MI Agar)

3247 sdrd 10

3061872

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	07-OCT-2021	08-OCT-2021	SJM
Total Coliforms	07-OCT-2021	08-OCT-2021	SJM

Water

Water Quality Assessment - PWQO (mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity	07-OCT-2021	07-OCT-2021	ND
pH	07-OCT-2021	07-OCT-2021	ND
Saturation pH (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Langelier Index (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Hardness (as CaCO3) (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Total Dissolved Solids	12-OCT-2021	13-OCT-2021	VD
Alkalinity (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Bicarbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Carbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Hydroxide (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Fluoride	08-OCT-2021	08-OCT-2021	LC
Chloride	08-OCT-2021	08-OCT-2021	LC
Nitrate as N	08-OCT-2021	08-OCT-2021	LC
Nitrite as N	08-OCT-2021	08-OCT-2021	LC
Bromide	08-OCT-2021	08-OCT-2021	LC
Sulphate	08-OCT-2021	08-OCT-2021	LC
Ortho Phosphate as P	08-OCT-2021	08-OCT-2021	LC
Ammonia as N	08-OCT-2021	08-OCT-2021	SK
Ammonia-Un-ionized (Calculated)	08-OCT-2021	08-OCT-2021	SYS



Time Markers

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
3061872	3247 sdrd 10	Water	06-OCT-2021	06-OCT-2021

Parameter	Date Prepared	Date Analyzed	Initials
Total Phosphorus	07-OCT-2021	07-OCT-2021	XL
Total Organic Carbon	07-OCT-2021	07-OCT-2021	ND
True Colour	12-OCT-2021	12-OCT-2021	NK
Turbidity	07-OCT-2021	07-OCT-2021	NK
Total Calcium	13-OCT-2021	13-OCT-2021	AA
Total Magnesium	13-OCT-2021	13-OCT-2021	AA
Total Potassium	13-OCT-2021	13-OCT-2021	AA
Total Sodium	13-OCT-2021	13-OCT-2021	AA
Aluminum-dissolved	08-OCT-2021	08-OCT-2021	DW
Total Antimony	09-OCT-2021	09-OCT-2021	DW
Total Arsenic	09-OCT-2021	09-OCT-2021	DW
Total Barium	09-OCT-2021	09-OCT-2021	DW
Total Beryllium	09-OCT-2021	09-OCT-2021	DW
Total Boron	09-OCT-2021	09-OCT-2021	DW
Total Cadmium	09-OCT-2021	09-OCT-2021	DW
Total Chromium	09-OCT-2021	09-OCT-2021	DW
Total Cobalt	09-OCT-2021	09-OCT-2021	DW
Total Copper	09-OCT-2021	09-OCT-2021	DW
Total Iron	09-OCT-2021	09-OCT-2021	DW
Total Lead	09-OCT-2021	09-OCT-2021	DW
Total Manganese	09-OCT-2021	09-OCT-2021	DW
Dissolved Mercury	08-OCT-2021	08-OCT-2021	DL
Total Molybdenum	09-OCT-2021	09-OCT-2021	DW
Total Nickel	09-OCT-2021	09-OCT-2021	DW
Total Selenium	09-OCT-2021	09-OCT-2021	DW
Total Silver	09-OCT-2021	09-OCT-2021	DW
Total Strontium	09-OCT-2021	09-OCT-2021	DW
Total Thallium	09-OCT-2021	09-OCT-2021	DW
Total Tin	09-OCT-2021	09-OCT-2021	DW
Total Titanium	09-OCT-2021	09-OCT-2021	DW
Total Tungsten	09-OCT-2021	09-OCT-2021	DW
Total Uranium	09-OCT-2021	09-OCT-2021	DW
Total Vanadium	09-OCT-2021	09-OCT-2021	DW
Total Zinc	09-OCT-2021	09-OCT-2021	DW
Total Zirconium	09-OCT-2021	09-OCT-2021	DW
Lab Filtration Aluminum Dissolved			
Lab Filtration mercury			

3061873 3223 sdrd 10 Water 06-OCT-2021 06-OCT-2021



Time Markers

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
3061873	3223 sdrd 10	Water	06-OCT-2021	06-OCT-2021

Total Coliforms & E. Coli (Using MI Agar)

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	07-OCT-2021	08-OCT-2021	SJM
Total Coliforms	07-OCT-2021	08-OCT-2021	SJM

Water Quality Assessment - PWQO (mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity	07-OCT-2021	07-OCT-2021	ND
рН	07-OCT-2021	07-OCT-2021	ND
Saturation pH (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Langelier Index (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Hardness (as CaCO3) (Calculated)	13-OCT-2021	13-OCT-2021	SYS
Total Dissolved Solids	12-OCT-2021	13-OCT-2021	VD
Alkalinity (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Bicarbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Carbonate (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Hydroxide (as CaCO3)	07-OCT-2021	07-OCT-2021	ND
Fluoride	08-OCT-2021	08-OCT-2021	LC
Chloride	08-OCT-2021	08-OCT-2021	LC
Nitrate as N	08-OCT-2021	08-OCT-2021	LC
Nitrite as N	08-OCT-2021	08-OCT-2021	LC
Bromide	08-OCT-2021	08-OCT-2021	LC
Sulphate	08-OCT-2021	08-OCT-2021	LC
Ortho Phosphate as P	08-OCT-2021	08-OCT-2021	LC
Ammonia as N	08-OCT-2021	08-OCT-2021	SK
Ammonia-Un-ionized (Calculated)	08-OCT-2021	08-OCT-2021	SYS
Total Phosphorus	07-OCT-2021	07-OCT-2021	XL
Total Organic Carbon	07-OCT-2021	07-OCT-2021	ND
True Colour	12-OCT-2021	12-OCT-2021	NK
Turbidity	07-OCT-2021	07-OCT-2021	NK
Total Calcium	13-OCT-2021	13-OCT-2021	AA
Total Magnesium	13-OCT-2021	13-OCT-2021	AA
Total Potassium	13-OCT-2021	13-OCT-2021	AA
Total Sodium	13-OCT-2021	13-OCT-2021	AA
Aluminum-dissolved	08-OCT-2021	08-OCT-2021	DW
Total Antimony	09-OCT-2021	09-OCT-2021	DW
Total Arsenic	09-OCT-2021	09-OCT-2021	DW
Total Barium	09-OCT-2021	09-OCT-2021	DW
Total Beryllium	09-OCT-2021	09-OCT-2021	DW
Total Boron	09-OCT-2021	09-OCT-2021	DW
Total Cadmium	09-OCT-2021	09-OCT-2021	DW



Time Markers

AGAT WORK ORDER: 21T812334

PROJECT: 60636190

ATTENTION TO: Brian Holden

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
3061873	3223 sdrd 10	Water	06-OCT-2021	06-OCT-2021

Parameter	Date Prepared	Date Analyzed	Initials
Total Chromium	09-OCT-2021	09-OCT-2021	DW
Total Cobalt	09-OCT-2021	09-OCT-2021	DW
Total Copper	09-OCT-2021	09-OCT-2021	DW
Total Iron	09-OCT-2021	09-OCT-2021	DW
Total Lead	09-OCT-2021	09-OCT-2021	DW
Total Manganese	09-OCT-2021	09-OCT-2021	DW
Dissolved Mercury	08-OCT-2021	08-OCT-2021	DL
Total Molybdenum	09-OCT-2021	09-OCT-2021	DW
Total Nickel	09-OCT-2021	09-OCT-2021	DW
Total Selenium	09-OCT-2021	09-OCT-2021	DW
Total Silver	09-OCT-2021	09-OCT-2021	DW
Total Strontium	09-OCT-2021	09-OCT-2021	DW
Total Thallium	09-OCT-2021	09-OCT-2021	DW
Total Tin	09-OCT-2021	09-OCT-2021	DW
Total Titanium	09-OCT-2021	09-OCT-2021	DW
Total Tungsten	09-OCT-2021	09-OCT-2021	DW
Total Uranium	09-OCT-2021	09-OCT-2021	DW
Total Vanadium	09-OCT-2021	09-OCT-2021	DW
Total Zinc	09-OCT-2021	09-OCT-2021	DW
Total Zirconium	09-OCT-2021	09-OCT-2021	DW
Lab Filtration Aluminum Dissolved			
Lab Filtration mercury			



Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334 ATTENTION TO: Brian Holden SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:Bradford

PROJECT: 60636190

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Ammonia-Un-ionized (Calculated)		MOE REFERENCE, PWQOs Tab 2	CALCULATION
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Aluminum-dissolved	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190
SAMPLING SITE:Bradford

AGAT WORK ORDER: 21T812334
ATTENTION TO: Brian Holden
SAMPLED BY:Justin Borrmann

SAMPLING SHE:Bradford		SAMPLED BY: Justin Borrmann	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Dissolved Mercury	MET-93-6100	modified from EPA 245.2 and SM 311B	¹² CVAAS
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Lab Filtration Aluminum Dissolved	SR-78-9001		FILTRATION
Lab Filtration mercury	SR-78-9001		FILTRATION

FORM NO. 0506—4--77 FORM 7

	rironment			VV							KU
Ontario		NT ONLY IN SPACES ECK 🗵 CORRECT BOX		_E (1)		57184	02	5.700 S		3N	22 23 24
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2	FRESH 3 SU SALTY 4 MI	NERAL 2	GALVANIZ GALVANIZ GONCREJE	E	3 -	1006/	FROM	TO 10-13 14-17		LEAD F	PACKER, ETC)
<u></u>	FRESH S SU	NERAL 2	4 OPEN HOL 4-25 1 STEEL 2 GALVANIZ	26		27-30	1	8-21 22-25		······································	
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50-53	DEEF	JE (11 N G	FEET RATE		GPM				6		
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AECOM

*		Well I.D. #: 57/8402			AECOM Project No.:	
Well Owne	r Informatio	on:				
Property Owner	Name: Ma	rie A. Ke	avsor	<u> </u>	1	
Property Addres	1324 Bro	7 10+h	Sider	00(C	463	
Telephone:	905	830 4856	Email:	1	Marie Pears	son 6 sumpati
Name of Person Completing Sur	CONTRACTOR OF THE PARTY OF THE	ric Pears	ion			
Telephone:	905	830 4856	Email:	8 =	Mane pars	mo nico, ca
Relationship to Property Owner:	0	wner	Date of Si Completion		Sept 23	21
Name of Origina (if known/differen		unknown		88		11
Occupant	of Property	Served by W	ell: (If other	er thar	o Owner)	
Name:			·- · · ·			
Telephone:		Email:	199			· · · · · · · · · · · · · · · · · · ·
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Well Locat	ion:		ij (¥			
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	27	1 1015				
Well Const	truction Det	tails:				
Well Record Available?	☐ Yes No	Date Well Constructed:	N.		Well Contractor Name:	
Well Type: (Drilled/Bared/Dug)	Dug	Casing Material: (Steel, Concrete, etc.)	Concret	e	Well Casing Diameter:	
Well Stick Up: (Above Ground)		Well Depth: (Below Ground)	551,5	11	Water Level: (Below Ground)	40'
Is Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)			Well Stick Up: (Above Pit Bottom)	
is Well Flowing?	s Well Flowing? Yes No Flow Rate:		46PM		Contractor:	
Well Cap Type:	Concrete	Does Cap Create a Good Seal?	☐ Yes ☐	No	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No
is the Well:	Accessible for Direct Sampling?	Yes □ No	OR		d, In a Well Pit, or Confined Space?	☐ Yes ☐ No
Well Screen	☐ Yes ☐ No	If Yes, Length & Slot Size:			of Top of Screen: Ground)	

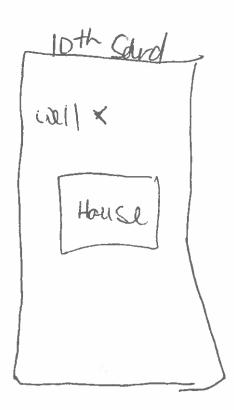
AECOM

				Well I.D. #:			AECOM Projec	t No.: 60636	6 195
			ME	MECP WWR #: 57/8		102 Cilent Project No		t No.:	1920
umping E	quipr	nent:	_						
Pump Type:	□ Je	et Pump	Submers	ible 🗆 Pisto	on Pump	Othe	r (please descr	ibe):	
oump Horsepow	er:		Pump A	Age:	51	11/	Pumping Capacity:		
Pump Intake Dep (Below Ground)	th: E	50 ft	- Pump I (If Not in	Location: Well)	In We	11	Pumping Ra (If Known)	te:	
Pressure Tank:	Туре		•				Capacity:	FW.	
Water Treatment: (if present)			•	Softener 🗆 I			te type)		
Nell Usage	:								
Primary Use(s):	Domes	tic: 🖈	Yes 🗌 No	Livestock:	☐ Yes	X) No	Lawn Water	ing: 🗆 Ye	s No
# of Persons Using Well:	2	1.0	Livestock ered:		Other Uses:			ily Amount:	
Indoor Plumbing (Washroom(s), Sho Laundry, Pool, Spa,	wer(s), Dis	shwasher,		Ai La	wash shwa wnd	ry	er F	001	
Sewage Se Private Sewage System or Munic		1g: ——		rstem Type:	Set	sti'C		istance of Well:	eav propo
Well Location:	С] Uphill	☐ Downhill	Same G	Grade	From	it you	d	
Presence of Any Potential Source (including distance	(s) of Co	ntaminat		or Other		N	>		
Previous C	once	rns:)(
How Long Have Operated a Busi				161	11S				1
Have You Exper Concerns with Y (Quantity or Quality	our Well	ny <u>Previ</u> c Supply?	ous [] Yes No	If Yes, 1	Nhen?			
Cause(s) of the Previous Conce		Drought Contami				Increas	ed Usage 🛭 I	nterference	

AECOM

Well I.D. #:		AECOM Project No.: 606 36/90
MECD WAND #	1-1-11	Client Project No :

Location Sketch (To be Completed by Property Owner / Occupant)



Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

× ×7 ×	<u> </u>	MEC	Well I.D. #:	718402	AECOM Project No.:	
Nell Modif	ication / I	Maintenan	ce:	4.		
Has Your Well Ever Been	Deepened?	`	Cleaned?		Reconstructed or Replaced?	☐ Yes 🕱 No
f Yes to Any of t Please Provide I		Clor	inateo	1 Regula	urly y	parly.
Other Deta	ils:					
Other Details tha	it May be Rele	ant to Assessin	g the Curren	t Condition of Yo	our Well Supply:	
						III
						·ř
Property O	wner Par	ticipation	in Monit	toring Prog	ıram:	
Does the Proper and/or Sample Y	ty Owner and/o	or Occupant Gra	nt Permissio	n for MTO/AECO	M to Monitor	Yes No
(h)	laric Roa	NCON	16	A)	with and	infirmation 21
Property	Owner / Occup se Print in BLOCK			Signature	<u> </u>	Date

AECOM

	Weit I.D. #	l:	AECOM Proje	ect No.:	60636190	_
	MECP WWR	5718402	Client Proje	ect No.:		-
_Og (To Be Compl	eted by AECOM St	aff)				
tails:						
BBP WE	U Sur	vey	Project No.:	606	636190	
2247 1	oth Sid		Inspected By:	Hold	on Borina	
	Time: 14:0	w - 14:30	Weather:	Sun	ny / Cloud	1
611429	Northing: 48	87 134	Datum:	177		
s:		9				
le for Inspection?	☐ Yes ☐ No	If No, Provide Re	eason:			
5718402	Date Well Constructed:	18/10/82	Contractor Nam	ne:	Tand B Vell Poilling	
Dug	Well Stick Up: (Above Ground)	0-18		1: etc.)		
☐ Yes 🎾 No	Well Pit Depth: (Below Ground)	61 Ft	Well Stick Up: (Above Pit Bottom)	HE"	
0.9m	Well Depth: (Below Ground)	55' 5"	Groundwater L (Below Ground)	evel:	40 "	
∑(On ☐ Off	Water Level Condition:	Stable (Static)	Declining (Drav	vdown) [Rising (Recovery)	
☐ Yes 🗹 No	Flow Rate: (Estimated)	16PM	Well Cap Type:	:		
☐ Yes 🏋 No	If Yes, Length & Slot Size:		Top of Screen (Below Ground)	:		
ession Around the erior?	☐ Yes M No	Phot	co(s) of Well Obt	ained?	Yes No	
Summary:						7
ed in fro	nt yard	w/ bin	1bath			
		150 at == 2.50				
	tails: BBP We 3247 1 Oct @121 C11429 S: le for Inspection? Dug Yes No O.9 M You Off Yes No O.9 M Son Off Yes No O.9 M Son Off Yes No O.9 M Son Off Summary:	Well I.D. & MECP WWR & Long tails: BBP Well Survey	MECP WWR #: S718402 LOG (To Be Completed by AECOM Staff) tails: BBP Well Survey 3247 10th SideRool Oct G(21 Time: 14:00 - 14:30 G)1429 Northing: 4887 1341 S: le for Inspection? Pyes No If No, Provide Research S718402 Date Well Constructed: 18/10/82 Dug Well Stick Up: (Above Ground) Pyes No Well Pit Depth: (Below Ground) Yes No (Below Ground) Water Level Condition: Ss' 5" Water Level Condition: 1 GPM Pyes No If Yes, Length & Slot Size: Bussion Around the Pyes No Phote Summary:	MECP WWR #: S7/84/02 AECOM Project No.: ST/84/02 Project No.: BBP Well Survey Project No.: 3247 10th Side Cool Inspected By: Oct. 6/21 Time: 14:30 Weather: 6/1929 Northing: 9887 134 Datum: S: Se for Inspection? Project No.: S1/84/02 Date Well Constructed: Well Stick Up: (Above Ground) Constructed: Yes No Well Pit Depth: (Below Ground) Well Stick Up: (Above Pit Bottom (Below Ground)) Yes No Flow Rate: (Estimated) Yes No Flow Rate: (Estimated) Yes No Resion Around the Project No.: Summary: AECOM Project No. S1/84/02 Project No.: Stable (Stalic) Date Well Project No.: ST/84/02 Project No.: Inspected By: No Heather: Datum: Stable (Stalic) Declining (Draw Condition: Declining (Draw Condition) Stable (Stalic) Declining (Draw Condition) Photo(s) of Well Obterior?	Well I.D. #: MECP WWR #: \$718402 Client Project No.: Cloud Flow Contractor Name: Casing Material: Cyteck Concrete, etc.) Well Stick Up: (Above Pit Bottom) Cyte Concrete, etc.) Well Stick Up: (Above Pit Bottom) Cyte Concrete, etc.) Casing Material: Cyte Concrete, etc.) Cyte Concrete, etc.) C	Well I.D. #: ST/8402 Client Project No.: Client No.: C



			Well I.D. #:	m dent	AECOM Pro	elect No.: 60636190
147-4			MECP WWR #:	571840	Client Pro	Ject No.:
Water Qua	ality San	ipling:		6		
Water Quality S Obtained?	Sample	¥Yes □ No	if No, Provide	Reason:		=
Sampling Loca	tion:	autside Top	Raw or Treated	1 Sample?	Raw	
Disinfected Sar	mple Port?	☑ Yes ☐ No	Disinfection Me	thod:	Alconex	.0
Photo of Sampl (against white bac		S√Yes □ No	If No, Provide I	Reason:		1 2
Analyte Suite:	93179	4 E.	colî 1	Total (Californs	
Sample I.D.:	3247 SX	Date /	Time of	4:19	Number of Sample Bot	tles: 9
Field Water Qua	ality Paramet	ers: (record units	3)			
Temperature:	14.1	pH:	7.48		Conductivity:	1.18
Turbidity:	_	D.O.:	The same of the sa		Colour:	Clear
Odours?	None	Appe	arance/Odour:	Clau	~	
Type of Concer	n: (if applicable		☐ Water Quantity Note any differences i	in taste, odour, o	colour or clarity)	12.0
If the concern w changes were a		ation what ater quality?	Concerned	about	hate Su	gods, whent are dry
Were there any	effects of this	s concern?	happens 1	& the	well a	as My
What action was concern?	s taken to ove					4

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix N

Property ID #17 – 29 Grandview Crescent



May 3, 2022

Jennifer and Frank Caietta 29 Grandview Crescent Bradford, ON L3Z 3L1

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Caietta,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of verbal permission from yourself, a sample of treated groundwater from your private well was collected for laboratory analysis by AECOM staff on March 3rd, 2022. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Hardness (as CaCO ₃)	<0.5 mg/L	80 - 100 mg/L	OG	N
True Colour	6 TCU	5 TCU	AO	N
Total Sodium	121 mg/L	20 mg/L	AO	N

NOTE: AO – Aesthetic Objective; OG – Operational Guideline; TCU – True Colour Units. mg/L = milligrams per Litre

The presence of sodium in excess of 20 mg/L should be considered for water users who are on a sodium-restricted diet which would warrant a follow-up with the Health Department and/or their physician.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo. Hydrogeology, Environment

Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



Groundwater Supply Well Location 29 Grandview Cres

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

29 Grandview Cres, Bradford, Ontario

Owner Information:

Owner Name: Jennifer and Frank Caietta

Phone Number: 905-252-2052 Email: fcaietta@rogers.com

Well Record

Coordinates (UTM)......614838E/4888360N

(NAD83 Zone17)

Well Diameter......0.152 m Well Depth......73.76 m

Casing Position......0.61 m above ground;

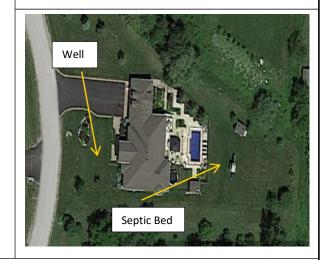
Casing Condition......Good

Water Usage.....Residential

Water Source.....Overburden

Static Water Level......42.67 m

The well was not accessible for inspection due to snow covered. Therefore, the photo of the well is not available.



Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources...None

Location of Septic Tank......Downgrade in the rear yard

Treatment System......Reverse Osmosis, iron filter, and water softener

Recent Test Results.....None

Water Sampled......Yes (March 3, 2022)

Sample Source...... Kitchen sink tap (treated)

Appearance......Clear

Comments:

- The well sampled is the residential well and as been used for 16 years. No previous issues.
- Curious about when the BBP construction will occur.
- Every single tap at the property goes through treatment system.
- When the kitchen sink tap was set to cold, the water felt more warmer than usual.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

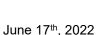
Parameters	Test Results	Guideline/Standard	Criteria Type
Hardness (as CaCO ₃)	<0.5 mg/L	80 - 100 mg/L	OG
True Colour	6 TCU	5 TCU	AO
Total Sodium	121 mg/L	20 mg/L	AO

Notes:

- 1. Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 4. mg/L Milligrams per Litre
- 5. TCU True Colour Units







Jennifer and Frank Caietta 29 Grandview Crescent Bradford, ON L3Z 3L1

AECOM Imagine it. Delivered.

60636190 **Project No:**

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Caietta,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of verbal permission from yourself, a sample of raw groundwater from your private well was collected for laboratory analysis by AECOM staff on May 31st, 2022. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the Ontario Drinking Water Standards, Objectives and Guidelines (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Total Sodium	67.1 mg/L	20 mg/L	AO	N
Apparent Colour	43.3 TCU	5 TCU	AO	N
Total Iron	0.650 mg/L	0.3 mg/L	AO	N

NOTE: AO - Aesthetic Objective; OG - Operational Guideline; TCU - True Colour Units. mg/L = milligrams per Litre

The presence of sodium in excess of 20 mg/L should be considered for water users who are on a sodium-restricted diet which would warrant a follow-up with the Health Department and/or their physician.

For your information, the Well Aware Booklet - A Guide To Caring For Your Well created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



Groundwater Supply Well Location 29 Grandview Cres

Project Name: Bradford Bypass - CR4 Expansion

Project#: 60636190

Residence Address:

29 Grandview Cres, Bradford, Ontario

Owner Information:

Owner Name: Jennifer and Frank Caietta

Phone Number: 905-252-2052 Email: fcaietta@rogers.com

Well Record

Coordinates (UTM)......614838E/4888360N

(NAD83 Zone17)

Well Diameter......0.152 m Well Depth......73.76 m

Casing Position......0.61 m above ground;

Casing Condition.....Good

Water Usage.....Residential

Water Source.....Overburden

Static Water Level......42.67 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources...None

Location of Septic Tank......Downgrade in the rear yard

Treatment System......Reverse Osmosis, iron filter, and water softener

Recent Test Results...... Treated Sample on March 3, 2022

Comments:

- The well sampled is the residential well and as been used for 16 years. No previous issues.
- Curious about when the BBP construction will occur.
- Flushmount casing/casing lid of well is exactly at the ground/grass level.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Sodium	67.1 mg/L	20 mg/L	AO
Apparent Colour	43.3 TCU	5 TCU	AO
Total Iron	0.650 mg/L	0.3 mg/L	AO

Notes:

- 1. Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. OG Operational Guideline (parameters which must be controlled for effective treatment)
- 4. mg/L Milligrams per Litre
- 5. TCU True Colour Units





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 22T869736

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Mar 11, 2022

PAGES (INCLUDING COVER): 14 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 14

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

ATTENTION TO: Brian Holden
SAMPLED BY:Brian Holden

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2022-03-03 DATE REPORTED: 2022-03-11

SAMPLE DESCRIPTION: 29 Grandview

 Parameter
 Unit
 G / S
 RDL
 35755

 Escherichia coli
 CFU/100mL
 0
 0

 Total Coliforms
 CFU/100mL
 0
 0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3575541 Escherichia coli, Total Coliforms RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

CHEMIST OF CHEMIST OF



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

ATTENTION TO: Brian Holden SAMPLED BY:Brian Holden

				Water Q	uality Assess	ment (mg/L)	
DATE RECEIVED: 2022-03-03							DATE REPORTED: 2022-03-11
			SA	SCRIPTION: MPLE TYPE: E SAMPLED:	29 Grandview Water 2022-03-03 11:35		
Parameter	Unit	G / S: A	G / S: B	RDL	3575541		
Electrical Conductivity	μS/cm			2	505		
рН	pH Units		6.5-8.5	NA	8.15		
Saturation pH (Calculated)					9.63		
Langelier Index (Calculated)					-1.48		
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	<0.5		
Total Dissolved Solids	mg/L		500	10	290[<b]< td=""><td></td><td></td></b]<>		
Alkalinity (as CaCO3)	mg/L		30-500	5	240		
Bicarbonate (as CaCO3)	mg/L			5	240		
Carbonate (as CaCO3)	mg/L			5	<5		
Hydroxide (as CaCO3)	mg/L			5	<5		
Fluoride	mg/L	1.5		0.05	0.32[<a]< td=""><td></td><td></td></a]<>		
Chloride	mg/L		250	0.10	17.7[<b]< td=""><td></td><td></td></b]<>		
Nitrate as N	mg/L	10.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Bromide	mg/L			0.05	<0.05		
Sulphate	mg/L		500	0.10	<0.10[<b]< td=""><td></td><td></td></b]<>		
Ortho Phosphate as P	mg/L			0.10	<0.10		
Ammonia as N	mg/L			0.02	0.32		
Total Phosphorus	mg/L			0.02	0.10		
Total Organic Carbon	mg/L			0.5	3.0		
True Colour	TCU		5	5	6[>B]		
Turbidity	NTU		5	0.5	<0.5[<b]< td=""><td></td><td></td></b]<>		
Total Calcium	mg/L			0.10	<0.10		
Total Magnesium	mg/L			0.10	<0.10		
Total Potassium	mg/L			0.50	<0.50		
Total Sodium	mg/L	20	200	0.10	121[A-B]		
Total Aluminum	mg/L		0.1	0.010	<0.010[<b]< td=""><td></td><td></td></b]<>		
Total Antimony	mg/L	0.006		0.003	<0.003[<a]< td=""><td></td><td></td></a]<>		
Total Arsenic	mg/L	0.01		0.003	<0.003[<a]< td=""><td></td><td></td></a]<>		

Certified By:

Inis Verastegui



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD
SAMPLING SITE:

ATTENTION TO: Brian Holden SAMPLED BY:Brian Holden

OAIIII EIITO OITE.						O/ tim	ELD BT:BHair	Toldell		
			Wa	ater Q	uality Assessm	ent (mg/L)				
DATE RECEIVED: 2022-03-03								DATE REPORT	ED: 2022-03-11	
			SAMPLE DESCRI SAMPLE DATE SAM	TYPE:	29 Grandview Water 2022-03-03 11:35					
Parameter	Unit	G / S: A	G/S:BR	RDL	3575541					
Total Barium	mg/L	1.0	0.	.002	<0.002[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Beryllium	mg/L		0.	.001	<0.001					
Total Boron	mg/L	5.0	0.	010	0.102[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Cadmium	mg/L	0.005	0.	.001	<0.001[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Chromium	mg/L	0.05	0.	.003	<0.003[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Cobalt	mg/L		0.	.001	<0.001					
Total Copper	mg/L		1 0.	.003	0.013[<b]< td=""><td></td><td></td><td></td><td></td><td></td></b]<>					
Total Iron	mg/L		0.3 0.	010	0.073[<b]< td=""><td></td><td></td><td></td><td></td><td></td></b]<>					
Total Lead	mg/L	0.010	0.	.001	<0.001[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Manganese	mg/L		0.05 0.	002	<0.002[<b]< td=""><td></td><td></td><td></td><td></td><td></td></b]<>					
Total Mercury	mg/L	0.001	0.0	0001	<0.0001[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Molybdenum	mg/L		0.	002	0.003					
Total Nickel	mg/L		0.	.003	< 0.003					
Total Selenium	mg/L	0.05	0.	002	<0.002[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Silver	mg/L		0.	002	<0.002					
Total Strontium	mg/L		0.	005	< 0.005					
Total Thallium	mg/L		0.	006	<0.006					
Total Tin	mg/L		0.	002	<0.002					
Total Titanium	mg/L		0.	010	<0.010					
Total Tungsten	mg/L		0.	010	<0.010					
Total Uranium	mg/L	0.02	0.	002	<0.002[<a]< td=""><td></td><td></td><td></td><td></td><td></td></a]<>					
Total Vanadium	mg/L		0.	.002	<0.002					
Total Zinc	mg/L		5 0.	020	<0.020[<b]< td=""><td></td><td></td><td></td><td></td><td></td></b]<>					
Total Zirconium	mg/L		0.	004	<0.004					

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

3575541 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Inis Verastegui



Exceedance Summary

AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3575541	29 Grandview	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	Hardness (as CaCO3) (Calculated)	mg/L	80-100	<0.5
3575541	29 Grandview	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	True Colour	TCU	5	6
3575541	29 Grandview	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L)	Total Sodium	mg/L	20	121



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

Microbiology Analysis														
RPT Date: Mar 11, 2022				UPLICAT	E		REFEREN	ICE MATERIA	L METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER Batch Sample			Dup #1 Dup #	Dup #2	RPD	Method Blank	Measured	Acceptable Limits	Recovery	Lir	ptable nits	Recovery		ptable nits
		ld					Value	Lower Uppe	r	Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3575532 3575532 0 0 NA Total Coliforms 3575532 3575532 0 0 NA

Comments: NA - % RPD Not Applicable.

ONOTHION OF

Ming Basil

Certified By:

AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

	Water Analysis														
RPT Date: Mar 11, 2022			С	UPLICATI	•		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
		Camula				Method	Manaurad		ptable			ptable			ptable
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Blank	Measured Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Water Quality Assessment (mg]/L)			1											
Electrical Conductivity	3575532 35	75532	1400	1410	0.7%	< 2	103%	90%	110%						
рН	3575532 35	75532	7.80	7.83	0.4%	NA	102%	90%	110%						
Total Dissolved Solids	3571729		412	416	1.0%	< 10	96%	80%	120%						
Alkalinity (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	95%	80%	120%						
Bicarbonate (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	NA								
Carbonate (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Fluoride	3579620		< 0.05	< 0.05	NA	< 0.05	102%	70%	130%	101%	80%	120%	104%	70%	130%
Chloride	3579620		20.8	20.3	2.4%	< 0.10	90%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3579620		0.17	0.19	NA	< 0.05	95%	70%	130%	103%	80%	120%	106%	70%	130%
Nitrite as N	3579620		<0.05	<0.05	NA	< 0.05	98%	70%	130%	98%	80%	120%	101%	70%	130%
Bromide	3579620		< 0.05	< 0.05	NA	< 0.05	100%	70%	130%	99%	80%	120%	91%	70%	130%
Sulphate	3579620		49.4	48.7	1.4%	< 0.10	97%	70%	130%	103%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3579620		<0.10	<0.10	NA	< 0.10	95%	70%	130%	108%	80%	120%	100%	70%	130%
Ammonia as N	3575532 35	75532	<0.02	<0.02	NA	< 0.02	100%	70%	130%	103%	80%	120%	86%	70%	130%
Total Phosphorus	3575532 35	75532	<0.02	<0.02	NA	< 0.02	101%	70%	130%	101%	80%	120%	104%	70%	130%
Total Organic Carbon	3575532 35	75532	1.1	1.1	NA	< 0.5	92%	90%	110%	96%	90%	110%	93%	80%	120%
True Colour	3573150		<5	<5	NA	< 5	99%	90%	110%						
Turbidity	3573150		3.1	3.1	0.0%	< 0.5	102%	80%	120%						
Total Calcium	3575539 35	75539	108	107	0.9%	< 0.10	99%	70%	130%	97%	80%	120%	95%	70%	130%
Total Magnesium	3575539 35	75539	39.8	39.0	2.0%	< 0.10	103%	70%	130%	100%	80%	120%	96%	70%	130%
Total Potassium	3575539 35	75539	2.68	2.53	5.8%	< 0.50	101%	70%	130%	98%	80%	120%	93%	70%	130%
Total Sodium	3575539 35	75539	128	126	1.6%	< 0.10	101%	70%	130%	98%	80%	120%	94%	70%	130%
Total Aluminum	3575532 35		0.013	<0.010	NA	< 0.010	111%	70%	130%	118%	80%	120%	96%	70%	130%
Total Antimony	3575532 35		<0.003	<0.003	NA	< 0.003	101%	70%	130%	104%	80%	120%	102%	70%	130%
Total Arsenic	3575532 35	75532	<0.003	<0.003	NA	< 0.003	89%	70%	130%	101%	80%	120%	104%	70%	130%
Total Barium	3575532 35	75532	0.135	0.128	5.3%	< 0.002	99%	70%	130%	107%	80%	120%	106%	70%	130%
Total Beryllium	3575532 35		<0.005	<0.005	NA	< 0.001	106%	70%	130%	118%	80%	120%	93%	70%	130%
Total Boron	3575532 35		<0.010	<0.010	NA	< 0.010	100%	70%	130%	107%	80%	120%	90%	70%	130%
Total Cadmium	3575532 35	75532	<0.001	<0.001	NA	< 0.001	100%	70%	130%	100%	80%	120%	101%	70%	130%
Total Chromium	3575532 35	75532	<0.003	<0.003	NA	< 0.003	99%	70%	130%	98%	80%	120%	100%	70%	130%
Total Cobalt	3575532 35		<0.001	<0.001	NA	< 0.001	89%		130%	101%	80%	120%	95%	70%	130%
Total Copper	3575532 35		0.019	0.020	5.1%	< 0.003	95%		130%	100%	80%	120%	97%	70%	
Total Iron	3575532 35		0.012	0.026	NA	< 0.010	94%		130%	105%	80%	120%	98%		130%
Total Lead	3575532 35		0.005	0.005	0.0%	< 0.001	94%		130%	100%		120%	92%		130%
Total Manganese	3575532 35	75532	<0.002	<0.002	NA	< 0.002	93%	70%	130%	104%	80%	120%	102%	70%	130%
Total Mercury	3575532 35		<0.0001	<0.0001	NA	< 0.0001			130%	101%		120%	102%		130%
Total Molybdenum	3575532 35		<0.002	<0.002	NA	< 0.0001	98%		130%	102%	80%	120%	105%	70%	130%
Total Nickel	3575532 35		<0.002	<0.002	NA	< 0.002			130%	105%		120%	95%		130%
	33. 300 <u>L</u> 00		-5.500	-5.555	. •/ ١	- 5.550	5 170	. 5 / 0	. 55 / 5	. 5576	23/0	5/5	5576	. 5 / 0	. 55 / 5

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 14

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

		V	Vate	Ana	lysis	(Coı	ntinu	ed)							
RPT Date: Mar 11, 2022				UPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MATRIX SPIKE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value		ptable nits	Recovery	Lin	ptable nits	Recovery	1 :-	ptable nits
		lu lu					value	Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3575532	3575532	<0.002	<0.002	NA	< 0.002	102%	70%	130%	105%	80%	120%	96%	70%	130%
Total Silver	3575532	3575532	<0.002	<0.002	NA	< 0.002	92%	70%	130%	105%	80%	120%	97%	70%	130%
Total Strontium	3575532	3575532	0.403	0.410	1.7%	< 0.005	82%	70%	130%	106%	80%	120%	103%	70%	130%
Total Thallium	3575532	3575532	<0.006	< 0.006	NA	< 0.006	98%	70%	130%	99%	80%	120%	92%	70%	130%
Total Tin	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	103%	70%	130%	107%	80%	120%	104%	70%	130%
Total Titanium	3575532	3575532	<0.010	<0.010	NA	< 0.010	88%	70%	130%	86%	80%	120%	110%	70%	130%
Total Tungsten	3575532	3575532	<0.010	<0.010	NA	< 0.010	97%	70%	130%	96%	80%	120%	102%	70%	130%
Total Uranium	3575532	3575532	<0.002	< 0.002	NA	< 0.002	94%	70%	130%	98%	80%	120%	93%	70%	130%
Total Vanadium	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	91%	70%	130%	104%	80%	120%	98%	70%	130%
Total Zinc	3575532	3575532	0.041	0.034	NA	< 0.020	95%	70%	130%	101%	80%	120%	95%	70%	130%
Total Zirconium	3575532	3575532	<0.004	<0.004	NA	< 0.004	96%	70%	130%	103%	80%	120%	105%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Tris Verástegui



AGAT WORK ORDER: 22T869736

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

SAMPLING SITE:		SAMPLED BY:BII	ANALYTICAL TECHNIQUE				
PARAMETER	PARAMETER AGAT S.O.P LITERATURE REFEREN						
Water Analysis	,						
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE				
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE				
Saturation pH (Calculated)		SM 2320 B	CALCULATION				
Langelier Index (Calculated)		SM 2330B	CALCULATION				
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION				
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE				
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE				
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE				
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE				
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE				
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Nitrite as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH				
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA				
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A					
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER				
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA				
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER				
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES				
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES				
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES				
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES				
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS				

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE					
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 311	² CVAAS					
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS					



CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 22T901602

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Jun 08, 2022

PAGES (INCLUDING COVER): 14

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes		
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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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

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AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2022-05-31 DATE REPORTED: 2022-06-08

29 Grandview

SAMPLE DESCRIPTION: Cres.

SAMPLE TYPE: Water

DATE SAMPLED: 2022-05-31

11:30

 Parameter
 Unit
 G / S
 RDL
 3916843

 Escherichia coli
 CFU/100mL
 0
 0

 Total Coliforms
 CFU/100mL
 0
 0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3916843 Escherichia coli, Total Coliforms RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

CHARTERED ON THE PROPERTY OF CHEMIST OF CHEM

Certified By:



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

DRINKING WATER - Water Quality Assessment (mg/L)

- JI	DATE RECEIVED: 2022-05-31	DATE REPORTED: 2022-06-08
- 1		

DATE RECEIVED: 2022-05-31						DATE REPORTED: 2022-00-08
					29 Grandview	
			SAMPLE DE	SCRIPTION:	Cres.	
			SAI	MPLE TYPE:	Water	
			DATE	SAMPLED:	2022-05-31 11:30	
Parameter	Unit	G / S: A	G / S: B	RDL	3916843	
Electrical Conductivity	μS/cm			2	467	
рΗ	pH Units	6.5-8.5		NA	8.00	
Hardness (as CaCO3) (Calculated)	mg/L	80-100		0.5	93.2	
Total Dissolved Solids	mg/L	500		10	258[<a]< td=""><td></td></a]<>	
Alkalinity (as CaCO3)	mg/L	30-500		5	257	
Fluoride	mg/L		1.5	0.05	0.30[<b]< td=""><td></td></b]<>	
Chloride	mg/L	250		0.10	6.36[<a]< td=""><td></td></a]<>	
Nitrate as N	mg/L		10.0	0.05	<0.05[<b]< td=""><td></td></b]<>	
Nitrite as N	mg/L		1.0	0.05	<0.05[<b]< td=""><td></td></b]<>	
Bromide	mg/L			0.05	<0.05	
Sulphate	mg/L	500		0.10	<0.10[<a]< td=""><td></td></a]<>	
Ortho Phosphate as P	mg/L			0.10	<0.10	
Ammonia as N	mg/L			0.02	1.59	
Total Phosphorus	mg/L			0.02	0.12	
Total Organic Carbon	mg/L			0.5	7.1	
Apparent Colour	TCU	5		2.50	43.3[>A]	
Turbidity	NTU	5		0.5	1.8[<a]< td=""><td></td></a]<>	
Total Calcium	mg/L			0.10	18.7	
Total Magnesium	mg/L			0.10	11.3	
Total Potassium	mg/L			0.50	1.17	
otal Sodium	mg/L	200	20	0.10	67.1[B-A]	
otal Aluminum	mg/L	0.1		0.010	<0.010[<a]< td=""><td></td></a]<>	
otal Antimony	mg/L		0.006	0.003	<0.003[<b]< td=""><td></td></b]<>	
otal Arsenic	mg/L		0.01	0.003	<0.003[<b]< td=""><td></td></b]<>	
otal Barium	mg/L		1.0	0.002	0.094[<b]< td=""><td></td></b]<>	
otal Beryllium	mg/L			0.001	<0.001	
Total Boron	mg/L		5.0	0.010	0.138[<b]< td=""><td></td></b]<>	
Total Cadmium	mg/L		0.005	0.001	<0.001[<b]< td=""><td></td></b]<>	

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

DRINKING WATER - Water Quality Assessment (mg/L)

DATE RECEIVED: 2022-05-31 DATE REPORTED: 2022-06-08 29 Grandview SAMPLE DESCRIPTION: Cres. **SAMPLE TYPE:** Water DATE SAMPLED: 2022-05-31 11:30 Unit RDL 3916843 Parameter G / S: A G / S: B Total Chromium 0.05 0.003 mg/L <0.003[<B] **Total Cobalt** mg/L 0.001 < 0.001 **Total Copper** 0.003 mg/L 1 0.030[<A]0.3 Total Iron mg/L 0.010 0.650[>A] 0.001 Total Lead mg/L 0.010 <0.001[<B] Total Manganese mg/L 0.05 0.002 0.013[<A] Total Mercury mg/L 0.001 0.0001 <0.0001[<B] Total Molybdenum mg/L 0.002 0.009 0.003 < 0.003 Total Nickel mg/L 0.05 0.002 **Total Selenium** mg/L <0.002[<B] Total Silver 0.002 mg/L < 0.002 Total Strontium mg/L 0.005 0.313 < 0.006 Total Thallium mg/L 0.006 Total Tin 0.002 mg/L < 0.002 Total Titanium mg/L 0.010 < 0.010

< 0.010

<0.002[<B]

< 0.002

0.030[<A]

< 0.004

0.010

0.002

0.002

0.020

0.004

0.02

5

Comments:

Total Tungsten

Total Uranium

Total Zinc

Total Vanadium

Total Zirconium

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3916843 Dilution required, RDL has been increased accordingly.

mg/L

mg/L

mg/L

mg/L

mg/L

Analysis performed at AGAT Toronto (unless marked by *)

STEMICAL PROPERTY OF THE PROPE



Exceedance Summary

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3916843	29 Grandview Cres.	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Apparent Colour	TCU	5	43.3
3916843	29 Grandview Cres.	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Total Iron	mg/L	0.3	0.650
3916843	29 Grandview Cres.	ON 169/03 MAC/IMAC	DRINKING WATER - Water Quality Assessment (mg/L)	Total Sodium	mg/L	20	67.1



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Microbiology Analysis																	
RPT Date: Jun 08, 2022 DUPLICATE					REFEREN	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE				
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank			Measured		ptable nits	Recovery	Lin	ptable nits	Recovery		ptable nits
		ld					Value	Lower	Upper		Lower	Upper		Lower	Upper		

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3916758 3916758 NA **Total Coliforms** 3916758 3916758 NA

Comments: NA - % RPD Not Applicable.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

			Wate	er Ar	nalys	is								
RPT Date: Jun 08, 2022			DUPLICAT	E	RE	REFEREN	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE		KE
PARAMETER		mple Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery		ptable nits	Recovery		ptable nits
TANAMETER	Baton	d Dup#1	Dup #2	I D		Value	Lower	Upper	recovery	Lower	Upper	recovery	Lower	Upper
DRINKING WATER - Water Qu	uality Assessment (mg/L)			•			•		•				•
Electrical Conductivity	3913596	321	325	1.2%	< 2	103%	90%	110%						
рН	3913596	7.66	7.75	1.2%	NA	102%	90%	110%						
Total Dissolved Solids	3916347	368	376	2.2%	< 10	98%	80%	120%						
Alkalinity (as CaCO3)	3913596	92	95	3.7%	< 5	97%	80%	120%						
Fluoride	3913753	<0.05	<0.05	NA	< 0.05	103%	70%	130%	105%	80%	120%	93%	70%	130%
Chloride	3913753	51.0	51.6	1.2%	< 0.10	97%	70%	130%	102%	80%	120%	106%	70%	130%
Nitrate as N	3913753	< 0.05	< 0.05	NA	< 0.05	95%	70%	130%	104%	80%	120%	105%	70%	130%
Nitrite as N	3913753	< 0.05	< 0.05	NA	< 0.05	98%	70%	130%	94%	80%	120%	103%	70%	130%
Bromide	3913753	< 0.05	< 0.05	NA	< 0.05	102%	70%	130%	103%	80%	120%	100%	70%	130%
Sulphate	3913753	76.2	75.5	1.0%	< 0.10	100%	70%	130%	100%	80%	120%	106%	70%	130%
Ortho Phosphate as P	3913753	<0.10	<0.10	NA	< 0.10	106%	70%	130%	97%	80%	120%	120%	70%	130%
Ammonia as N	3913753	< 0.02	< 0.02	NA	< 0.02	109%	70%	130%	99%	80%	120%	98%	70%	130%
Total Phosphorus	3916347	0.05	0.04	NA	< 0.02	99%	70%	130%	98%	80%	120%	100%	70%	130%
Total Organic Carbon	3916758 3916	758 2.0	2.0	NA	< 0.5	96%	90%	110%	108%	90%	110%	101%	80%	120%
Apparent Colour	3915077	14.2	16.3	13.5%	< 2.5	106%	90%	110%						
Turbidity	3913753	9.6	9.6	0.7%	< 0.5	96%	80%	120%						
Total Calcium	3915077	271	264	2.6%	< 0.10	101%	70%	130%	102%	80%	120%	97%	70%	130%
Total Magnesium	3915077	78.9	77.1	2.3%	< 0.10	104%	70%	130%	104%	80%	120%	96%	70%	130%
Total Potassium	3915077	35.2	34.4	2.4%	< 0.50	103%	70%	130%	103%	80%	120%	94%	70%	130%
Total Sodium	3915077	451	439	2.7%	< 0.10	103%	70%	130%	103%	80%	120%	92%	70%	130%
Total Aluminum	3929053	0.755	0.818	8.0%	< 0.010	100%	70%	130%	107%	80%	120%	117%	70%	130%
Total Antimony	3929053	< 0.003	< 0.003	NA	< 0.003	100%	70%	130%	101%	80%	120%	101%	70%	130%
Total Arsenic	3929053	0.007	0.008	NA	< 0.003	92%	70%	130%	95%	80%	120%	96%	70%	130%
Total Barium	3929053	0.076	0.081	5.3%	< 0.002	100%	70%	130%	98%	80%	120%	105%	70%	130%
Total Beryllium	3929053	<0.001	<0.001	NA	< 0.001	101%	70%	130%	109%	80%	120%	100%	70%	130%
Total Boron	3929053	0.229	0.225	1.5%	< 0.010	100%	70%	130%	104%	80%	120%	101%	70%	130%
Total Cadmium	3929053	< 0.001	< 0.001	NA	< 0.001	101%	70%	130%	99%	80%	120%	92%	70%	130%
Total Chromium	3929053	0.004	0.004	NA	< 0.003	101%	70%	130%	102%	80%	120%	101%	70%	130%
Total Cobalt	3929053	0.003	0.003	NA	< 0.001	100%	70%	130%	101%	80%	120%	101%	70%	130%
Total Copper	3929053	0.008	0.008	NA	< 0.003	100%	70%	130%	98%	80%	120%	96%	70%	130%
Total Iron	3929053	1.96	2.05	4.7%	< 0.010	100%	70%	130%	103%	80%	120%	113%	70%	130%
Total Lead	3929053	0.014	0.015	6.1%	< 0.001	101%	70%	130%	98%	80%	120%	97%	70%	130%
Total Manganese	3929053	0.315	0.327	3.9%	< 0.002	100%	70%	130%	103%	80%	120%	109%	70%	130%
Total Mercury	3913753	<0.0001	<0.0001	NA	< 0.0001	105%	70%	130%	99%	80%	120%	99%	70%	130%
Total Molybdenum	3929053	0.013	0.014	6.8%	< 0.002	102%	70%	130%	101%	80%	120%	106%	70%	130%
Total Nickel	3929053	0.009	0.012	NA	< 0.003	101%	70%	130%	102%	80%	120%	102%	70%	130%
Total Selenium	3929053	0.009	0.009	NA	< 0.002	101%	70%	130%	105%	80%	120%	96%	70%	130%
Total Silver	3929053	< 0.002	< 0.002	NA	< 0.002			130%	99%	80%	120%	95%	70%	130%
Total Strontium	3929053	0.803	0.835	3.9%	< 0.005			130%	105%		120%	107%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 14

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Water Analysis ((Continued)
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RPT Date: Jun 08, 2022			DUPLICATE			REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE				
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	ank Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld						Lower	Upper	,	Lower	Upper	,		Upper
Total Thallium	3929053		<0.006	<0.006	NA	< 0.006	94%	70%	130%	105%	80%	120%	102%	70%	130%
Total Tin	3929053		0.002	0.002	NA	< 0.002	100%	70%	130%	101%	80%	120%	103%	70%	130%
Total Titanium	3929053		0.033	0.011	NA	< 0.010	97%	70%	130%	105%	80%	120%	109%	70%	130%
Total Tungsten	3929053		<0.010	< 0.010	NA	< 0.010	87%	70%	130%	87%	80%	120%	91%	70%	130%
Total Uranium	3929053		0.003	0.003	NA	< 0.002	92%	70%	130%	108%	80%	120%	108%	70%	130%
Total Vanadium	3929053		0.003	0.004	NA	< 0.002	100%	70%	130%	104%	80%	120%	106%	70%	130%
Total Zinc	3929053		0.076	0.080	NA	< 0.020	105%	70%	130%	109%	80%	120%	104%	70%	130%
Total Zirconium	3929053		< 0.004	< 0.004	NA	< 0.004	102%	70%	130%	100%	80%	120%	104%	70%	130%

Comments: NA Signifies Not Applicable

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

DRINKING WATER - Water Quality Assessment (mg/L)

Ammonia as N 3916843 3916843 1.59 1.61 1.3% < 0.02 104% 70% 130% 101% 80% 120% 70% 130%

Comments: NA Signifies Not Applicable

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

Certified By:



Method Summary

CLIENT NAME: AECOM CANADA LTD AGAT WORK ORDER: 22T901602

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190

AGAT WORK ORDER: 22T901602

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:				
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE			
Water Analysis		·				
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE			
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE			
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION			
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE			
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE			
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Nitrite as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA			
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER			
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER			
Apparent Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA			
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER			
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	² CVAAS			

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Ministry of the Environment

Well	Tag	Num	ber (Place sticker and	print number below)
.,	`	,A	035292	

Well Record
Regulation 903 Ontario Water Resources Act

page $\underline{\mathcal{L}}$ of $\underline{\mathbf{3}}$

tructions for Completing Form

All SectionQuestionAll metre	n the lons m es rega	Province or ust be comparding compsurements	f Ontario pleted in foleting this shall be	ull to avoid delays application can be reported to 1/10 th	in processi e directed to	ng. Further in o the Water V	istructions an	lease retain for futu d explanations are a ment Coordinator a	vallable t 416-2	on the bac 35-6203.	ck of t	his form.
 Please present 	rint cle	early in blue	or black	ink only.		MUN		Ministry U	se Only		ОТ	
				tion of Well Info							-	
_		iew Cre	es.			West GW City/Town/Vill	1111mbu		partment	t/Block/Tra	N ct etc	
RR#/Street Nu	mber/r	vame				Bradfo	rd	pl.	51M3	337		
GPS Reading		IAD Zone		- I I	ing ~ R e 3 6 0	Unit Make/Mo	odel Mod		ndifferentia ifferentiate	ed, specify	Avera	gea
Log of Over	burd	en and Be	drock Ma	terials (see inst	ručtions)					Dept	h	Metres
General Colour	Mo	ost common r	material	Other Ma	terials			al Description		Froi		To
brown		clay		loar	_		£	i11		0		12
brown		loam		sand	1				,	12	-	24
blue		clay								24		180
blue		c1ay		small s	stones		der	se		180		230
red		clay								230 235		235 238
grey 🤢		silt sand								238		242
grey												
Hole I	Diame	ter		Cons	truction Rec	ord				ell Yield		
	etres	Diameter Centimetres	Inside	Material	Wall thickness	Depth	Metres ET	Pumping test metho	~	aw Down Water Level		ecovery Water Leve
From	То	Centimetres	diam centimetres	Waterial	centimetres	From	То	bailer Pump intake set at	min	Metres	min	Metres
					Casing			(metres)	Level	140	0	195
				X Steel Fibreglass	· · · · · · · · · · · · · · · · · · ·			Pumping rate - (litres/min) 10gp	m 1	136.9	1	188
Wate	r Reco	ord	6 1/2	Plastic Concrete Galvanized	.188	2A.G.	238	Duration of pumping		152.8	2	182.4
Water found at Metres		d of Water		Steel Fibreglass				hrs + n		158.3	3	173
	Fresh	Sulphur		Plastic Concrete				of pumpingmetr		156.5	3	1/3
Gas U	Salty	Minerals		Galvanized Steel Fibreglass				Recommended pum type.	` 	163	4_	172.5
	Fresh	Sulphur		Plastic Concrete				Recommended pun		167.2	5	168.4
Gas Other: —	Salty	Minerals		Galvanized				depthmetr				
	Fresh	Sulphur	0.434		Screen			Recommended pun rate. (litres/min)	¹ P 10 15	180 187	10 15	154.4
Gas Cher: ——	Salty	Minerals	Outside diam	Steel Fibreglass Plastic Concrete	Slot No.			If flowing give rate -		191	20	145.8
After test of we			6	Galvanized	12	238	242	(litres/min)	25	193.4	25 30	143
Other, spec				No C	asing or Sc	reen	<u> </u>	If pumping discontinued, give reason.	40	194.6 195	40	140
Chlorinated X	Vec	No		Open hole					50 60	195	50 60	140
Ciliotinated X						Abandonmont		Locatio		195	00	140
Depth set at - M		ging and Se		ord Annula slurry, neat cement slurry	v) etc Volu	Abandonment ime Placed		ow show distances of we			and bu	ilding.
From 4	то 20	Grout			(cul	oic metres)	Indicate north	oy arrow.	o th	4		
-4	20	GLOUL	& Dei						1	112		,
							,	1				V
								3			4	\
					,				3			Ĭ
Cable Tool		Rotary		Construction Diamond		Digging		=				
Rotary (conv		l) 🔲 Air perd		Jetting		Other		3 9	49!	•		
Rotary (reve	rse)	Boring	Wat	Driving er Use				4. /	70-	7		
▼ Domestic		Industri	al	Public Sup	ply	Other		V				
Stock		☐ Comme ☐ Municip		☐ Not used ☐ Cooling & a	air conditioning	44.	Audit No.	A O 1 E A	Date Wel	l Completed	YY	MM, DD
				atus of Well		dana di (Othan)	Was the well	42154 owner's information	Date Deli	-20C	<u>6</u>	5 17 MM DD
Water Supp Observation		☐ Recharge w ☐ Abandoned,	insufficient			idoned, (Other)	package delive	OWITE S INTOTTICATION				
Test Hole		Abandoned,		Replaceme				Ministry	Use On	ly		
Name of Well C		or		W	/ell Contractor	I I	Data Source		Contracto	°40	9	
Maltby Business Addre	Ss (stre	well Di	cillin per, city etc.)	g Inc.	640	9	Date Floceined	8 2006, MM , DD		nspection	YYYY	MM DD
R.R.#3	, #	4459 li	ine 5,	Tottenham	LOG /ell Technician	1WO		0 Z VUU	Well Roo	ord Number		
Name of Well T			ıırst name)		T-155		Remarks		AAGII LAGO	ora Humbel		
Signature of Te	chnicia			Da	ate Submitted _{YY}	YY MM DD						
0506E (09/03)	ACC.	-1-JWOP	Co	ntractor's Copy 🔲 🐧	/linistry's Cop	y 📝 Well Ow	ner's Copy	Cet	te formu	le est disp	onible	en frança

A				AA
A	-	U	U	M

		Well I.D. #		AECOM Project No	o.:		
		MECP WWR #	MECP WWR #:		Client Project No.:		
Well Owne	er Informatio	on:					
Property Owner	Name: Coiet	ta - Jennifer	and fr	ark			
Property Addres				idford L323	SLI		
Telephone:	905-2	52-2052	Email:	fcaiettae	rogers, com		
Name of Person Completing Sur		ur-Jennit	Cer .				
Telephone:			Email:	Table 1			
Relationship to Property Owner	383		Date of Su Completio				
Name of Origina (if known/differen							
Occupant	of Property	Served by W	ell: (if othe	r than Owner)			
Name:							
Telephone:		Email:	* **				
Address:							
Well Locat	ion:						
Lot:	Conces	sion:		Township:			
Well Const	truction Det	ails:	***************************************	***************************************			
Well Record Available?	☐ Yes ☐ No	Date Well Constructed:	2005	Well Contractor			
Well Type: (Drilled / Bored / Dug)	Drilled	Casing Material: (Steel, Concrete, etc.)		Well Casing Diameter:			
Well Stick Up: (Above Ground)		Well Depth: (Below Ground)		Water Level: (Below Ground)			
Is Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)	Y	Well Stick Up: (Above Pit Bottom)			
Is Well Flowing?	✓ Yes □ No	Flow Rate:		Contractor:			
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐ I	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No		
is the Well:	Accessible for Direct Sampling?	☐ Yes ☐ No	OR I	Buried, In a Well Pit, or Other Confined Space?	☐ Yes ☐ No		
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:		Depth of Top of Screen: Below Ground)			

					Well I.D. #:						
				ME	MECP WWR #:			Client Project No.:			
Pumping E	quip	omei	nt:								
ump Type:		Jet Pu	тр 🗆	Submers	sible 🗆 Pisto	on Pump	☐ Other	(please de	scribe):		
ump Horsepowe	er:			Pump	Age:			Pumping Capacity:			
Pump Intake Dept Below Ground)	th:			Pump (If Not i	Location:			Pumping (If Known)	Rate:		
Pressure Tank:	Ту	/pe:					4	Capacity	Hull I		
Vater Treatment: if present)					Softener 🗆 I			te type)			
Vell Usage	:	We	-11	oca.	ted in	Tro	nty	ord	150	eptic	zink
Primary Use(s):	Dom	estic:	Yes	i □ No	Livestock:	☐ Yes	□No	Lawn Wa	tering:	☐ Ye	es 🗆 No
of Persons Using Well:	4	<u> </u>	#of Live			Other Uses:			Daily At		
ndoor Plumbing Washroom(s), Show aundry, Pool, Spa,	ver(s),		sher,		- Wash - Dish - Lau	wash	x 3				
Sewage Se	rvio	ing:						4 1	Distan		
Private Sewage System or Munic	ipal:	Pr	ivat		ystem Type: eptic tank, etc.	Sep	itic/	gravit	Distant from V	ce Vell:	
Well Location:		□ Up	hill 🗆	Downhill	Same C	Grade					
Presence of Any Potential Source (including distance of	(s) of	Contar	nination		k or Other						
Previous C	ond	cerns	s:						la a a la		7
How Long Have Operated a Busi				l, or y?	Occupa	mey !	Bul	tin 2	2006	-01	rigina
Have You Experi Concerns with Y (Quantity or Quality	our W				□ Yes ☑ No					5.	our
Cause(s) of the Previous Conce	rn?	☐ Cor	ntaminati	on 🗆 C	ailure 🗆 Plo Other (Please	describe):				9	
		1	Jeve	a ho	we h	ad a	ny	Conc	ems	h	ith
Water_Well_Survey_Form_2021-08	-30_606361	190 Docx			Well	and	Se	pric	•		



			Well I.D. #:		AECOM Project No.:		
		MECP WWR #:			Client Project No.:		
Moll Modif	ication / I	Maintanan	201				
Well Modif	ication / i	waintenand	ce: 				
Has Your Well Ever Been	Deepened?	☐ Yes ☑wo	Cleaned?	☐ Yes ☐ No	Reconstructed or Replaced?	☐ Yes ►No	
If Yes to Any of Please Provide I)		
Other Deta	ils:		*	n e			
Other Details tha	at May be Relev	ant to Assessin	g the Curren	t Condition of Yo	our Well Supply:		
		11 12 12 12	7774				
- NO CO	nams						
- adda	d boost	er Dum	onig	inally	20		
- PIMELY	thing	has b	een				
0.0	opera-	tional	and	Senicin	N		
					3		
		5000					
					2000 1000 1000		
Property O	wner Par	ticipation i	in Monit	oring Prog	ıram:		
Does the Proper and/or Sample Y	ty Owner and/o	r Occupant Gran	nt Permissio	n for MTO/AECO	M to Monitor	Yes □ No	
	O 5	1.	. /	\ .,			
(ennt	fu Caie	etta	4	Cautter	So	at 14121	
•	Owner / Occupa		7	Signature		Date	



Well I.D. #:	AECOM Project No.:
MECP WWR #:	Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant)

Well located in Front Yard

Cap - mid yard

in front of Front entrance

- D Septre Tank - Rear Yourd.

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

		-	-
Δ			Λ
	-	w.	71

· · · · · ·		y	A0387°	7'2 AECOM Pun	lost No :	
		MECP WWI	R#: 4	Client Pro	-	
Field Visit	Log (To Be Comp	leted by AECOM	Staff)			
General De	etails:					
Project Name:	BBP			Project No.:		0636190
Address:	29 Grand	drier re	Į.	Inspected By:	Hol	den/Parith
Date:	Mar. 3/22		1:00-12:00	Weather:	Ele	ar Icold
Easting:	614838	Northing: 4	1888360	Datum:	N.	AD 83
Well Detail	ls:					
ls Well Accessib	ole for Inspection?	☐ Yes ATNo	If No, Provide Re	eason: Shu	W	covered
MECP Water Wel	A038292	Date Well Constructed:	May 17	Contractor Na	ne:	Maltby's Web Drilling Inc.
Well Type: (Drilled / Bored / Dug)	Drilled	Well Stick Up: (Above Ground)		Casing Materia (Steel, Concrete,		Steel
Well Located in a Well Pit?	☐ Yes ဩrNo	Well Pit Depth: (Below Ground)		Well Stick Up: (Above Pit Bottom)		
Well Casing Diameter:	6 44 "	Well Depth: (Below Ground)	242 ft	Groundwater L (Below Ground)	.evel:	235 fl.
Pump On / Off?	□ On □ Off	Water Level Condition:	Stable (Static)	Declining (Dra	wdown)	☐ Rising (Recovery)
Flowing Well?	☐ Yes ☐ No	Flow Rate: (Estimated)		Well Cap Type	:	
Well Screen Installed?	≧ Yes □ No	If Yes, Length & Slot Size:	4 ft/12 Sict	Top of Screen (Below Ground)	:	238 Ft
ls There a Depre Well Casing Ext	ession Around the erior?	☐ Yes ☐ No	Phot	o(s) of Well Obt	ained?	☐ Yes ☐ No
Observation(s)	Summary:					
- wate	tant	Storge	for house	e		
- veru	SP OSMOSE		Litter,	2 Fift	e p	
- Sof	lene.	1	(the second secon		
	en e		The state of the s			

AECOM

		Well I.D. #:							
Nater Qua	ality San	pling	:						
Water Quality S Obtained?	ample	ð Yes [□No	If No, Prov	ide Reason:				
Sampling Local	tion:	Titoler	Top	Cy Raw or Treated San					
Disinfected Sar	nple Port?	Yes [] No	Disinfection	n Method:	wred			
Photo of Sampl (against white bac		¥ Yes [□No	If No, Prov	ide Reason:				
Analyte Suite:	RCAP,	Feca	11:	Total	Coliforn	2 S			
Sample I.D.:	29 Gra	dview	Date / Sampl	Time of ing:	11:35	Number of Sample Bottle	es: 7		
Field Water Qu	ality Paramet	ers: (reco	rd units,)					
Temperature:	AND THE RESIDENCE OF THE PROPERTY OF THE PROPE	×	рН:			Conductivity:			
Turbidity:			D.O.:			Colour:			
Odours?	None		Appe	arance/Odo	ur: <i>Clee</i>				
Type of Concei	'n: (if applicabl	e)			antity	-			
If the concern v									
Were there any	effects of th	is concer	n?						
What action wa	is taken to o	ercome t	his						
too wh	heh Se	f af		cdu	i is u	nore work	n/cold		

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com

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		•	$\overline{}$	# V B

Project Name: 2	9 brandvien	a Don		Project No.:	606	36190		
	29 Grandview	. ,		Inspected E	~			
	5121/22		100	Weather:	DP			
P X AT A STATE A	4.1394587		4.5812338	Datum:				
Well Details								
s Well Accessible	for Inspection?	□Yes □No	If No, Provide Re	eason:				
MECP Water Well Record No.:		Date Well Constructed:		Contractor	Name:			
Well Type: 'Drilled / Bored / Dug)	Drillad	Well Stick Up: (Above Ground)		Casing Material: (Steel, Concrete, etc.)				
Well Located in Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)	190000	Well Stick Up: (Above Pit Bottom)				
Well Casing Diameter:	E O V	Well Depth: (Below Ground)		Groundwater Level: (Below Ground)				
Pump On / Off?	□ On □ Off	Water Level Condition:	☐ Stable (Static)	Declining (Drawdown)	Rising (Recover		
Flowing Well?	☐ Yes ⋈ No	Flow Rate: (Estimated)		Well Cap T	ype:			
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:		Top of Scr (Below Groun				
Is There a Depres Well Casing Exter	sion Around the	☐ Yes ☑ No	Phot	Photo(s) of Well Obtained?				
Observation(s) Su								
- flesh man	The state of the s	asing 12 ls	at exactly a	u the go	ass J gross	devel		
- flish man	ut lasing / (asing 12 b	at exactly a	4 the go	au J gron	d level.		

AECOM

			1	Well I.D. #		AECOM Pr	oject No.:
			1	MECP WWR #		Client Pr	oject No.:
Nater Qua	ality San	npling	j :				
Water Quality S Obtained?	Sample	□ Yes	□No	If No, Prov	ide Reason:	_	
Sampling Loca	tion: Bad	Lon upper d		Raw or Treated Sample?		Renw /A	coording to own
Disinfected Sample Port? Photo of Sample Obtained? (against white background)		☑Yes ☐ No		Disinfectio	n Method:	Chris	
				If No, Prov	ide Reason:		
Analyte Suite:	ODWas	3					
Sample I.D.:	29 Grandvikus Date			Time of bling:	11:30	Number of Sample Bo	ttles: 8
Field Water Qu	uality Paramet	ers: (rec	ord unit	s)			(有5)的2.参约 以 检查多
Temperature:	19-92	c'	pH:	8.60	Total Control of the	Conductivity:	0.971 ms/cm
Turbidity:	0.01	170	D.O.:	Elifa .	ns/L Do	Colour:	Yellow fint
Odours?	0.309	9/	Appe	earance/Odo	UF: ORPHIN	- 120	
Type of Conce	rn: (if applicable	9)		☐ Water Qua	antity	Quality r, colour or clarity)	
If the concern to changes were	was contamin apparent to w	ation wh ater qual	at ity?	/			
Vere there any	effects of thi	s concer	n?	/			7 2
What action was taken to overcome this concern?				_			

AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix O

Property ID #142 – 1562 Holborn Road

May 3, 2022

Bob and Ann Liszon 1562 Holborn Road Queensville, ON L0G 1R0

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. and Ms. Liszon,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on March 3rd, 2022. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)		
Hardness (as CaCO ₃)	120 mg/L	80 - 100 mg/L	OG	Ν		
Total Sodium	41.8 mg/L	20 mg/L	AO	N		

NOTE: AO – Aesthetic Objective; OG – Operational Guideline.

mg/L = milligrams per Litre

The presence of sodium in excess of 20 mg/L should be considered for water users who are on a sodium-restricted diet which would warrant a follow-up with the Health Department and/or their physician.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo. Hydrogeology, Environment

Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



<u>Groundwater Supply Well Location – 1562 Holborn Road</u>

Project Name: Bradford Bypass Project#: 60636190

Residence Address:

1562 Holborn Road, Queensville, ON

Owner Information:

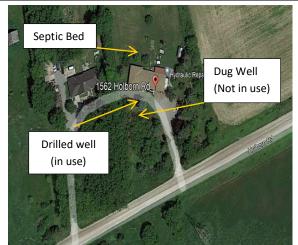
Owner Name: Bob and Ann Liszon Phone Number: 416-566-6191 Email: squirtcat123@hotmail.com

Well Record

Ministry of the Environment, Conservation, and Parks (MCEP) – Water Well Record is not available.



Well



Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources... None

Location of Septic Tank.....same grade in the back yard

Treatment System......Water Softener

Recent Test Results.....None

Water Sampled......Yes (March 3, 2022)

Sample Source...... Basement untreated tap (near pressure tank)

Appearance.......Clear, slightly Sulphur like odour

Comments:

- The well sampled is the residential well and has no history of well issues.
- On March 3rd, 2022, after completing the sampling, AECOM staff received a phone call from homeowner and informed that there isn't water in the house and wanted to come back, and check and investigate the issue. After careful investigation, it was concluded that the pressure tank lost the pressure, and it may need to be repressurized.
- In addition, there is another supply well (dug well) located about 25 ft south of the drilled supply well. According to the homeowner, this dug well is not in use.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Hardness (as CaCO ₃)	120 mg/L	80 - 100 mg/L	OG
Total Sodium	41.8 mg/L	20 mg/L	AO

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
 AO - Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- OG Operational Guideline (parameters which must be controlled for effective treatment)
- mg/L Milligrams per Litre





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 22T869736

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Mar 11, 2022

PAGES (INCLUDING COVER): 15 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 15

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



ATTENTION TO: Brian Holden

AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE: SAMPLED BY:Brian Holden

Total Coliforms & E. Co	i (Using MI Agar)
-------------------------	-------------------

DATE REPORTED: 2022-03-11 DATE RECEIVED: 2022-03-03

1562 Holbom

SAMPLE DESCRIPTION: Rd.

> **SAMPLE TYPE:** Water

DATE SAMPLED: 2022-03-03

10:30

3575540 **Parameter** Unit G/S RDL Escherichia coli CFU/100mL 0 0 Total Coliforms CFU/100mL 0 0

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3575540 Escherichia coli, Total Coliforms RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY CHEMIST



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD SAMPLING SITE:

ATTENTION TO: Brian Holden SAMPLED BY:Brian Holden

Water Quality Assessment (mg/L)										
DATE RECEIVED: 2022-03-03							DATE REPORTED: 2022-03-			
			SA	SCRIPTION: MPLE TYPE: E SAMPLED:	1562 Holbom Rd. Water 2022-03-03 10:30					
Parameter	Unit	G / S: A	G / S: B	RDL	3575540					
Electrical Conductivity	μS/cm			2	411					
рН	pH Units		6.5-8.5	NA	7.96					
Saturation pH (Calculated)					7.50					
Langelier Index (Calculated)					0.461					
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	120					
Total Dissolved Solids	mg/L		500	10	222[<b]< td=""><td></td><td></td></b]<>					
Alkalinity (as CaCO3)	mg/L		30-500	5	179					
Bicarbonate (as CaCO3)	mg/L			5	179					
Carbonate (as CaCO3)	mg/L			5	<5					
Hydroxide (as CaCO3)	mg/L			5	<5					
Fluoride	mg/L	1.5		0.05	0.16[<a]< td=""><td></td><td></td></a]<>					
Chloride	mg/L		250	0.10	27.4[<b]< td=""><td></td><td></td></b]<>					
Nitrate as N	mg/L	10.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>					
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>					
Bromide	mg/L			0.05	0.32					
Sulphate	mg/L		500	0.10	<0.10[<b]< td=""><td></td><td></td></b]<>					
Ortho Phosphate as P	mg/L			0.10	<0.10					
Ammonia as N	mg/L			0.02	0.60					
Total Phosphorus	mg/L			0.02	0.03					
Total Organic Carbon	mg/L			0.5	1.5					
True Colour	TCU		5	5	5[B]					
Furbidity	NTU		5	0.5	<0.5[<b]< td=""><td></td><td></td></b]<>					
Fotal Calcium	mg/L			0.10	23.9					
Total Magnesium	mg/L			0.10	14.6					
Total Potassium	mg/L			0.50	1.85					
Total Sodium	mg/L	20	200	0.10	41.8[A-B]					
Total Aluminum	mg/L		0.1	0.010	<0.010[<b]< td=""><td></td><td></td></b]<>					
Total Antimony	mg/L	0.006		0.003	<0.003[<a]< td=""><td></td><td></td></a]<>					

Certified By:

Trus Verastegui



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

ATTENTION TO: Brian Holden SAMPLED BY:Brian Holden

	Water Quality Assessment (mg/L)												
DATE RECEIVED: 2022-03-03						DATE REPORTED: 2022-03-11							
			SAMPLE DESCRIPTION: SAMPLE TYPE: DATE SAMPLED:		1562 Holbom Rd. Water 2022-03-03 10:30								
Parameter	Unit	G / S: A	G / S: B	RDL	3575540								
Total Arsenic	mg/L	0.01		0.003	<0.003[<a]< td=""><td></td></a]<>								
Total Barium	mg/L	1.0		0.002	0.104[<a]< td=""><td></td></a]<>								
Total Beryllium	mg/L			0.001	<0.001								
Total Boron	mg/L	5.0		0.010	0.101[<a]< td=""><td></td></a]<>								
Total Cadmium	mg/L	0.005		0.001	<0.001[<a]< td=""><td></td></a]<>								
Total Chromium	mg/L	0.05		0.003	<0.003[<a]< td=""><td></td></a]<>								
Total Cobalt	mg/L			0.001	<0.001								
Total Copper	mg/L		1	0.003	0.006[<b]< td=""><td></td></b]<>								
Total Iron	mg/L		0.3	0.010	0.176[<b]< td=""><td></td></b]<>								
Total Lead	mg/L	0.010		0.001	0.003[<a]< td=""><td></td></a]<>								
Total Manganese	mg/L		0.05	0.002	0.006[<b]< td=""><td></td></b]<>								
Total Mercury	mg/L	0.001	(0.0001	<0.0001[<a]< td=""><td></td></a]<>								
Total Molybdenum	mg/L			0.002	<0.002								
Total Nickel	mg/L			0.003	<0.003								
Total Selenium	mg/L	0.05		0.002	<0.002[<a]< td=""><td></td></a]<>								
Total Silver	mg/L			0.002	< 0.002								
Total Strontium	mg/L			0.005	1.12								
Total Thallium	mg/L			0.006	<0.006								
Total Tin	mg/L			0.002	< 0.002								
Total Titanium	mg/L			0.010	<0.010								
Total Tungsten	mg/L			0.010	<0.010								
Total Uranium	mg/L	0.02		0.002	<0.002[<a]< td=""><td></td></a]<>								
Total Vanadium	mg/L			0.002	<0.002								
Total Zinc	mg/L		5	0.020	<0.020[<b]< td=""><td></td></b]<>								
Total Zirconium	mg/L			0.004	<0.004								

Certified By:

Tris Verastegui



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

ATTENTION TO: Brian Holden
SAMPLED BY:Brian Holden

Water Quality Assessment (mg/L)

DATE RECEIVED: 2022-03-03 DATE REPORTED: 2022-03-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 -

Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

3575540 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Exceedance Summary

AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3575540	1562 Holbom Rd.	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	Hardness (as CaCO3) (Calculated)	mg/L	80-100	120
3575540	1562 Holbom Rd.	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L)	Total Sodium	mg/L	20	41.8



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

Microbiology Analysis															
RPT Date: Mar 11, 2022 DUPLICATE					REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE				
PARAMETER	Batch Sample	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured	Accep Limi		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
PARAMETER		Id					Value	Lower	Upper		Lower	Upper	,	Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3575532 3575532 0 0 NA Total Coliforms 3575532 3575532 0 0 NA

Comments: NA - % RPD Not Applicable.

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Page 7 of 15

AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

				Wate	er Ar	nalys	is								
RPT Date: Mar 11, 2022			С	UPLICATI	•		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
		Camula				Method	Manaurad		ptable			ptable			ptable
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Blank	Measured Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Water Quality Assessment (mg]/L)			1											
Electrical Conductivity	3575532 35	75532	1400	1410	0.7%	< 2	103%	90%	110%						
рН	3575532 35	75532	7.80	7.83	0.4%	NA	102%	90%	110%						
Total Dissolved Solids	3571729		412	416	1.0%	< 10	96%	80%	120%						
Alkalinity (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	95%	80%	120%						
Bicarbonate (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	NA								
Carbonate (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Fluoride	3579620		< 0.05	< 0.05	NA	< 0.05	102%	70%	130%	101%	80%	120%	104%	70%	130%
Chloride	3579620		20.8	20.3	2.4%	< 0.10	90%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3579620		0.17	0.19	NA	< 0.05	95%	70%	130%	103%	80%	120%	106%	70%	130%
Nitrite as N	3579620		<0.05	<0.05	NA	< 0.05	98%	70%	130%	98%	80%	120%	101%	70%	130%
Bromide	3579620		< 0.05	< 0.05	NA	< 0.05	100%	70%	130%	99%	80%	120%	91%	70%	130%
Sulphate	3579620		49.4	48.7	1.4%	< 0.10	97%	70%	130%	103%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3579620		<0.10	<0.10	NA	< 0.10	95%	70%	130%	108%	80%	120%	100%	70%	130%
Ammonia as N	3575532 35	75532	<0.02	<0.02	NA	< 0.02	100%	70%	130%	103%	80%	120%	86%	70%	130%
Total Phosphorus	3575532 35	75532	<0.02	<0.02	NA	< 0.02	101%	70%	130%	101%	80%	120%	104%	70%	130%
Total Organic Carbon	3575532 35	75532	1.1	1.1	NA	< 0.5	92%	90%	110%	96%	90%	110%	93%	80%	120%
True Colour	3573150		<5	<5	NA	< 5	99%	90%	110%						
Turbidity	3573150		3.1	3.1	0.0%	< 0.5	102%	80%	120%						
Total Calcium	3575539 35	75539	108	107	0.9%	< 0.10	99%	70%	130%	97%	80%	120%	95%	70%	130%
Total Magnesium	3575539 35	75539	39.8	39.0	2.0%	< 0.10	103%	70%	130%	100%	80%	120%	96%	70%	130%
Total Potassium	3575539 35	75539	2.68	2.53	5.8%	< 0.50	101%	70%	130%	98%	80%	120%	93%	70%	130%
Total Sodium	3575539 35	75539	128	126	1.6%	< 0.10	101%	70%	130%	98%	80%	120%	94%	70%	130%
Total Aluminum	3575532 35		0.013	<0.010	NA	< 0.010	111%	70%	130%	118%	80%	120%	96%	70%	130%
Total Antimony	3575532 35		<0.003	<0.003	NA	< 0.003	101%	70%	130%	104%	80%	120%	102%	70%	130%
Total Arsenic	3575532 35	75532	<0.003	<0.003	NA	< 0.003	89%	70%	130%	101%	80%	120%	104%	70%	130%
Total Barium	3575532 35	75532	0.135	0.128	5.3%	< 0.002	99%	70%	130%	107%	80%	120%	106%	70%	130%
Total Beryllium	3575532 35		<0.005	<0.005	NA	< 0.001	106%	70%	130%	118%	80%	120%	93%	70%	130%
Total Boron	3575532 35		<0.010	<0.010	NA	< 0.010	100%	70%	130%	107%	80%	120%	90%	70%	130%
Total Cadmium	3575532 35	75532	<0.001	<0.001	NA	< 0.001	100%	70%	130%	100%	80%	120%	101%	70%	130%
Total Chromium	3575532 35	75532	<0.003	<0.003	NA	< 0.003	99%	70%	130%	98%	80%	120%	100%	70%	130%
Total Cobalt	3575532 35		<0.001	<0.001	NA	< 0.001	89%		130%	101%	80%	120%	95%	70%	130%
Total Copper	3575532 35		0.019	0.020	5.1%	< 0.003	95%		130%	100%	80%	120%	97%	70%	
Total Iron	3575532 35		0.012	0.026	NA	< 0.010	94%		130%	105%	80%	120%	98%		130%
Total Lead	3575532 35		0.005	0.005	0.0%	< 0.001	94%		130%	100%		120%	92%		130%
Total Manganese	3575532 35	75532	<0.002	<0.002	NA	< 0.002	93%	70%	130%	104%	80%	120%	102%	70%	130%
Total Mercury	3575532 35		<0.0001	<0.0001	NA	< 0.0001			130%	101%		120%	102%		130%
Total Molybdenum	3575532 35		<0.002	<0.002	NA	< 0.0001	98%		130%	102%	80%	120%	105%	70%	130%
Total Nickel	3575532 35		<0.002	<0.002	NA	< 0.002			130%	105%		120%	95%		130%
	33. 300 <u>L</u> 00		-5.500	-5.555	. •/ ١	- 5.550	5 170	. 5 / 0	. 55 / 5	. 5576	23/0	5/5	5576	. 5 / 0	. 55 / 5

AGAT QUALITY ASSURANCE REPORT (V1)

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AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

		١	Nater	Ana	lysis	(Coı	ntinu	ed)							
RPT Date: Mar 11, 2022			C	UPLICAT	E		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Measured Limits		Recovery	Lin	ptable nits	Recovery	1 1 1 1 1	ptable nits
		la la					value	Lower	Upper	·	Lower	Upper		Lower	Upper
Total Selenium	3575532	3575532	<0.002	<0.002	NA	< 0.002	102%	70%	130%	105%	80%	120%	96%	70%	130%
Total Silver	3575532	3575532	<0.002	<0.002	NA	< 0.002	92%	70%	130%	105%	80%	120%	97%	70%	130%
Total Strontium	3575532	3575532	0.403	0.410	1.7%	< 0.005	82%	70%	130%	106%	80%	120%	103%	70%	130%
Total Thallium	3575532	3575532	<0.006	<0.006	NA	< 0.006	98%	70%	130%	99%	80%	120%	92%	70%	130%
Total Tin	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	103%	70%	130%	107%	80%	120%	104%	70%	130%
Total Titanium	3575532	3575532	<0.010	<0.010	NA	< 0.010	88%	70%	130%	86%	80%	120%	110%	70%	130%
Total Tungsten	3575532	3575532	<0.010	<0.010	NA	< 0.010	97%	70%	130%	96%	80%	120%	102%	70%	130%
Total Uranium	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	94%	70%	130%	98%	80%	120%	93%	70%	130%
Total Vanadium	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	91%	70%	130%	104%	80%	120%	98%	70%	130%
Total Zinc	3575532	3575532	0.041	0.034	NA	< 0.020	95%	70%	130%	101%	80%	120%	95%	70%	130%
Total Zirconium	3575532	3575532	<0.004	<0.004	NA	< 0.004	96%	70%	130%	103%	80%	120%	105%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Iris Verástegui



AGAT WORK ORDER: 22T869736

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

SAMPLING SITE:		OAMII EED BT.BII	AMPLED BY:Brian Holden			
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE			
Water Analysis	,					
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE			
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE			
Saturation pH (Calculated)		SM 2320 B	CALCULATION			
Langelier Index (Calculated)		SM 2330B	CALCULATION			
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION			
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE			
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE			
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE			
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE			
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE			
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Nitrite as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH			
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA			
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A				
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER			
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA			
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER			
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES			
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS			

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

	iii Liito Off L.				
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 311	² CVAAS		
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		

Δ	E	C	0	N	1
		•		•	

		Well I.D. #	<u> </u>	AECOM Project No.:	1	
	MECP WWR #: Client Project No.:					
Well Owne	r Informatio	n:				
Property Owner	Name: Rol	and Ani	n L152	5.0		
December Andrews	KI (MAKE)		milet			
Property Addres	s: 15 k	a Holb	orn ro	ad, Queens	ville on	
Telephone:	416	566 6191	Email:	HRSOBEL		
Name of Person Completing Surv	rey: A	nn Lis	zon			
Telephone:	647	203 4364	Email:	Squirtca	+ 123@hotmail.com	
Relationship to Property Owner:	Self		Date of Surve Completion:			
Name of Original			· ·		000	
(if known/different	from above)					
Occupant o	of Property	Served by W	ell: (if other th	en Owner)		
Name: Q		<u> </u>				
	so b and		520M			
releptione:	16 566	6191 Email:	HRSOL	sell.net		
Address:	562 4	e/para re	200	no ollivers	106180	
		01801111	المرك طي	SADALLE ON	C alka	
Well Locati	ion:					
Lot: 26	Conces	sion: 3	Т	ownship: East	Gwillimbery	
				11431	O WITIMEDITY	
Well Const	ruction Det	ails:				
Well Record Available?	□ Yes 🗶 No	Date Well Constructed:	Unknow	Well Contractor		
Well Type: (Drilled / Bored / Dug)	Drilled	Casing Material: (Steel, Concrete, etc.)	No	Well Casing Diameter:	unknown	
Well Stick Up: (Above Ground)	Yes	Well Depth: (Below Ground)	No	Water Level: (Below Ground)	250 feet	
Is Well Located in a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)		Well Stick Up: (Above Pit Bottom)		
Is Well Flowing?	☐ Yes ☐ No	Flow Rate:		Contractor:		
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐ No	Is Wire Conduit Tight to Well Cap?	☐ Yes ☐ No	
THE TEXAS MANAGES	Accessible for _ Direct Sampling?	Yes □ No		ed, In a Well Pit, or er Confined Space?	☐ Yes No	
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:		th of Top of Screen: w Ground)		



					Well I.D. #:			AECOM P	roject No.:		
				ME	CP WWR #:		-	Client Project No.:			
Pumping E	qι	ıipme	nt: 📐	10+	Know	n to	hor	ne oi	vne:		
Pump Type:					ible 🗆 Pisto						
Pump Horsepower:		Pump A	Pump Age:				Pumping Capacity:				
				tump Location: f Not in Well)				Pumping Rate: (If Known)			
Pressure Tank:		Type:						Capacity		100	
Water Treatment: (if present)					oftener 🗆 V r (please desc			e type)			
Well Usage):										
Primary Use(s):	Do	mestic:	1 Yes	□ No	Livestock:	☐ Yes		Lawn Wa	atering:	☐ Ye	es No
# of Persons Using Well:	-	3	#of Live Watered			Other Uses:	12. Hosa	Bibs	Daily An		
Indoor Plumbing (Washroom(s), Shoot Laundry, Pool, Spa, Sewage Se	wer(s	s), Dishwa:)	sher,		15						
Private Sewage System or Munic					stem Type: ptic tank, etc.)	y/e	- 3		Distance from We	ell:	nKnow
Well Location:		□ Up	hill 🗆 C	ownhill –	Same Gr	ade					
Presence of Any Potential Source (including distance of	(s) o	f Contan	nination:	je Tank	or Other	1) on)E			
Previous C	on	cerns):			, A					
How Long Have \ Operated a Busin					10)40	XV5	93	of 2	2021		-D
Have You Experie Concerns with Yo (Quantity or Quality)	our \	ed Any <u>P</u> Well Sup	revious ply?		Yes 🔀 No	If Yes, V			·		
Cause(s) of the Previous Concern	n?	1			lure 🗆 Plug ner (Please de		ncreased	d Usage [☐ Interfer	ence	



			Well I.D. #:		AECOM Project No.:	
		MEC	P WWR #:		Client Project No.:	
Nell Modif	ication / I	Maintenan	co:			
	ication / I	viaiiileiiaiil	LE.			
Has Your Well Ever Been	Deepened?	☐ Yes ☐ No	Cleaned?	☐ Yes ☐ No	Reconstructed or Replaced?	☐ Yes ☐ No
f Yes to Any of t Please Provide I	the Above, Details:					
Other Deta	ils:					
Other Details the	et May be Poley	ant to Accessin	er the Curren	4 Condition of V		
Julier Details the	IL May be Relev	ant to Assessin	g the Curren	t Condition of Yo	our well Supply:	
	<u> </u>					
	-					
roperty O	wner Par	ticipation i	in Monit	oring Prog	ıram:	
Does the Proper and/or Sample Y	ty Owner and/o	r Occupant Grar	nt Permission	n for MTO/AECO	M to Monitor	¥Yes □ No
			N			
	10	Li				
InnMarie	/ Kobe!	T LISZU,	[]		D	er.9 2021
Property (Owner / Occup	ant Name	,	Signature		Date
(Pleas	e Print in BLOCK le	etters)				



Well I.D. #: AECOM Project No.:

MECP WWR #: Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant)
Holborn road
Prive X Lamp Post
x-well head
House

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

	Well I.D. #:							
Well Modif	ication / I	Maintenand	ce:					
Has Your Well Ever Been	Deepened?	☐ Yes ☐ No	Cleaned?	☐ Yes ☐ No	Reconstructed or Replaced?	☐ Yes ☐ No		
If Yes to Any of the Please Provide I								
Other Deta	ils:			Person of discours provided and communication of the second of the secon	Secretary and a secretary and	A PARAMETER SERVICE DE MANAGEMENT DE L'ANGELE DE L'ANGELE DE L'ANGELE DE L'ANGELE DE L'ANGELE DE L'ANGELE DE L		
Other Details tha	it May be Relev	ant to Assessing	g the Curren	t Condition of Y	our Well Supply:	er de la companya de		
- Samples	Collected at	10'30 Am.	(Raw o	vorfor).				
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Property O	wner Par	ticipation i	n Monit	oring Prog	gram:			
Does the Propert and/or Sample Y	y Owner and/o	or Occupant Gran	nt Permission	n for MTO/AECO	M to Monitor	Ú Yes □ No		
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Annmarie	1 Robe	of Liszu,	- M		D	ec.9 2021		
	Owner / Occup e Print in BLOCK le			Signature		Date		

AECOM

Well I.D. #:	AECOM Project No.:
MECP WWR #:	Client Project No.:

Location Sketch (To be Completed by Property Owner / Occupant) x - well head

Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

AECOM

		W	eli I.D.	#: 6063619	AECOM Pro	ject No.	:	
		MECP	WWR	#:	Client Pro	ject No.		
Field Visit I	_og (To Be Comp	oleted by AEC	OM S	Staff)			vozovaletka,	
General De				:				
Project Name:	BBP				Project No.:	600	0636190	
Address:	1562 H	-Idborn	-	Rd.	Inspected By:		Iden / Porit	
Date:	Mar 3/22	Time:	10	1:00 -10:43	Weather:		ecr / Cold	
Easting:	623671	Northing:	4	890575			7T /NAP83	
Well Details	s:							
is Well Accessible	e for Inspection?	Yes 🗆	No	If No, Provide Re	eason:			
MECP Water Well Record No.:	NIA	Date Well Constructed	•		Contractor Nan	ne:		
Well Type: (Drilled / Bored / Dug)	prelled	Well Stick Up (Above Ground		NA	Casing Materia (Steel, Concrete, e		Steel	
Well Located in a Well Pit?	☐ Yes ☒ No	Well Pit Dept (Below Ground			Well Stick Up: (Above Pit Bottom)	29 cm	
Well Casing Diameter:	6/4"	Well Depth: (Below Ground)		Groundwater L (Below Ground)	evel:		
Pump On / Off?	□ On □ Off	Water Level Condition:		Stable (Static)	Declining (Draw	rdown)	Rising (Recovery)	
Flowing Well?	☐ Yes ☐ No	Flow Rate: (Estimated)			Well Cap Type:		Old type	
Well Screen Installed?	☐ Yes ☐ No	If Yes, Lengt & Slot Size:	th		Top of Screen: (Below Ground)			
Is There a Depres Well Casing Exter	sion Around the rior?	□ Yes 💢	No	Photo	o(s) of Well Obta	ined?	¥Yes □ No	
Observation(s) Su	ımmary:	and the second s	10 S O S O S O S	C. A. C.	COAL STATE OF THE			
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AECOM

	Well I.D. #:					AECOM Project No.:			
				MECP WWR #:		Client Project No.:			
Nater Qua	ality San	pling	j :						
Water Quality Sample Obtained?		Yes	□No	If No, Provide	Reason:	1 411211	1000		
Sampling Local	tion:	Sampl	e port phasive	Raw or Treated Sample?		PAW			
Disinfected San	mple Port?	Yes				RAW Bleach	April 12 Miles		
Photo of Sampl against white bac		Yes	□No	o If No, Provide Reason:		wa bore	N 4360 -		
Analyte Suite:	RCAP,	Fed	al l		al i form	- May	t aller		
Sample I.D.:	Data / Tim				10:30	Number of Sample Bott	les: 7		
Field Water Que	ality Paramet	ers: (rec	ord units,	1032					
Temperature:	10.34		pH:	8.0	25	Conductivity:	0.434 ms	ton	
Γurbidity:	0.3 M	u	D.O.:	4.1	7 mg/L	Colour: 7DS	0.282 9/1		
Odours?	YES		Appea	8.05 Conductivity H 17 mg/L Colour: TO gearance/Odour: Clear, Shightly			ulphor ocloser		
Type of Concer	n: (if applicable	;)		☐ Water Quantity Note any differences	✓ ☑ Water	Quality	Carred 4		
f the concern w						1 1000			
Were there any	effects of thi	s conce	m?						
What action was	s taken to ov	ercome	this						

AECOM Canada Ltd.

105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com



Appendix P

Property ID #143 – 3236 Sideroad 10



May 3, 2022

Paul Watson 3236 Sideroad 10 Bradford, ON L3Z 3T8

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Paul Watson,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of written permission from yourself, a sample of raw (untreated) groundwater from your private well was collected for laboratory analysis by AECOM staff on March 3rd, 2022. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards, Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y/N)
Chloride	259 mg/L	250 mg/L	AO	N
Hardness (as CaCO ₃)	443 mg/L	80 - 100 mg/L	OG	N
Total Dissolved Solids	808 mg/L	500 mg/L	AO	N
Total Sodium	132 mg/L	20 mg/L	AO	N

NOTE: AO – Aesthetic Objective; OG – Operational Guideline.

mg/L = milligrams per Litre

The presence of sodium in excess of 20 mg/L should be considered for water users who are on a sodium-restricted diet which would warrant a follow-up with the Health Department and/or their physician.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/

Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520



If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



Groundwater Supply Well Location 3236 Sideroad 10

Project Name: Bradford Bypass Project#: 60636190

Residence Address:

3236 Sideroad 10, Bradford, ON L3Z 3T8

Owner Information:

Owner Name: Paul Watson Phone Number: 905-392-9350 Email: paul.alewatson@gmail.com

Well Record

Well

Ministry of the Environment, Conservation and Parks (MCEP) – Water Well Record is not available.



Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources...Well is covered by vegetation

Location of Septic Tank......Downgrade in the backyard (~ 100 ft from well)

Treatment System......Water Softener and Reverse Osmosis

Recent Test Results.....None

Water Sampled......Yes (March 3, 2022)

Appearance......Clear, no odour

Comments:

- The well sampled is the residential well and has no history of previous issues.
- *UV* water treatment system located in the basement does not work.
- No water supply well / groundwater related concerns regarding the BBP construction from the homeowner.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Chloride	259 mg/L	250 mg/L	AO
Hardness (as CaCO ₃)	443 mg/L	80 - 100 mg/L	OG
Total Dissolved Solids	808 mg/L	500 mg/L	AO
Total Sodium	132 mg/L	20 mg/L	AO

Notes:

- 1. Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- 2. AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- 3. OG Operational Guideline (parameters which must be controlled for effective treatme
- 4. mg/L Milligrams per Litre
- 5. Laboratory testing results for the sample / duplicate obtained indicate that concentrations of certain parameters, as shown in the table above, are in excess of *Ontario Drinking Water Quality Standards, Objectives and Guidelines* (Ontario Ministry of the Environment, 2006).





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 22T869736

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Mar 11, 2022

PAGES (INCLUDING COVER): 14 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 14

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden SAMPLING SITE: **SAMPLED BY:Brian Holden**

Total Coliforms	& E.	Coli ((Using	MI Agar)	
------------------------	------	--------	--------	----------	--

DATE REPORTED: 2022-03-11 DATE RECEIVED: 2022-03-03

> SAMPLE DESCRIPTION: 3236 SDRD 10 **SAMPLE TYPE:** Water

> > DATE SAMPLED: 2022-03-03 13:45

Parameter Unit G/S RDL 3575532 CFU/100mL Escherichia coli 0 CFU/100mL 0 Total Coliforms

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

3575532 Escherichia coli, Total Coliforms RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY CHEMIST



AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

Water Quality Assessment (mg/L)							
DATE RECEIVED: 2022-03-03 DATE REPORTED: 2022-03-11							
			SA	SCRIPTION: MPLE TYPE: E SAMPLED:	3236 SDRD 10 Water 2022-03-03 13:45		
Parameter	Unit	G / S: A	G / S: B	RDL	3575532		
Electrical Conductivity	μS/cm			2	1400		
рН	pH Units		6.5-8.5	NA	7.80		
Saturation pH (Calculated)					6.77		
Langelier Index (Calculated)					1.03		
Hardness (as CaCO3) (Calculated)	mg/L		80-100	0.5	443		
Total Dissolved Solids	mg/L		500	10	808[>B]		
Alkalinity (as CaCO3)	mg/L		30-500	5	302		
Bicarbonate (as CaCO3)	mg/L			5	302		
Carbonate (as CaCO3)	mg/L			5	<5		
Hydroxide (as CaCO3)	mg/L			5	<5		
Fluoride	mg/L	1.5		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Chloride	mg/L		250	0.12	259[>B]		
Nitrate as N	mg/L	10.0		0.05	1.14[<a]< td=""><td></td><td></td></a]<>		
Nitrite as N	mg/L	1.0		0.05	<0.05[<a]< td=""><td></td><td></td></a]<>		
Bromide	mg/L			0.05	<0.05		
Sulphate	mg/L		500	0.10	45.6[<b]< td=""><td></td><td></td></b]<>		
Ortho Phosphate as P	mg/L			0.10	<0.10		
Ammonia as N	mg/L			0.02	<0.02		
Total Phosphorus	mg/L			0.02	<0.02		
Total Organic Carbon	mg/L			0.5	1.1		
True Colour	TCU		5	5	<5[<b]< td=""><td></td><td></td></b]<>		
Turbidity	NTU		5	0.5	<0.5[<b]< td=""><td></td><td></td></b]<>		
Total Calcium	mg/L			0.32	110		
Total Magnesium	mg/L			0.34	40.9		
Total Potassium	mg/L			1.15	2.98		
Total Sodium	mg/L	20	200	0.45	132[A-B]		
Total Aluminum	mg/L		0.1	0.010	0.013[<b]< td=""><td></td><td></td></b]<>		
Total Antimony	mg/L	0.006		0.003	<0.003[<a]< td=""><td></td><td></td></a]<>		
Total Arsenic	mg/L	0.01		0.003	<0.003[<a]< td=""><td></td><td></td></a]<>		

Certified By:





AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

ATTENTION TO: Brian Holden SAMPLED BY:Brian Holden

DATE RECEIVED: 2022-03-03 Water Quality Assessment (mg/L) DATE REPORTED: 2022-03-11							
Parameter	Unit	G / S: A	G / S: B	RDL	3575532		
Total Barium	mg/L	1.0		0.002	0.135[<a]< td=""><td></td></a]<>		
Total Beryllium	mg/L			0.005	<0.005		
Total Boron	mg/L	5.0		0.010	<0.010[<a]< td=""><td></td></a]<>		
Total Cadmium	mg/L	0.005		0.001	<0.001[<a]< td=""><td></td></a]<>		
Total Chromium	mg/L	0.05		0.003	<0.003[<a]< td=""><td></td></a]<>		
Total Cobalt	mg/L			0.001	<0.001		
Total Copper	mg/L		1	0.003	0.019[<b]< td=""><td></td></b]<>		
Total Iron	mg/L		0.3	0.010	0.012[<b]< td=""><td></td></b]<>		
Total Lead	mg/L	0.010		0.001	0.005[<a]< td=""><td></td></a]<>		
Total Manganese	mg/L		0.05	0.002	<0.002[<b]< td=""><td></td></b]<>		
Total Mercury	mg/L	0.001		0.0001	<0.0001[<a]< td=""><td></td></a]<>		
Total Molybdenum	mg/L			0.002	<0.002		
Total Nickel	mg/L			0.003	<0.003		
Total Selenium	mg/L	0.05		0.002	<0.002[<a]< td=""><td></td></a]<>		
Total Silver	mg/L			0.002	<0.002		
Total Strontium	mg/L			0.005	0.403		
Total Thallium	mg/L			0.006	<0.006		
Total Tin	mg/L			0.002	<0.002		
Total Titanium	mg/L			0.010	<0.010		
otal Tungsten	mg/L			0.010	<0.010		
otal Uranium	mg/L	0.02		0.002	<0.002[<a]< td=""><td></td></a]<>		
Fotal Vanadium	mg/L			0.002	<0.002		
Total Zinc	mg/L		5	0.020	0.041[<b]< td=""><td></td></b]<>		
Total Zirconium	mg/L			0.004	<0.004		

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248, B Refers to O. Reg 169/03 -

Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines

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.

3575532 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Tris Verastegui



Exceedance Summary

AGAT WORK ORDER: 22T869736

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3575532	3236 SDRD 10	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	Chloride	mg/L	250	259
3575532	3236 SDRD 10	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	Hardness (as CaCO3) (Calculated)	mg/L	80-100	443
3575532	3236 SDRD 10	ON 169/03 AO&OG	Water Quality Assessment (mg/L)	Total Dissolved Solids	mg/L	500	808
3575532	3236 SDRD 10	ON 169/03 MAC/IMAC	Water Quality Assessment (mg/L)	Total Sodium	mg/L	20	132



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

	Microbiology Analysis														
RPT Date: Mar 11, 2022 DUPLICATE REFERENCE MATERIAL METHOD BLANK SPIKE								MAT	MATRIX SPIKE						
PARAMETER Batch		Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits			ptable nits	Recovery		ptable nits
		ld					Value	Lower	Upper	,	Lower	Upper		Lower	Upper

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3575532 3575532 0 0 NA Total Coliforms 3575532 3575532 0 0 NA

Comments: NA - % RPD Not Applicable.

MingBound

Certified By:

AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

				Wate	er Ar	nalys	is								
RPT Date: Mar 11, 2022			С	UPLICATI	•		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
		Camula				Method	Manaurad		ptable			ptable			ptable
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Blank	Measured Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Water Quality Assessment (mg]/L)			1											
Electrical Conductivity	3575532 35	75532	1400	1410	0.7%	< 2	103%	90%	110%						
рН	3575532 35	75532	7.80	7.83	0.4%	NA	102%	90%	110%						
Total Dissolved Solids	3571729		412	416	1.0%	< 10	96%	80%	120%						
Alkalinity (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	95%	80%	120%						
Bicarbonate (as CaCO3)	3575532 35	75532	302	302	0.0%	< 5	NA								
Carbonate (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Hydroxide (as CaCO3)	3575532 35	75532	<5	<5	NA	< 5	NA								
Fluoride	3579620		< 0.05	< 0.05	NA	< 0.05	102%	70%	130%	101%	80%	120%	104%	70%	130%
Chloride	3579620		20.8	20.3	2.4%	< 0.10	90%	70%	130%	104%	80%	120%	110%	70%	130%
Nitrate as N	3579620		0.17	0.19	NA	< 0.05	95%	70%	130%	103%	80%	120%	106%	70%	130%
Nitrite as N	3579620		<0.05	<0.05	NA	< 0.05	98%	70%	130%	98%	80%	120%	101%	70%	130%
Bromide	3579620		< 0.05	< 0.05	NA	< 0.05	100%	70%	130%	99%	80%	120%	91%	70%	130%
Sulphate	3579620		49.4	48.7	1.4%	< 0.10	97%	70%	130%	103%	80%	120%	108%	70%	130%
Ortho Phosphate as P	3579620		<0.10	<0.10	NA	< 0.10	95%	70%	130%	108%	80%	120%	100%	70%	130%
Ammonia as N	3575532 35	75532	<0.02	<0.02	NA	< 0.02	100%	70%	130%	103%	80%	120%	86%	70%	130%
Total Phosphorus	3575532 35	75532	<0.02	<0.02	NA	< 0.02	101%	70%	130%	101%	80%	120%	104%	70%	130%
Total Organic Carbon	3575532 35	75532	1.1	1.1	NA	< 0.5	92%	90%	110%	96%	90%	110%	93%	80%	120%
True Colour	3573150		<5	<5	NA	< 5	99%	90%	110%						
Turbidity	3573150		3.1	3.1	0.0%	< 0.5	102%	80%	120%						
Total Calcium	3575539 35	75539	108	107	0.9%	< 0.10	99%	70%	130%	97%	80%	120%	95%	70%	130%
Total Magnesium	3575539 35	75539	39.8	39.0	2.0%	< 0.10	103%	70%	130%	100%	80%	120%	96%	70%	130%
Total Potassium	3575539 35	75539	2.68	2.53	5.8%	< 0.50	101%	70%	130%	98%	80%	120%	93%	70%	130%
Total Sodium	3575539 35	75539	128	126	1.6%	< 0.10	101%	70%	130%	98%	80%	120%	94%	70%	130%
Total Aluminum	3575532 35		0.013	<0.010	NA	< 0.010	111%	70%	130%	118%	80%	120%	96%	70%	130%
Total Antimony	3575532 35		<0.003	<0.003	NA	< 0.003	101%	70%	130%	104%	80%	120%	102%	70%	130%
Total Arsenic	3575532 35	75532	<0.003	<0.003	NA	< 0.003	89%	70%	130%	101%	80%	120%	104%	70%	130%
Total Barium	3575532 35	75532	0.135	0.128	5.3%	< 0.002	99%	70%	130%	107%	80%	120%	106%	70%	130%
Total Beryllium	3575532 35		<0.005	<0.005	NA	< 0.001	106%	70%	130%	118%	80%	120%	93%	70%	130%
Total Boron	3575532 35		<0.010	<0.010	NA	< 0.010	100%	70%	130%	107%	80%	120%	90%	70%	130%
Total Cadmium	3575532 35	75532	<0.001	<0.001	NA	< 0.001	100%	70%	130%	100%	80%	120%	101%	70%	130%
Total Chromium	3575532 35	75532	<0.003	<0.003	NA	< 0.003	99%	70%	130%	98%	80%	120%	100%	70%	130%
Total Cobalt	3575532 35		<0.001	<0.001	NA	< 0.001	89%		130%	101%	80%	120%	95%	70%	130%
Total Copper	3575532 35		0.019	0.020	5.1%	< 0.003	95%		130%	100%	80%	120%	97%	70%	
Total Iron	3575532 35		0.012	0.026	NA	< 0.010	94%		130%	105%	80%	120%	98%		130%
Total Lead	3575532 35		0.005	0.005	0.0%	< 0.001	94%		130%	100%		120%	92%		130%
Total Manganese	3575532 35	75532	<0.002	<0.002	NA	< 0.002	93%	70%	130%	104%	80%	120%	102%	70%	130%
Total Mercury	3575532 35		<0.0001	<0.0001	NA	< 0.0001			130%	101%		120%	102%		130%
Total Molybdenum	3575532 35		<0.002	<0.002	NA	< 0.0001	98%		130%	102%	80%	120%	105%	70%	130%
Total Nickel	3575532 35		<0.002	<0.002	NA	< 0.002			130%	105%		120%	95%		130%
	33. 300 <u>L</u> 00		-5.500	-5.555	. •/ ١	- 5.550	5 170	. 5 / 0	. 55 / 5	. 5576	23/0	5/5	5576	. 5 / 0	. 55 / 5

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 14

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



AGAT WORK ORDER: 22T869736

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

	Water Analysis (Continued)														
RPT Date: Mar 11, 2022			C	UPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	IKE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable mits	Recovery	1 1 1 1 1	ptable nits	Recovery	1 1 10	eptable mits
		la la				Value L		Lower	Upper		Lower	Upper		Lower	Upper
Total Selenium	3575532	3575532	<0.002	<0.002	NA	< 0.002	102%	70%	130%	105%	80%	120%	96%	70%	130%
Total Silver	3575532	3575532	<0.002	<0.002	NA	< 0.002	92%	70%	130%	105%	80%	120%	97%	70%	130%
Total Strontium	3575532	3575532	0.403	0.410	1.7%	< 0.005	82%	70%	130%	106%	80%	120%	103%	70%	130%
Total Thallium	3575532	3575532	<0.006	< 0.006	NA	< 0.006	98%	70%	130%	99%	80%	120%	92%	70%	130%
Total Tin	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	103%	70%	130%	107%	80%	120%	104%	70%	130%
Total Titanium	3575532	3575532	<0.010	<0.010	NA	< 0.010	88%	70%	130%	86%	80%	120%	110%	70%	130%
Total Tungsten	3575532	3575532	<0.010	<0.010	NA	< 0.010	97%	70%	130%	96%	80%	120%	102%	70%	130%
Total Uranium	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	94%	70%	130%	98%	80%	120%	93%	70%	130%
Total Vanadium	3575532	3575532	< 0.002	< 0.002	NA	< 0.002	91%	70%	130%	104%	80%	120%	98%	70%	130%
Total Zinc	3575532	3575532	0.041	0.034	NA	< 0.020	95%	70%	130%	101%	80%	120%	95%	70%	130%
Total Zirconium	3575532	3575532	<0.004	<0.004	NA	< 0.004	96%	70%	130%	103%	80%	120%	105%	70%	130%

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:

Tris Verástegui



AGAT WORK ORDER: 22T869736

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			1
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Saturation pH (Calculated)		SM 2320 B	CALCULATION
Langelier Index (Calculated)		SM 2330B	CALCULATION
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE
Bicarbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Carbonate (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Hydroxide (as CaCO3)	INOR-93-6000	modified from SM 2320 B	PC TITRATE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA
Total Phosphorus	INOR-93-6057	modified from LACHAT 10-115-01-3A	
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER
True Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T869736 PROJECT: 60636190 **ATTENTION TO: Brian Holden SAMPLING SITE: SAMPLED BY:Brian Holden**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 311 B	² CVAAS
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

		Well I.D. #	k:	AECO	OM Project No.:	
		MECP WWR #	t:	Clie	ent Project No.:_	
Well Owne	r Informatio	n:				
Property Owner	Name: D P	AUL WA	FSON			
Property Addres		Ne Keli I		10 F	ox emfor	0 L32-358
Telephone:	905	392 9350	Email:	paul	aleva	tson@gmail.c
Name of Person Completing Surv		foul				
Telephone:		SAME	Email:		SAME	2
Relationship to Property Owner:			Date of Su Completion		Nov Z	20/21
Name of Original (if known/different		Cyril	Hend	lerson	(0	de ceased)
Occupant o	of Property	Served by W				,
Name:						
Telephone:		Email:				
Address:						
Nell Locat	ion:					
Lot:	Conces	sion:		Township:		
Well Const	ruction Det	ails:				
Well Record	☐ Yes ☑ No	Date Well Constructed:	1980	→ Well Co Name:	ntractor	
Well Type: Drilled / Bored / Dug)	Drilled.	Casing Material: (Steel, Concrete, etc.)	1980 Concre)	Well Car Diamete		
Well Stick Up: (Above Ground)	Yes.	Well Depth: (Below Ground)		Water L. (Below G.		
s Well Located n a Well Pit?	☐ Yes ☐ No	Well Pit Depth: (Below Ground)		Well Sti		
s Well Flowing?	☐ Yes ☐ No	Flow Rate:		Contrac		
Well Cap Type:	METAL	Does Cap Create a Good Seal?	☐ Yes ☐	MO I	Conduit Well Cap?	☑ Yes ☐ No
s the Well:	Accessible for Direct Sampling?	☐ Yes ੴNo		Buried, In a W Other Confine	ell Pit, or	☐ Yes ☐ No
Well Screen Installed?	☐ Yes ☐ No	If Yes, Length & Slot Size:		Depth of Top ((Below Ground)	of Screen:	



				-	Well I.D. #:_			AECOM Pro		
				ME	CP WWR #:_			Client Pro	oject No.:_	<u> </u>
Pumping E	quip	me	nt:							
Pump Type:		Jet P	ump 🗹 s	Submersi	ible 🗆 Pis	ton Pump	1 Other	(please de	scribe):	ressure
Pump Horsepowe	∍r:			Pump A	vge:	30	ics.	Pumping Capacity:		
Pump Intake Dept (Below Ground)	th:			Pump L (If Not in	ocation: Well)	30-j Basem	ent	Pumping (If Known)	Rate:	
Pressure Tank:	Туг	oe: i	/					Capacity		
Water Treatment: (if present)	100				oftener □ · (please de		•	e type)		
Well Usage):									
Primary Use(s):	Dome	stic:	Yes	□No	Livestock	: Yes	s □ No	Lawn Wa	tering:	☐ Yes ☐ No
# of Persons Using Well:	L	+	#of Live: Watered			Other Uses:			Daily An	of a Para Circle State of the Circle State of
Indoor Plumbing (Washroom(s), Shov Laundry, Pool, Spa,	wer(s), L		sher,		3 N Lan	ashron ndr~	7/. K	with ?	Lshe	sulevs.
Sewage Se	rvic	ng:								
Private Sewage System or Munic	ipal:	P	rival	Sy:	stem Type ptic tank, etc	.)	TAN	1	Distance from W	And the second s
Well Location:		□ VJ	hill MAPE	ownhill	□ Same	Grade				
Presence of Any Potential Source (including distance of	(s) of C	ontar	mination:	je Tank	or Other	N	0.			
Previous C	onc	ern	5:				702			
How Long Have \ Operated a Busir				?	54	rs.	-			
Have You Experie Concerns with Yo (Quantity or Quality)	our We				Yes N	If Yes,	When?			
Cause(s) of the Previous Concer					ilure 🏻 Pl her (Please			d Usage [☐ Interfe	rence

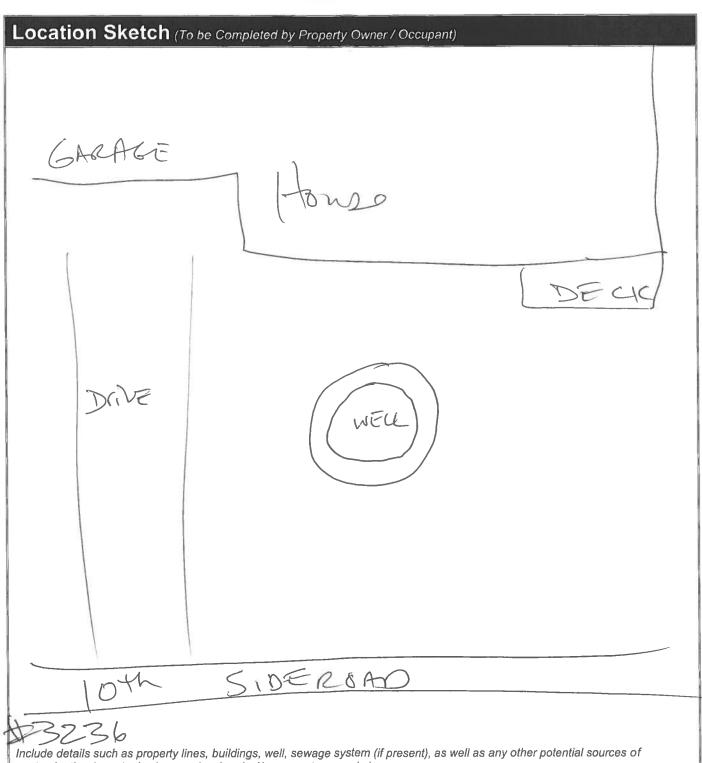


			Well I.D. #:		AECOM Project No.:	
		MEC	P WWR #:		Client Project No.:	
Vell Modifi	ication / N	Maintenan	CO'			
		viaintenan	· · ·			
as Your Well ver Been	Deepened?	☐ Yes ☑ No	Cleaned?	☐ Yes ☑ No	Reconstructed or Replaced?	☐ Yes ☐ No
Yes to Any of t lease Provide D						
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ther Details tha	t Mav be Relev	ant to Assessin	a the Curren	t Condition of Ye	our Well Supply:	
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	D	41 - 1 41				
roperty O	wner Par	ticipation	in wonit	oring Prog	gram:	
		or Occupant Gra	nt Permissio	n for MTO/AECO	M to Monitor	☐ Yes ☑ No
nd/or Sample Y	our well?					
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	Well I.D. #: MECP WWR #:	AECOM Project No.:	
	MECP WWR #:	Client Project No.:	
Location Sketch (To be Complet	ed by Property Owner / O	ccupant)	



contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).

(To Be Compl					-	001 140		
	eted by AECC	DM St	aff)					
s:		······································						
BP .				Projec	t No.:	Contract of the Contract of th	0636190	
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×								
Inspection?	☐ Yes 🗷	No	If No, Provide Re	eason:	Decor	tive ,	lcid.	
NA	Date Well Constructed	:		Contra	ctor Nar	ne:		
us	Well Stick Up (Above Ground				Materia Concrete,		Concete	
Yes No	Well Pit Dep			Well S (Above	tick Up: Pit Botton	7)		
	Well Depth: (Below Ground	d)				.evel:		
On Off	Water Level Condition:		☐ Stable (Static)	_ Decl	ining (Drav	vdown)	Rising (Recovery)	
] Yes □ No	Flow Rate: (Estimated)			Well C	ар Туре	:		
] Yes □ No						:		
Around the	☐ Yes 🏻	No	Phot	o(s) of	Well Obt	ained?	☑ Yes ☐ No	
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				and the second s	Company			
ACCESSOR CONTRACTOR OF THE PROPERTY OF THE PRO			3			and the second second		
	On Off Yes No Yes No Around the	Well Depth: (Below Ground Well Depth: (Below Ground Water Level Condition: Yes \sum No Flow Rate: (Estimated) If Yes, Leng & Slot Size: Around the	Well Depth: (Below Ground) Water Level Condition: Yes \(\sum No \) If Yes, Length & Slot Size: Around the \(\sup Yes \) No	Well Depth: (Below Ground) Water Level Condition: Yes \(\sum No \) If Yes, Length Slot Size: Around the \(\sup Yes \) Yes \(\sup No \) Phot	Well Depth: (Below Ground) Water Level Condition: Yes \(\text{No} \) If Yes, Length Slot Size: Well Condition: Yes \(\text{No} \) Photo(s) of Vertical Around the (Below Ground) Water Level Condition: Stable (Static) Decline Well Condition: Top or (Below Ground)	Well Depth: (Below Ground) Water Level Condition: Stable (Static) Declining (Draw Well Cap Type Well Cap Type Yes \(\sum No \) If Yes, Length Slot Size: Around the Yes \(\sum No \) Photo(s) of Well Obt	Well Depth: (Below Ground) Water Level Condition: Stable (Static) Declining (Drawdown) Well Cap Type: Well Cap Type: Yes \(\sum No \) If Yes, Length Slot Size: Around the Yes \(\sum No \) Photo(s) of Well Obtained?	

				Well I.D. #:_			AECOM Proje	ct No.:_	
				MECP WWR #:_			Client Proje	ct No.:_	
Vater Quality	Sam	nlina	•						
		.p9				and the control of		No. of Contrast, 2	
Water Quality Sample Obtained?		Yes	□ No	If No, Provid	de Reason:				
Sampling Location:		Samp	le Port	Raw or Trea	ated Sample?	R	aw		
Disinfected Sample P	ort?	Yes	□No	Disinfection	Method:	W	ipel		
Photo of Sample Obta against white background		D⊬Yes	□No	If No, Provi	de Reason:				
Analyte Suite: RC	AP	Fac	al /	total	ColoRe	me	5.		PER CONTRACTOR OF THE
Sample I.D.: 323	6 SP	RD10	Date / Sampl	Time of ing:	Colore 13:31		Number of Sample Bott	les:	7
Fleid Water Quality P	aramet	ers: (rec	ord units)					
Temperature:		**************************************	pH:			Co	onductivity:		
Turbidity:			D.O.:			Co	olour:		
Odours?			Appe	arance/Odou	ur:				
If the concern was co changes were appare									
Were there any effec	ts of th	is conce	rn?						
What action was take	en to ov	/ercome	this						
- Sound -> Samela -> Dup co	Collarge	leachs I hor	at with	1:45 Am. Jucation	; FD: 3	235	IM .	NO (2'00 Pm).
AECOM Canada Ltd. 105 Commerce Valley Markham, ON L3T 7V Canada	Drive V	corrent	Floor	ist who	To Kilhabin	borse	mm (bless	s won	(workers fine)
T: 905.886.7022 F: 905.538.8076 www.aecom.com	A	Horles	Plas	, kc			WWW. The second participation of the second		or visual observa
Water_Well_Survey_Form 2021-08-30_606		typ &			> MO ODON	mi,			6



Appendix Q

Property ID #102 – 3183 Sideroad 10



June 17th, 2022

Manuel Marques 3183 10 Sideroad Bradford, ON L3Z 3V4

Project No: 60636190

Regarding: Pre-Construction Water Quality Testing Results

MTO Bradford Bypass Project

Dear Mr. Marques,

AECOM Canada Ltd. (AECOM) would like to thank you for your participation in the Pre-Construction Well Assessment Program offered to local residents as part of the Bradford Bypass Project. Based on receipt of verbal permission from yourself, a sample of raw groundwater from your private well was collected for laboratory analysis by AECOM staff on May 31st, 2022. Please find attached a copy of the water quality testing results for your review and record.

Laboratory testing results for the sample obtained indicate that concentrations of certain parameters, as shown in the table below, are in excess of the *Ontario Drinking Water Standards*, *Objectives and Guidelines* (Ontario Ministry of the Environment, 2006). It should be noted, however, that these results are based on a single sample analysis and that additional testing is recommended.

PARAMETER	CONCENTRATION IN YOUR WATER	STANDARD VALUE / RANGE	STANDARD TYPE	HEALTH RELATED (Y / N)
Total Sodium	698 mg/L	20 mg/L	AO	N
Chloride	1270 mg/L	250 mg/L	AO	N
Apparent Colour	18.8 TCU	5 TCU	AO	N
Hardness (as CaCO3)	722 mg/L	80 - 100 mg/L	AO	N
Total Dissolved Solids	2660 mg/L	500 mg/L	AO	N

NOTE: AO – Aesthetic Objective; OG – Operational Guideline; TCU – True Colour Units. mg/L = milligrams per Litre

The presence of sodium in excess of 20 mg/L should be considered for water users who are on a sodium-restricted diet which would warrant a follow-up with the Health Department and/or their physician.

For your information, the *Well Aware Booklet – A Guide To Caring For Your Well* created by Green Communities Canada is available on the Walkerton Clean Water Centre (WCWC) website at:

https://wcwc.ca/well-aware-and-well-wise-program-resources-for-homeowners/



Should you have any questions or concerns regarding the quality of your well water, it is recommended that you contact your local Public Health Unit for further information and advice. Contact information for your Local Public Health Unit is provided, as follows:

Simcoe Muskoka District Health Unit

80 Bradford St. #403 Barrie, ON L4N 6S7

Website: https://www.simcoemuskokahealth.org/

Telephone: 705.721.7520

If you have any further questions, please contact:

AECOM Canada Ltd. C/O Brian Holden, P.Geo.

Hydrogeology, Environment Telephone: 226-821-2486

Email: brian.holden@aecom.com

Sincerely,

AECOM Canada Ltd.

Brian Holden, P.Geo.

Hydrogeologist

DCS Americas, Canada East (Greater Ontario / Metro Toronto)

Environment

Brian.holden@aecom.com

Encl.

cc: R. Sheikh, N. Valenton, S. Rankin, S.Schmied – AECOM;

H. Singh, L. Sarris, J. MacKinnon, R. Gribbon - MTO



Groundwater Supply Well Location – 3183 10 Sideroad

Project Name: Bradford Bypass – BBP Expansion

Project#: 60636190

Residence Address:

3183 10 Sideroad, Bradford, ON

Owner Information:

Owner Name: Manuel Marques Phone Number: 905-716-3555

Email: manuelmarques2009@hotmail.com

Well Record

Coordinates (UTM)......611440E/4886620N

(NAD83 Zone17)

Type of Well...... Dug

Constructed (year)..... July 9, 1968

Well Location..... In backyard

Well Diameter.....0.76 m

Well Depth.....11.89 m

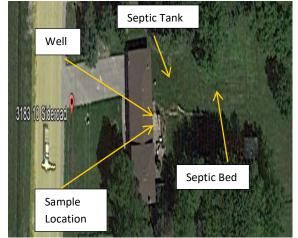
Casing Condition......Good

Water Usage.....Residential

Water Source.....Overburden

Static Water Level......2.44 m





Water Quality & Well Testing

Past Water Quality Problems...... None

Potential Contamination Sources...None

Location of Septic Tank......Downgrade in the back yard

Treatment System.....None

Recent Test Results.....None

Water Sampled......Yes (May 31, 2022)

Sample Source..... Backyard tap (raw)

Appearance......Clear

Comments:

• Curious about when the BBP construction will occur.

Quality Testing

Groundwater quality met the applicable standards for bacteriological, selected inorganic and metal parameters analyzed except for the following:

Parameters	Test Results	Guideline/Standard	Criteria Type
Total Sodium	698 mg/L	20 mg/L	AO
Chloride	1270 mg/L	250 mg/L	AO
Apparent Colour	18.8 TCU	5 TCU	AO
Hardness (as CaCO3)	722 mg/L	80 - 100 mg/L	AO
Total Dissolved Solids	2660 mg/L	500 mg/L	AO

Notes:

- Criteria are from "Ontario Drinking Water Standards" (Ontario Regulation 169/03) and "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines" (MOE, June 2003, revised June 2006)
- AO Aesthetic Objectives (parameters that may impair the taste, odour or colour of water or which may interfere with good water quality)
- mg/L Milligrams per Litre TCU True Colour Units





CLIENT NAME: AECOM CANADA LTD

50 SPORTSWORLD CROSSING RD UNIT 290

KITCHENER, ON N2P0A4

(519) 650-5313

ATTENTION TO: Brian Holden

PROJECT: 60636190

AGAT WORK ORDER: 22T901602

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Jun 08, 2022

PAGES (INCLUDING COVER): 14 VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*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
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 services.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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 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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories (V1)

Page 1 of 14

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



Certificate of Analysis

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

5835 COOPERS AVENUE

Total Coliforms & E. Coli (Using MI Agar)

DATE RECEIVED: 2022-05-31 DATE REPORTED: 2022-06-08

3183 10

SAMPLE DESCRIPTION: Sideroad

> **SAMPLE TYPE:** Water

2022-05-31

DATE SAMPLED: 09:30

Parameter	Unit	G/S	RDL	3916758
Escherichia coli	CFU/100mL	0		0
Total Coliforms	CFU/100mL	0		0

RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248 Comments:

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.

3916758 Escherichia coli, Total Coliforms RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

NIVINE BASILY CHEMIST

Certified By:



CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

DRINKING WATER - Water Quality Assessment (mg/L)

DATE RECEIVED: 2022-05-31

3183 10

SAMPLE DESCRIPTION: Sideroad

				MPLE TYPE:	Water
			DAT	E SAMPLED:	2022-05-31 09:30
Parameter	Unit	G / S: A	G / S: B	RDL	3916758
Electrical Conductivity	μS/cm			2	4590
pH	pH Units	6.5-8.5		NA	7.56
Hardness (as CaCO3) (Calculated)	mg/L	80-100		0.5	722
Total Dissolved Solids	mg/L	500		10	2660[>A]
Alkalinity (as CaCO3)	mg/L	30-500		5	438
Fluoride	mg/L		1.5	0.13	<0.13[<b]< td=""></b]<>
Chloride	mg/L	250		1.2	1270[>A]
Nitrate as N	mg/L		10.0	0.36	2.40[<b]< td=""></b]<>
Nitrite as N	mg/L		1.0	0.27	<0.27[<b]< td=""></b]<>
Bromide	mg/L			0.28	<0.28
Sulphate	mg/L	500		0.95	83.5[<a]< td=""></a]<>
Ortho Phosphate as P	mg/L			0.65	< 0.65
Ammonia as N	mg/L			0.02	<0.02
Total Phosphorus	mg/L			0.02	< 0.02
Total Organic Carbon	mg/L			0.5	2.0
Apparent Colour	TCU	5		2.50	18.8[>A]
Turbidity	NTU	5		0.5	<0.5[<a]< td=""></a]<>
Total Calcium	mg/L			0.32	213
Total Magnesium	mg/L			0.34	46.2
Total Potassium	mg/L			1.15	4.03
Total Sodium	mg/L	200	20	0.45	698[>A]
Total Aluminum	mg/L	0.1		0.010	<0.010[<a]< td=""></a]<>
Total Antimony	mg/L		0.006	0.003	<0.003[<b]< td=""></b]<>
Total Arsenic	mg/L		0.01	0.003	<0.003[<b]< td=""></b]<>
Total Barium	mg/L		1.0	0.002	0.309[<b]< td=""></b]<>
Total Beryllium	mg/L			0.001	<0.001
Total Boron	mg/L		5.0	0.010	0.030[<b]< td=""></b]<>
Total Cadmium	mg/L		0.005	0.001	<0.001[<b]< td=""></b]<>

Certified By:





CLIENT NAME: AECOM CANADA LTD

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

ATTENTION TO: Brian Holden

SAMPLED BY:

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

DRINKING WATER - Water Quality Assessment (mg/L)

DATE RECEIVED: 2022-05-31						DATE REPORTED: 2022
					3183 10	
			SAMPLE DE	SCRIPTION:	Sideroad	
				MPLE TYPE:	Water	
			DAT	E SAMPLED:	2022-05-31 09:30	
Parameter	Unit	G / S: A	G / S: B	RDL	3916758	
Total Chromium	mg/L		0.05	0.003	<0.003[<b]< td=""><td></td></b]<>	
Total Cobalt	mg/L			0.001	<0.001	
Total Copper	mg/L	1		0.003	0.032[<a]< td=""><td></td></a]<>	
Total Iron	mg/L	0.3		0.010	0.016[<a]< td=""><td></td></a]<>	
otal Lead	mg/L		0.010	0.001	0.002[<b]< td=""><td></td></b]<>	
otal Manganese	mg/L	0.05		0.002	0.005[<a]< td=""><td></td></a]<>	
Total Mercury	mg/L		0.001	0.0001	<0.0001[<b]< td=""><td></td></b]<>	
otal Molybdenum	mg/L			0.002	<0.002	
otal Nickel	mg/L			0.003	<0.003	
otal Selenium	mg/L		0.05	0.002	<0.002[<b]< td=""><td></td></b]<>	
Total Silver	mg/L			0.002	< 0.002	
Total Strontium	mg/L			0.005	0.696	
Total Thallium	mg/L			0.006	<0.006	
otal Tin	mg/L			0.002	<0.002	
otal Titanium	mg/L			0.010	<0.010	
Total Tungsten	mg/L			0.010	<0.010	
Total Uranium	mg/L		0.02	0.002	<0.002[<b]< td=""><td></td></b]<>	
Total Vanadium	mg/L			0.002	< 0.002	

Comments:

Total Zirconium

Total Zinc

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards - Aesthetic Objectives and Operational Guidelines, B Refers to O. Reg 169/03 - Ontario Drinking Water Quality Standards. Na value derived from O. Reg 248

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.

0.044[<A]

< 0.004

0.020

0.004

3916758 Dilution required, RDL has been increased accordingly.

mg/L

mg/L

5

Analysis performed at AGAT Toronto (unless marked by *)

ONLY IN THE PROPERTY OF THE PR



Exceedance Summary

AGAT WORK ORDER: 22T901602

PROJECT: 60636190

5835 COOPERS AVENUE MISSISSAUGA, ONTARIO CANADA L4Z 1Y2 TEL (905)712-5100 FAX (905)712-5122 http://www.agatlabs.com

CLIENT NAME: AECOM CANADA LTD ATTENTION TO: Brian Holden

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3916758	3183 10 Sideroad	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Apparent Colour	TCU	5	18.8
3916758	3183 10 Sideroad	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Chloride	mg/L	250	1270
3916758	3183 10 Sideroad	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Hardness (as CaCO3) (Calculated)	mg/L	80-100	722
3916758	3183 10 Sideroad	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Total Dissolved Solids	mg/L	500	2660
3916758	3183 10 Sideroad	ON 169/03 AO&OG	DRINKING WATER - Water Quality Assessment (mg/L)	Total Sodium	mg/L	200	698
3916758	3183 10 Sideroad	ON 169/03 MAC/IMAC	DRINKING WATER - Water Quality Assessment (mg/L)	Total Sodium	mg/L	20	698



AGAT WORK ORDER: 22T901602

Quality Assurance

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190 ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

Microbiology Analysis																
RPT Date: Jun 08, 2022 DUPLICATE							REFERENCE MATERIAL METHOD BLANK S					SPIKE	KE MATRIX SPIKE			
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		Acceptable Limits		Recovery	Acceptabl Limits		Recovery	Acceptable Limits	
		ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper	

Total Coliforms & E. Coli (Using MI Agar)

Escherichia coli 3916758 3916758 0 0 NA Total Coliforms 3916758 3916758 0 0 NA

Comments: NA - % RPD Not Applicable.

NIVINE E

Mun Basile

Certified By:



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Water Analysis														
RPT Date: Jun 08, 2022			DUPLICATE			REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		KE
PARAMETER		mple Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Acceptable Limits		Recovery		ptable nits
TANAMETER	Baton	d Dup#1	Dup #2	I D		Value	Lower	Upper	Recovery	Lower	Upper	recovery	Lower	Upper
DRINKING WATER - Water Qu	uality Assessment (mg/L)			•			•		•				•
Electrical Conductivity	3913596	321	325	1.2%	< 2	103%	90%	110%						
рН	3913596	7.66	7.75	1.2%	NA	102%	90%	110%						
Total Dissolved Solids	3916347	368	376	2.2%	< 10	98%	80%	120%						
Alkalinity (as CaCO3)	3913596	92	95	3.7%	< 5	97%	80%	120%						
Fluoride	3913753	<0.05	<0.05	NA	< 0.05	103%	70%	130%	105%	80%	120%	93%	70%	130%
Chloride	3913753	51.0	51.6	1.2%	< 0.10	97%	70%	130%	102%	80%	120%	106%	70%	130%
Nitrate as N	3913753	< 0.05	< 0.05	NA	< 0.05	95%	70%	130%	104%	80%	120%	105%	70%	130%
Nitrite as N	3913753	< 0.05	< 0.05	NA	< 0.05	98%	70%	130%	94%	80%	120%	103%	70%	130%
Bromide	3913753	< 0.05	< 0.05	NA	< 0.05	102%	70%	130%	103%	80%	120%	100%	70%	130%
Sulphate	3913753	76.2	75.5	1.0%	< 0.10	100%	70%	130%	100%	80%	120%	106%	70%	130%
Ortho Phosphate as P	3913753	<0.10	<0.10	NA	< 0.10	106%	70%	130%	97%	80%	120%	120%	70%	130%
Ammonia as N	3913753	< 0.02	< 0.02	NA	< 0.02	109%	70%	130%	99%	80%	120%	98%	70%	130%
Total Phosphorus	3916347	0.05	0.04	NA	< 0.02	99%	70%	130%	98%	80%	120%	100%	70%	130%
Total Organic Carbon	3916758 3916	758 2.0	2.0	NA	< 0.5	96%	90%	110%	108%	90%	110%	101%	80%	120%
Apparent Colour	3915077	14.2	16.3	13.5%	< 2.5	106%	90%	110%						
Turbidity	3913753	9.6	9.6	0.7%	< 0.5	96%	80%	120%						
Total Calcium	3915077	271	264	2.6%	< 0.10	101%	70%	130%	102%	80%	120%	97%	70%	130%
Total Magnesium	3915077	78.9	77.1	2.3%	< 0.10	104%	70%	130%	104%	80%	120%	96%	70%	130%
Total Potassium	3915077	35.2	34.4	2.4%	< 0.50	103%	70%	130%	103%	80%	120%	94%	70%	130%
Total Sodium	3915077	451	439	2.7%	< 0.10	103%	70%	130%	103%	80%	120%	92%	70%	130%
Total Aluminum	3929053	0.755	0.818	8.0%	< 0.010	100%	70%	130%	107%	80%	120%	117%	70%	130%
Total Antimony	3929053	< 0.003	< 0.003	NA	< 0.003	100%	70%	130%	101%	80%	120%	101%	70%	130%
Total Arsenic	3929053	0.007	0.008	NA	< 0.003	92%	70%	130%	95%	80%	120%	96%	70%	130%
Total Barium	3929053	0.076	0.081	5.3%	< 0.002	100%	70%	130%	98%	80%	120%	105%	70%	130%
Total Beryllium	3929053	<0.001	<0.001	NA	< 0.001	101%	70%	130%	109%	80%	120%	100%	70%	130%
Total Boron	3929053	0.229	0.225	1.5%	< 0.010	100%	70%	130%	104%	80%	120%	101%	70%	130%
Total Cadmium	3929053	< 0.001	< 0.001	NA	< 0.001	101%	70%	130%	99%	80%	120%	92%	70%	130%
Total Chromium	3929053	0.004	0.004	NA	< 0.003	101%	70%	130%	102%	80%	120%	101%	70%	130%
Total Cobalt	3929053	0.003	0.003	NA	< 0.001	100%	70%	130%	101%	80%	120%	101%	70%	130%
Total Copper	3929053	0.008	0.008	NA	< 0.003	100%	70%	130%	98%	80%	120%	96%	70%	130%
Total Iron	3929053	1.96	2.05	4.7%	< 0.010	100%	70%	130%	103%	80%	120%	113%	70%	130%
Total Lead	3929053	0.014	0.015	6.1%	< 0.001	101%	70%	130%	98%	80%	120%	97%	70%	130%
Total Manganese	3929053	0.315	0.327	3.9%	< 0.002	100%	70%	130%	103%	80%	120%	109%	70%	130%
Total Mercury	3913753	<0.0001	<0.0001	NA	< 0.0001	105%	70%	130%	99%	80%	120%	99%	70%	130%
Total Molybdenum	3929053	0.013	0.014	6.8%	< 0.002	102%	70%	130%	101%	80%	120%	106%	70%	130%
Total Nickel	3929053	0.009	0.012	NA	< 0.003	101%	70%	130%	102%	80%	120%	102%	70%	130%
Total Selenium	3929053	0.009	0.009	NA	< 0.002	101%	70%	130%	105%	80%	120%	96%	70%	130%
Total Silver	3929053	< 0.002	<0.002	NA	< 0.002			130%	99%	80%	120%	95%	70%	130%
Total Strontium	3929053	0.803	0.835	3.9%	< 0.005			130%	105%		120%	107%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 7 of 14

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.



Quality Assurance

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

Water Analysis ((Continued)
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RPT Date: Jun 08, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD	BLANK	SPIKE	MATRIX SPIKE		
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
		ld					value	Lower	Upper		Lower	Upper	,		Upper
Total Thallium	3929053		<0.006	<0.006	NA	< 0.006	94%	70%	130%	105%	80%	120%	102%	70%	130%
Total Tin	3929053		0.002	0.002	NA	< 0.002	100%	70%	130%	101%	80%	120%	103%	70%	130%
Total Titanium	3929053		0.033	0.011	NA	< 0.010	97%	70%	130%	105%	80%	120%	109%	70%	130%
Total Tungsten	3929053		<0.010	< 0.010	NA	< 0.010	87%	70%	130%	87%	80%	120%	91%	70%	130%
Total Uranium	3929053		0.003	0.003	NA	< 0.002	92%	70%	130%	108%	80%	120%	108%	70%	130%
Total Vanadium	3929053		0.003	0.004	NA	< 0.002	100%	70%	130%	104%	80%	120%	106%	70%	130%
Total Zinc	3929053		0.076	0.080	NA	< 0.020	105%	70%	130%	109%	80%	120%	104%	70%	130%
Total Zirconium	3929053		< 0.004	< 0.004	NA	< 0.004	102%	70%	130%	100%	80%	120%	104%	70%	130%

Comments: NA Signifies Not Applicable

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

DRINKING WATER - Water Quality Assessment (mg/L)

Ammonia as N 3916843 3916843 1.59 1.61 1.3% < 0.02 104% 70% 130% 101% 80% 120% 70% 130%

Comments: NA Signifies Not Applicable

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



Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190

AGAT WORK ORDER: 22T901602

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

PARAMETER	PARAMETER AGAT S.O.P		ANALYTICAL TECHNIQUE	
Microbiology Analysis				
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration	
Total Coliforms	MIC-93-7010	EPA 1604	Membrane Filtration	

Method Summary

CLIENT NAME: AECOM CANADA LTD

PROJECT: 60636190

AGAT WORK ORDER: 22T901602

ATTENTION TO: Brian Holden

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BY:			
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE		
Water Analysis		·			
Electrical Conductivity	INOR-93-6000	modified from SM 2510 B	PC TITRATE		
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE		
Hardness (as CaCO3) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION		
Total Dissolved Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE		
Alkalinity (as CaCO3)	INOR-93-6000	Modified from SM 2320 B	PC TITRATE		
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrate as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Nitrite as N	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ortho Phosphate as P	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH		
Ammonia as N	INOR-93-6059	modified from SM 4500-NH3 H	LACHAT FIA		
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER		
Total Organic Carbon	INOR-93-6049	modified from SM 5310 B	SHIMADZU CARBON ANALYZER		
Apparent Colour	INOR-93-6074	modified from SM 2120 B	LACHAT FIA		
Turbidity	INOR-93-6044	modified from SM 2130 B	NEPHELOMETER		
Total Calcium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Magnesium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Potassium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES		
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS		
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	² CVAAS		

Method Summary

CLIENT NAME: AECOM CANADA LTD

AGAT WORK ORDER: 22T901602 PROJECT: 60636190 **ATTENTION TO: Brian Holden**

SAMPLING SITE: SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Strontium	INOR-93-6003	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Thallium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tungsten	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Vanadium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zirconium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

_		tog exist
MIc	LIZIZ GIII (A A O Con VIII	5705458-
	481816192101 4111	3 9
Elev.	The Ontario Water Resources WATER WELL	Commission Act
noin.	WAILK WELL	RECORD

4 4886 620 20		_			
Elev. 5TR 950 The Ontario Water Resour					
Tasin Solve I WATER WELL	L REC	ORD			
County or Bistrict Simcoe To	wnship. Village: T	Fown or Git v	West Gwil	limhurv	
Con. 8 (10 sideroa) Lot 11 Da	te completed	9	July	1968	
	dress Box 7	OO, ERRE	orores o	NI.	
Casing and Screen Record	-	Pumpin	g Test	3-80-	
Inside diameter of casing 30 inches	Static level	8 ft.			
Total length of casing 39 ft.	Test-pumping ra	ate	1.2	G.P.M	
Type of screen	Pumping level				
Length of screen	Duration of test				
Depth to top of screen	Water clear or cl	oudy at end of	test clea	r	
Diameter of finished hole 30 inches	Recommended j	pumping rate.	1 រូ	G.P.M	
	with pump settir	ng of 37	feet below ground surfac		
Well Log	199W-		Water Record		
Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)	
top so i l	0	2	30	fresh	
sandy clay	2	14			
sandy stoney blue c	lay 14	39			
For what purpose(s) is the water to be used? house		Location	of Well		
			distances of wel		
Is well on upland, in valley, or on hillside? upland	road and	lot line. Ind	icate north by	arrow.	
DXMXX or Boring Firm J. F. KILCHING &	Ĺ	3. 2 V	V	ė	
SON LID.,		75		Ì	
Address HCLLARD LEADING, ONT.	-	3 3	MILE FRO	m E	
Licence Number 140	W &	Q Tuo'>	CURNER		
Name of Driller or Borer DAVE DRAFER,	->			13	
Address KESWICK. OFT.	31	HU	c 88	1	
Date Aug. 26, 1968	I		•	1	
(Signature of Licensed Driving or Boring Contractor)		-	S		

Form 7
OWRC COPY

CSS.S8

		Well I.D. #	<u> </u>	AECO	OM Project No.:		
		MECP WWR #	t:	Clie	Client Project No.:		
Vell Owne	r Informatio	n:					
Property Owner	Name: How	ed Maro	ues				
Property Addres	s: 3/83	Textle S	betoo	The state of	and on	1. 122314	
Telephone:	905-		Email:	man	ach man	Carportal	
Name of Person Completing Surv		Survey					
Telephone:			Email:				
Relationship to Property Owner:			Date of Surv Completion:				
Name of Origina (if known/differen							
Occupant (of Property	Served by W	ell: (if other	than Owner)			
Name:					1		
Telephone:		Email:					
		1.01kb (0)		- 17			
Address:							
Well Locat	ion:						
Lot:	Conces	sion:		Township:			
Lot.	Conces	Sion.		Township.			
Well Const	ruction Det	ails:					
Well Record Available?	☐ Yes ☑ No	Date Well Constructed:		Well Co Name:	ntractor		
Well Type: /Drilled / Bored / Dug)		Casing Material: (Steel, Concrete, etc.)		Well Ca Diamete			
Well Stick Up: (Above Ground)		Well Depth: (Below Ground)		Water L (Below G	evel:	4	
s Well Located in a Well Pit?	☐ Yes ☑ No	Well Pit Depth: (Below Ground)	4550	Well Sti (Above P	ck Up:		
s Well Flowing?	☐ Yes ☑ No	Flow Rate:		Contrac	tor:		
Well Cap Type:		Does Cap Create a Good Seal?	☐ Yes ☐ No		Conduit Well Cap?	☐ Yes ☐ No	
s the Well:	Accessible for Direct Sampling?	☑ Yes ☐ No		uried, In a W ther Confine		☐ Yes ☐ No	
Well Screen	☐ Yes ☐ No	If Yes, Length & Slot Size:		epth of Top elow Ground)	of Screen:		

			Well I.D. #:			AECOM Pro	ject No.:		
			MECP WWR #:_			Client Project No.:			
Pumping Ed	uipme	nt:							
Pump Type:	1/		bmersible □ Pis	ston Pump [☐ Other	r (please de:	scribe):		
Pump Horsepower	1/-			Pump Age: 3 years		Pumping Capacity:			
Pump Intake Depti (Below Ground)			Pump Location: If Not in Well)	inside.	4he	Pumping (If Known)	SAME PROCESSION		
Pressure Tank:	ssure Tank: Type: Hydro			Was been		Capacity:			
Water Treatment: (if present)	1984	inator 🗆 W	/ater Softener □] Other (please de			te type)	None		
Well Usage:	:								
Primary Use(s):	Domestic:	✓ Yes □	□ No Livestocl	k: Yes	⊠No	Lawn Wat	tering:	☐ Yes	No.
# of Persons Using Well:	2	#of Livesto	ock	Other Uses:			Daily Amount:		
Sewage Ser									
Private Sewage System or Municip	pal:	No	System Type (septic tank, etc		ste L	Yust	Distance from We	Physical III	. 42c
Well Location:	□ ∪р	ohill 🗆 Do	wnhill 🗆 Same	Grade					
Presence of Any A Potential Source(s (including distance or	s) of Contar	mination:	Tank or Other	V	So				
Previous Co	oncerns	s:							
How Long Have Y Operated a Busine				ears					
Have You Experie Concerns with Yo (Quantity or Quality)			☐ Yes 🖾 A	No If Yes, W	Vhen?				
The Control of the East	Secret State of the Secret								

			Well I.D. #:	AECOM Project No.:		
		MEC	P WWR #:		Client Project No.:	
ell Modifi	ication / I	Maintenan	ce:			
s Your Well	Deepened?		Cleaned?	☐ Yes XNo	Reconstructed	☐ Yes 🗖 No
er Been	Deepeneu.	700 42.0	Giodilou.	- 100 gate	or Replaced?	
es to Any of tase Provide I	the Above, Details:					
her Deta	ils:			Like State		
her Details tha	at May be Rele	vant to Assessir	a the Curren	t Condition of Yo	ur Well Supply:	
iei Details the	at may be itele	vanit to Assessin	ig the ounch	Condition of To	ат попопры,	
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200				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		100
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operty C)wner Pai	rticipation	in Moni	toring Prog	gram:	
d/or Sample \		or Occupant Gra	ant Permissio	n for MTO/AECO	M to Monitor	Yes □ N
				1.	1	1 1 1 1
, ,	11			(Helle)		. 100
James	1 / arec	sues		12/92	gal 13	05/2028
Property	Owner / Occup			Signature		Date
	ise Print in BLOCK			Orginature	-	

Project Name:	BPP			Project No.:	606	36190
	83 lo Siden	·)		Inspected By	137-	30170
	5/31/24	Time: 9:1	15	Weather:	Sunny	
Control of the second	. 1262675		9.6062614	Datum:		
Vell Details:						
s Well Accessible	for Inspection?	Ù Yes □ No	If No, Provide R	eason:		
MECP Water Well Record No.:		Date Well Constructed:		Contractor Na	ıme:	
Well Type: (Drilled / Bored / Dug)	Dug	Well Stick Up: (Above Ground)	~ 0.26m,	Casing Material: (Steel, Concrete, etc.)		Concrete
Well Located in a Well Pit?	☐ Yes 🗷 No	Well Pit Depth: (Below Ground)				
Well Casing Diameter:		Well Depth: (Below Ground)	Groundwater Level: (Below Ground)		2.05 hbtop	
Pump On / Off?	□ On □ Off	Water Level Condition:	☐ Statile (Static) ☐ Declining (Drawdown)			Rising (Recovery
lowing Well?	☐ Yes ⊠ No	Flow Rate: (Estimated)	Well Cap Type:			
Vell Screen nstalled?	☐ Yes ☐ No	If Yes, Length & Slot Size:	Top of Screen: (Below Ground)			
s There a Depress Vell Casing Exterio		☐ Yes 1214No	Phot	to(s) of Well Ob	tained?	1⊒Y€s □ No
Observation(s) Sur	nmarv:					
		Screnal Give	Samelian in	De Part 1	2100/610	GEN'L GOVE
- Cocher .	UNITED C			, etc	XVENT NO	122111 - 200

AECOM

				Well I.D. #:		AECOM Proj	ect No.:
			M	ECP WWR #:		Client Proj	ect No.:
Vater Qual	ity San	pling	:				
Water Quality San Obtained?	nple	Ves	□ No I	f No, Provi	de Reason:		
Sampling Location: Backyn2				Raw or Tre	ated Sample?	Raw	
Disinfected Samp	le Port?						
Photo of Sample (against white backg		Nes	□ No I	f No, Prov	ide Reason:		
Analyte Suite:	DWB	7					
Sample I.D.:	183 105	iderand	Date / T Samplin		9:30 Am	Number of Sample Bot	itles: 8
Field Water Quali	ity Parame	ters: (rec	ord units)				10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Temperature:	17.160		pH:	7.99	-	Conductivity:	4.26 ms/cm
Turbidity:	5.0NT	2	D.O.:	17,	79 mg/L	Colour: DPPM	V 156
Control of the State of the Sta	2.73 9		Appea	rance/Odo		v.	
Type of Concern	ı: (if applicat	le)			antity Water		
If the concern wa changes were ap				_	178.		
Were there any e	ffects of th	is conce	rn?				
What action was concern?	taken to o	vercome	this				

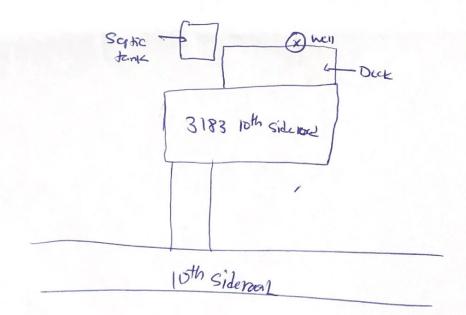
AECOM Canada Ltd. 105 Commerce Valley Drive West, 7th Floor Markham, ON L3T 7W3 Canada

T: 905.886.7022 F: 905.538.8076 www.aecom.com

AECOM

Well I.D. #:	AECOM Project No.:	
MECP WWR #:	Client Project No.:	

Location Sketch (To be Completed by Property Owner / Occupant)



Include details such as property lines, buildings, well, sewage system (if present), as well as any other potential sources of contamination (e.g., tanks, barnyards, chemical/manure storage, etc.).



* Drawing Completed by (= - beset on information Provided Brian Holden, P.Geo. Hydrogeologist, Environment Brian.Holden@aecom.com

AECOM Canada Ltd. 50 Sportsworld Crossing Road, Suite 290 Kitchener, ON N2P 0A4 Canada

T: 519.650.5313 F: 519.650.3424 www.aecom.com

