



February 11, 2026

Project Number: 250442

Rémi Godin, Senior Area Engineer

Waste Management of Canada

Watford, Ontario

Email: [rgodin@wm.com](mailto:rgodin@wm.com)

**Re: Hydrogeological Study  
2415 Carp Road, Stittsville, Ontario**

Dear Mr. Godin:

BluMetric Environmental Inc. (BluMetric®) is pleased to provide this updated technical memorandum documenting the hydrogeological and terrain assessment completed for the property owned by Waste Management of Canada Corporation (WM) at 2415 Carp Road (the 'site').

The site is located on the west side of Carp Road, immediately north of the West Carleton Environmental Centre and Transfer Station. The original assessment was undertaken to address comments received from the City of Ottawa on March 21, 2025, regarding the Site Plan Control Application for the proposed maintenance garage building west of the southwest of the existing Laurysen Building, which is on the east side of the site.

The hydrogeological assessment specifically addresses comments 24, 25 a) to 25 e) related to water supply and terrain suitability under the applicable MECP Guidelines D-5-4 and D-5-5 and the City of Ottawa's Hydrogeological and Terrain Analysis Guidelines, including the request for a potential karst assessment. Excerpts from the Pre-Consultation Meeting Feedback pertaining to hydrogeology are provided in Attachment A.

This memorandum updates the version dated September 15, 2025, to include responses to comments 44, 45, 46, and 47 from the City of Ottawa on the aforementioned memorandum on November 14, 2025. An excerpt of the Formal Review Comments is provided in Attachment B.

## **Servicing (March 21, 2025 - Comment 24)**

In response to comment 24, regarding servicing for the maintenance garage: Floor plans show washrooms and a lunch room requiring private services. A servicing report was prepared by TaskForce Engineering Inc. (TaskForce). The plan is to supply water from the existing private well that has historically served the Laurysen building, and install a new Class 4 Eljen GSF septic system



with tertiary treatment and a new infiltration bed. The Laurysen building has a design flow of 2,595 L/day (per TaskForce email, July 15, 2025). For the purposes of this application, it is understood from the same correspondence that the Laurysen building will not be in use.

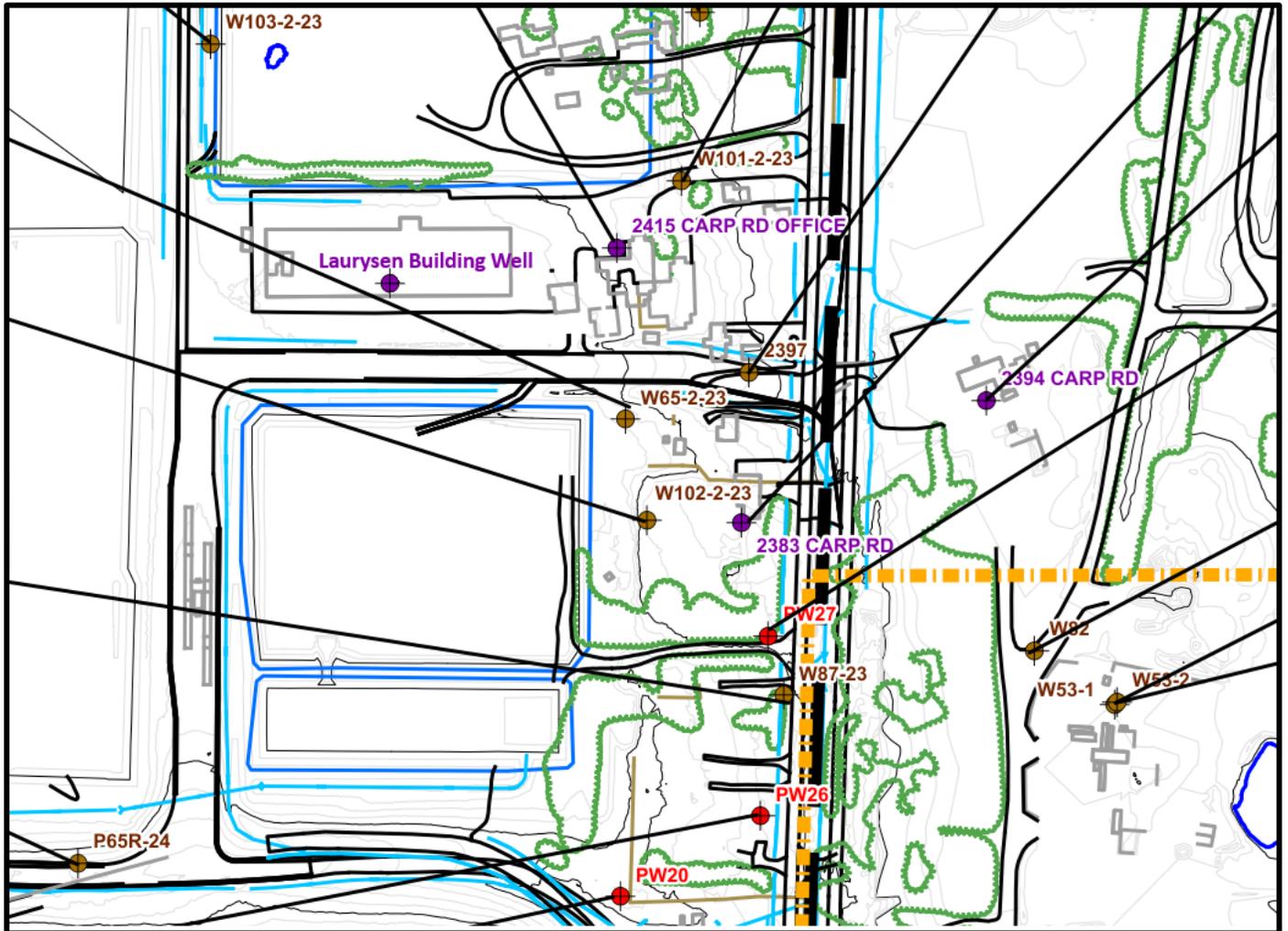


Figure 1: Approximate Location of the Laurysen Building Well and the Groundwater Monitoring Network for the WM West Carleton Environmental Centre in the vicinity of the Laurysen Building Well (adapted from Figure 7 of 2024 Annual Report Waste Management of Canada West Carleton Environmental Centre Ottawa, Ontario. Prepared for Waste Management of Canada Corporation. Prepared by BluMetric Environmental Inc. dated March 31, 2025

The estimated peak water demand for the new building is 49.1 L/min (13 gal/min), according to communication with TaskForce. Firefighting supply will be provided via buried tanks with a dry hydrant connection, creating no demand on groundwater. The proposed daily design sewage flow for the new system is 1,500 L/day, lower than that of the Laurysen building.

## Hydrogeologic & Terrain Analysis (March 21, 2025 - Comment 25)

### Quantity (Nov. 14, 2025 - Comment 45)

The well currently supplying the Laurysen Building is also proposed to supply water to the new maintenance garage building, Figure 1. The well is situated inside the Laurysen Building and corresponds to well record 1521167. There is no well tag on this well, as it predates the introduction of well tags in 2003. The well was installed in 1986 using air percussion drilling, to a depth of 61.0 metres (200 feet), and is completed in limestone bedrock. The overburden materials consist of sand and gravel to 9.4 metres (31 feet), with the casing extending to 10.0 metres (33 feet) below ground surface, approximately 0.6 metres (2 feet) into the bedrock. The well record, including construction details, along with recent photographs, is provided in Attachment C.

A 6-hour constant-rate pumping test at 37.9 L/min (10 gpm) was conducted on the well on March 17, 2024. The static water level was 10.2 m (33.5 ft). The pump was set at 45.7 m (150 ft) below the top of casing and the well was pumped for 6 hours at a rate of 37.9 L/min (10 gal/min). The water level at the end of pumping was 10.6 m (34.8 ft), a drawdown of 0.4 m, representing 1% of the available head above the pump. After pumping was stopped, the water level in the well recovered to 10.2 m (36.6 ft) below ground surface within 110 minutes. These results indicate high transmissivity and storativity within the fractured limestone aquifer.

The total water withdrawal during the test exceeded 13,000 L over six hours. In comparison, the daily design sewage flow is 1,500 L/d. Although the building's peak demand is 49.1 L/min (13 gpm), the negligible drawdown observed at 37.9 L/min supports the well's capacity to accommodate higher short-term demands.

### Quality

The well was sampled for a subdivision suite meeting the requirements of the City of Ottawa Hydrogeological and Terrain Analysis Guidelines on July 28<sup>th</sup>, 2025. Field parameters including colour, pH, temperature, conductivity, turbidity, and chlorine residual were collected prior to sampling. Hydrogen sulphide was not tested in the field due to difficulty in acquiring the reagent for testing but no olfactory evidence noted during sampling event. It is noted that the Nitrate had a concentration of 2.43 mg/L which is consistent with historical measurements collected at 2415 Carp Rd. Results are provided in Attachment D and have been compared to the Ontario Drinking Water Standards, Guidelines and Objectives (ODWSGO). The water quality exceeds the ODWSGO aesthetic objective (AO) for hardness having a value of 320 mg/L (AO: 80 to 100 mg/L). There are no other exceedances of the ODWSGO.

(Nov. 14, 2025 - Comment 46)

True colour and free chlorine were measured on July 28, 2025. Field notes indicate that "True colour and free chlorine deemed acceptable" on the field notes included in the laboratory's certificate of analysis. It was confirmed through communication with the field technician that carried out the sampling that both were 0. Colour was measured in the lab, and was not detected (<2 TCU).

## **Septic System Impact Assessment**

As the land use at the site consists largely of impermeable surfaces, it is proposed to assess septic suitability using a monitoring-based assessment, in accordance with Section 5.6.1 of MECP Guideline D-5-4. The septic system for the proposed building will have a lower design flow than the existing system, which will no longer be in use. The new proposed system will be smaller in capacity and will provide tertiary treatment, achieving a total nitrogen removal of approximately 50% according to the Eljen GSF System brochure. This represents an improvement compared to the existing servicing.

There is a long-standing groundwater monitoring program at the WM West Carleton Environmental Centre. Water quality is sampled semi-annually, in the spring and fall, at various wells across the site, including several in the vicinity of the Laurysen Building. Wells in the monitoring program are sampled for volatile organic compounds (VOCs) and general chemistry parameters, including nitrate.

Groundwater in the overburden near the Laurysen Building is interpreted to flow eastward toward Carp Road, with the Huntley Quarry located on the opposite side, as shown in Figure 2. Nitrate concentrations from the past 10 years for wells screened in both the overburden and bedrock in the vicinity of the Laurysen Building are presented in Figure 3.

Overburden wells upgradient and cross-gradient of the Laurysen Building include W103-2 and P65R. Nitrate concentrations at both locations are low and typically below detection limits.

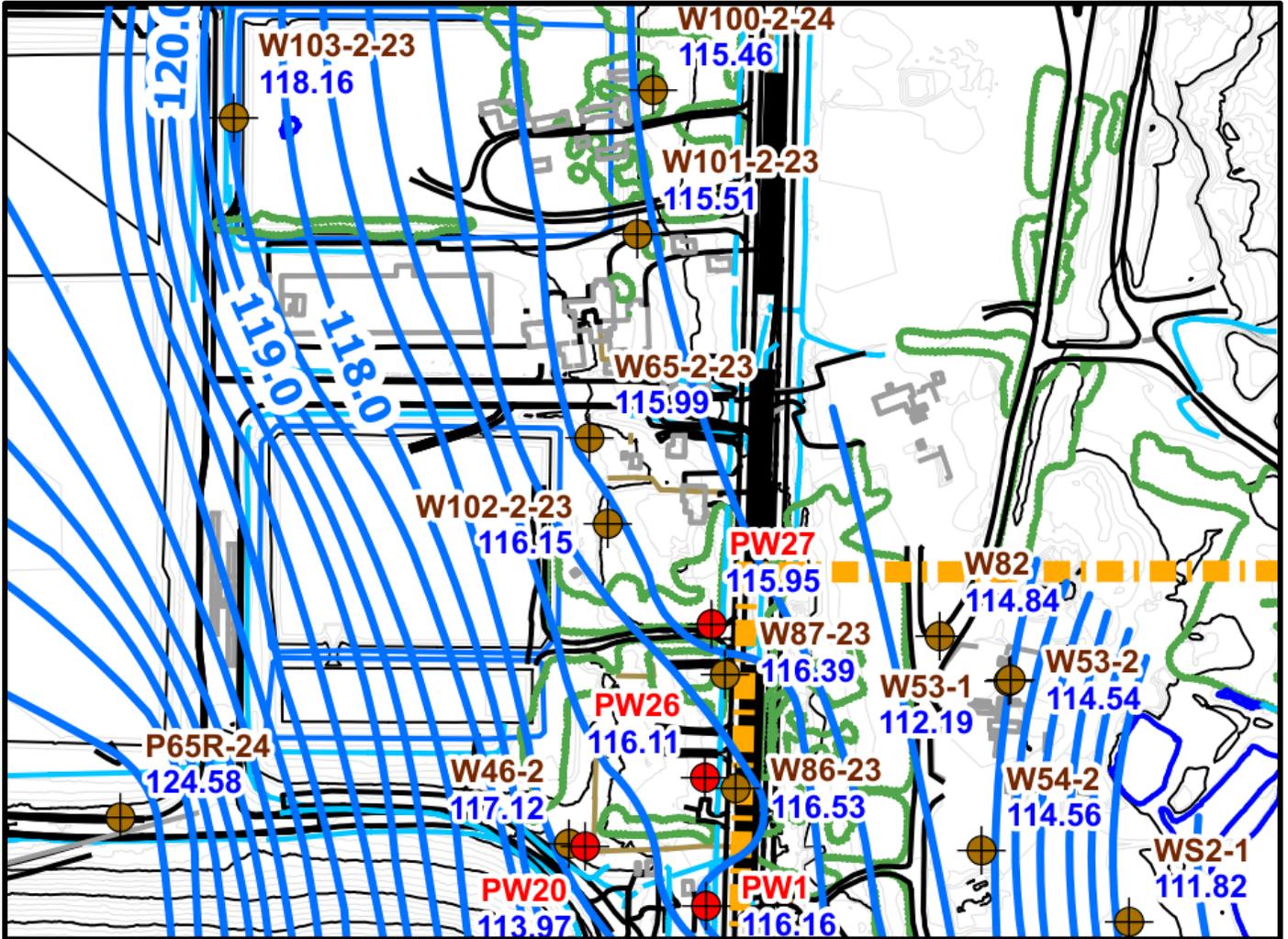


Figure 2: Interpreted groundwater flow in the overburden in the vicinity of the Laurysen Building Well (adapted from Figure 7 of 2024 Annual Report Waste Management of Canada West Carleton Environmental Centre Ottawa, Ontario. Prepared for Waste Management of Canada Corporation. Prepared by BluMetric Environmental Inc. dated March 31, 2025

A bedrock supply well located at 2415 Carp Road is directly downgradient of the Laurysen Building. This well is believed to correspond to well record 1511894, based on the map included in the well record provided in Attachment C. Installed in 1972 using cable tool drilling, the well is completed in limestone bedrock at a depth of 13.1 metres (43 feet).

Nitrate concentrations at 2415 Carp Road have fluctuated over the years and show seasonal variation, with concentrations typically higher in the fall and lower in the spring. The average fall concentration is 5.1 mg/L, with a maximum concentration of 10.6 mg/L observed on October 26, 2021. A period of consistently elevated nitrate concentrations occurred in 2015 and 2016, this peak also observed at downgradient overburden wells. The most recent fall concentration, measured in 2024, was 1.81 mg/L.

There are three overburden wells positioned radially near the 2415 Carp Road well. Two of these wells, W101-2 and W65-2, are located cross-gradient to 2415 Carp Road, while the third well, at 2397 Carp Road, is located downgradient to the south, approximately midway between 2415 Carp Road and the bedrock well across Carp Road at 2394 Carp Road.

Nitrate concentrations at W101-2 vary but do not show a pattern similar to that observed at 2415 Carp Road. Concentrations at W65-2 have remained relatively stable over most of the monitoring period; however, the most recent sample shows an abrupt increase compared to the consistently low concentrations since 2017. At both wells, the highest nitrate concentrations were measured later than at 2415 Carp Road, suggesting that groundwater with higher nitrate levels moved slowly through the area, reaching these wells some time after it passed 2415 Carp Road.

Nitrate concentrations at 2397 Carp Road exhibit a similar seasonal pattern as observed at 2415 Carp Road; however, concentrations over all are consistently lower. Similarly, nitrate concentrations at 2394 Carp Road show seasonal fluctuations in nitrate concentrations, with higher concentrations typically observed in the spring sample. The average concentration in the spring is 3.15 mg/L, with a maximum concentration of 4.82 mg/L observed on May 14, 2014. The most recent spring concentration in 2024 was of 2.64 mg/L.

The downgradient supply at 2394 Carp Road has consistently shown nitrate concentrations below the drinking water standard. Overall, the observed decrease in nitrate concentrations downgradient may be attributed to dilution processes occurring as groundwater moves away from the source area.

In summary, based on a review of the available data, nitrate in groundwater in this part of the WM West Carleton Environmental Centre appears to be influenced by activities at or near the Laurysen Building, as background locations generally show little to no nitrate. The highest concentrations are observed in the bedrock at 2415 Carp Road, located directly downgradient of the Laurysen Building, where concentrations of nitrate in groundwater fluctuate seasonally but are typically below the ODWSGO for nitrate of 10 mg/L, with the exception of one exceedance recorded in 2021. Nitrate concentrations in groundwater in wells near the property boundary, 2397 Carp Road (within the property boundary) and 2394 Carp Road (just beyond the property boundary) have been consistently historically below 10 mg/L.

**(Nov. 14, 2025 - Comment 47)**

Regarding concerns for the bedrock well given its relative position to the new proposed septic field. Overburden groundwater flows east toward Carp Road (Figure 2 of the report). The supply well is located near the midpoint of the Laurysen Building along the southern wall and is completed in limestone bedrock.

According to the drawing provided by Taskforce, the existing septic system and infiltration basin are situated on the north side of the Laurysen Building. The septic system lies directly north of the existing well (cross-gradient).

The new building has a lower design flow (1,500 L/d) and incorporates tertiary treatment using an Eljen GSF system, which provides approximately 50% total nitrogen reduction. Consequently, nitrate loading to the subsurface is expected to decrease relative to the former Laurysen use. Under current conditions, nitrate concentrations measured on July 28, 2025, were 2.43 mg/L, well below the Ontario drinking water standard.

Considering the interpreted groundwater flow direction, vertical separation to bedrock, reduced septic loading (lower design flow), and improved treatment it is not expected that groundwater quality at the Laurysen supply well would deteriorate. However, it is proposed that this supply well be sampled for nitrates biannually for 5 years following the landfill monitoring plan sampling events.

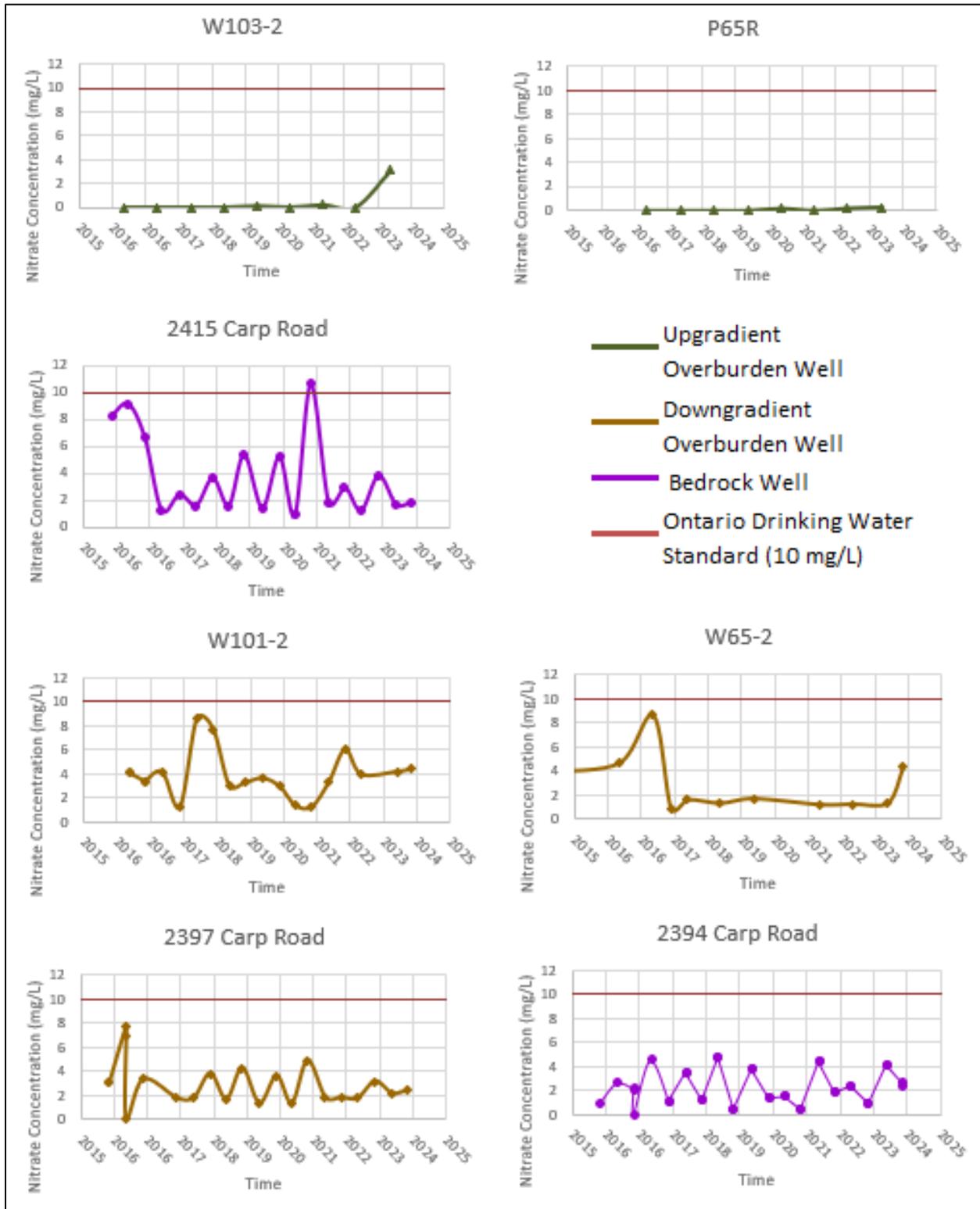


Figure 3: Nitrate concentrations within monitored wells in the vicinity of Laurysen Building between 2015 and 2024

## Karst Assessment

The karst was conducted using the Cataraqui Conservation Guidelines for Karst Investigation (Cataraqui Conservation. 2023. *Appendix Y: Guidelines for Karst Investigation*. Adapted from Quinte Conservation Karst (Unstable Bedrock) Guidelines, April 2023).

The Laurysen Building and the proposed maintenance building are located in an area mapped by the Ontario Geological Survey as having potential karst (Brunton, F.R. and Dodge, J.E.P., Karst of Southern Ontario and Manitoulin Island, Groundwater Resources Study 5, Ontario Geological Survey, 2008).

Digital elevation models were reviewed to assess the potential for irregular bedrock topography at the surface, no notable features were noted.

The geoOttawa online tool was also reviewed to examine historical aerial imagery for irregular bedrock topography and evidence of disappearing streams; no such features were observed. Furthermore, there is no indication of known karst formations in the annual monitoring report.

A review of borehole logs in the vicinity of the proposed maintenance building indicates that bedrock slopes to the northeast; the records do not suggest any abrupt changes in bedrock elevation that would indicate karstic bedrock topography. Bedrock elevations surrounding the proposed maintenance building are summarized in Table 1

**Table 1: Bedrock elevations in the vicinity of the Laurysen Building**

Location	Ground Surface (masl)	Depth to rock or Refusal (m)	Interpreted Bedrock Elevation (masl)	Notes
W100-2-24	117.82	5.74	112.08	Recorded Bedrock
W103-2-23	120.59	3	117.59	Recorded Bedrock
W101-2-23	122.11	8.1	114.01	Recorded Bedrock
Laurysen Building	-	9.45	-	Recorded Bedrock (WWR 1521167)
2415 Carp Road	-	8.53	-	Recorded Bedrock (WWR 1511894)
W65-2-23	126.75	11.84	114.91	Recorded Bedrock
W102-2-23	123.52	6.86	116.66	Recorded Bedrock
P65R-24	132.08	12.65	119.43	Auger refusal

## Proposed Monitoring

Given the relative position of the well and the septic system, it is proposed that the Laurysen Building well be sampled **biennially for five years**, coordinated in timing with the long-standing landfill monitoring program and analyzed for the **same parameters**, including nitrate.

## Contingency and Remedial Actions (Nov. 14, 2025- Comment 45)

The Laurysen Building well (WWR 1521167) was installed in 1986 and is located inside the building. Its location indoors means it does not meet the current O.Reg. 903 requirement for a casing height of at least 40 cm above finished grade and proper grading away from the wellhead.

The existing well predates current standards; however, it is in good condition and has historically provided potable water. If future concerns arise regarding water quality or structural integrity, remedial actions could include drilling a new well outside the building with full compliance to O.Reg. 903, including:

- Minimum casing height above grade.
- Proper surface seal and grout.
- Grading to prevent surface water infiltration.
- Installation of bollards for protection from vehicle traffic.

## Summary

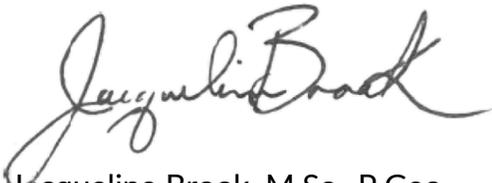
Based on the hydrogeological and terrain assessment, the site is suitable for the proposed maintenance building. The existing well has sufficient capacity to supply water to the new building, with minimal drawdown observed during testing. Water quality from the well meets ODWSOG except for hardness which exceeds the aesthetic objective of 80 to 100 mg/L.

Groundwater flow is eastward, and historical nitrate monitoring indicates that nitrate concentrations attenuate sufficiently before reaching downgradient receptors. For this application, it is understood that the existing system will not be in use, and the new proposed system will be smaller in capacity and will provide tertiary treatment; representing an improvement compared to the existing system. Groundwater monitoring will continue twice annually as part of the ongoing program at the WM West Carleton Environmental Centre. Downgradient water users include the office well and the Huntley Quarry. The quarry does not supply drinking water for children or other sensitive uses. No evidence of karstic bedrock topography was identified in the area of the proposed building.

## Closing

If you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,  
**BluMetric Environmental Inc.**



Jacqueline Brook, M.Sc., P.Geo.  
Senior Hydrogeologist



Michael Melaney, M.Sc. Eng., P.Eng.  
Senior Engineer/Hydrogeologist

Encl.

Ref: 250442\_HG\_Updated\_2415 Carp Road\_11FEB2026.docx

## **Attachment A**

City of Ottawa – Pre-Consultation Meeting Feedback – March 21, 2025

- c. Storm Water Management Report (including Erosion and Sediment Control Measures).
- d. Environmental Site Assessment (Phase 1 and, if required, Phase 2).
- e. Geotechnical Report (Earthquake analysis is now required to be provided in the report).
- f. Lighting Plan Certificate (not required at submission, but for registration).

Feel free to contact Derek Kulyk, Project Manager, for follow-up questions.

### **Hydrogeology**

Comments:

24. It is assumed that the proposed maintenance garage will be required to be fully serviced (water supply and sewage) based on the requirements of the Ontario Building Code. Confirmation in writing from the City's Building Code Services shall be provided if the application is looking to pursue the proposed development without providing servicing.

25. A **Hydrogeological and Terrain Analysis** will be required for the Site Plan Control application to establish that there is an adequate quantity and quality of groundwater to support the proposed development(s) and that there is sufficient septic dilution to accommodate the proposed sewage flows. The requirements for the Hydrogeological and Terrain Analysis Report are outlined in the City of Ottawa's Hydrogeological and Terrain Analysis Guidelines (HTAG), section 5.0 for Site Plans (pages 81 to 83). The study forms part of the requirements for Site Plan Control applications noted in the Studies and Plan Identification List, provided with the feedback documents.

- a. **Quantity:** The on-site supply well(s) must be tested via a pumping test to confirm that the well(s) onsite can supply the required quantity and quality of water. For commercial/industrial operations, an 8-hour pump test, or longer, is normally recommended, however a minimum of 6-hours is required in the HGTA Guidelines.
  - i. If an existing well is proposed to be used, then a well inspection is required to confirm it meets the Wells Regulations (O.Reg.903); specifically, confirming that the well casing and grouting are sound, grading is directed away from around the wellhead, and that the casing height is at least 40 cm, above ground and meets the regulations or proposes remedial measures.
  - ii. The anticipated water demands (average day, maximum daily, and maximum hour) must be presented and justified for the pump test rate. The pumping rate should be the combined maximum daily

demand rate. The pumping rate should consider the actual use(s). The Ottawa Design Guidelines – Water Distribution provides information for determining water demand rates for the proposed zoning, or uses, in Table 4.2 – Consumption Rates.

- b. **Quality:** The parameters of water quality that will be tested will be the “subdivision suite” known to local well testing companies, as well as trace metals, and Volatile organic compounds (VOC). Requirements are outlined in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines. The report should also provide an assessment of adjacent and on-site land uses and concerns and determine if any other parameters need to be tested (e.g., petroleum hydrocarbons, etc.).
  - i. If well water is mineralized, then approval from the MECP will be needed to continue to use the well, as specified in Ontario Regulation 903 (Section 21). The consultant should also consider, and report, the other issues associated with the mineralized water including corrosivity of the water and shortened lifespan of plumbing fixtures and the septic system. Specialized plumbing, and fixtures, may provide some mitigation of issues.
    - 1. Chemistry results for Area F (Carp Road Corridor Groundwater Study) identify one well that was mineralized due to chloride exceeding 500 mg/L.
  - ii. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the existing or proposed well(s).
- c. A **Septic System Impact Assessment** will be required to provide the septic system design and provide sufficient information to assess the likelihood that the operation of the on-site sewage system will not adversely impact the well(s) to be constructed on the subject property or existing wells on surrounding properties (as applicable). The reporting must be completed as per the City’s Hydrogeological and Terrain Analysis Report Guidelines and MECP Guideline D-5-4, please refer to the HGTA for the predictive assessment for commercial/industrial developments, pages 30 to 31 (not applicable for residential developments).
  - i. As this application is a site plan (not lot creation nor a zoning application) septic treatment (i.e. tertiary treatment with nitrate reduction) may be considered as part of the septic impact assessment calculations. A septic system must be certified through NSF/ANSI 245 or CAN/BNQ 3680-600 if total nitrogen reduction systems are required to meet nitrate impact limits at the property boundary.

- ii. If the sewage system/s daily design flow is 10,000 L/d or less, the septic permit from the Ottawa Septic System Office must be sent to the City prior to Site Plan Approval being granted.
  - iii. If the sewage system's design flow exceeds 10,000 L/d (per lot), a Reasonable Use Assessment must accompany the application to the City. Sewage systems with design flows exceeding 10,000 L/d require the issuance of an Environmental Compliance Approval (ECA) from the MECP prior to Site Plan Approval being granted (and the duration of approval is anticipated to be lengthy [many months]).
  - iv. Note that gravel shall be considered impermeable in the septic impact assessment unless field testing results confirm alternative infiltration rates.
  - v. If system isolation is contemplated, the technical pre-consultation with the reviewer is mandatory to ensure the assessment meets the minimum requirements identified in City Guidelines, and to convey the minimum onsite testing requirements.
  - vi. Please note that based on available geological mapping, the site is potentially hydrogeologically sensitive. There is potential karst topography mapped on the subject site and noted in the area based on geological mapping. Test pits and visual observations at the site should inform the discussion surrounding hydrogeological sensitivity. If the site is hydrogeologically sensitive, then mitigative measures must be recommended to protect the underlying supply aquifer, this can include increased casing depth for any new drilled wells, increased separation distance between wells and septic systems, strategic placement of wells and septic based on direction of groundwater flow and existing soil thickness, and additional protective construction measures for the septic systems such as a clay seal or advanced septic treatment.
  - vii. Bollards, or other means of preventing vehicle access, will need to be provided between areas with vehicle access and the proposed septic system(s).
- d. The site is within the boundaries of the Carp River Subwatershed Study and the Carp Road Corridor Groundwater Study (2004).
- i. The site is noted as Area F in the groundwater study (Figure 2 – Study Area and Land Use).
  - ii. Area F, based on Figure 9 – Groundwater Quality Summary, has health-related exceedance occurrence for total coliforms (25% of wells tested) and aesthetic exceedances for chloride (63% of wells

tested), sodium (50% of wells tested), sulphide (38% of wells tested), and iron (13 % of wells tested).

1. The City's Hydrogeological and Terrain Analysis guidelines note that the City for commercial and industrial uses, where the Official Plan and Zoning By-law are already in place and there are aesthetic parameter exceedances to the maximum concentration considered reasonably treatable (MCCRT) the proponent is to discuss the results with the review hydrogeologist. For health-related parameters with an exceedance, the City will not grant approval based on treatment.
- iii. From section 8.3.1 – General Recommendations: “In Area F, BMP initiatives should be directed to the quarry operations, repair shops, equipment storage yards, manufacturers, and gasoline station. Some of the key BMPs that should be promoted include waste management, spill protocols, and fuel/chemical storage and management.”.
  - e. Technical consultation with the hydrogeological report reviewer is recommended for all site plan control applications. Please contact the reviewer assigned to the file to arrange for the consultation. The hydrogeological consultant should conduct a background review and provide a work plan for review prior to the meeting.

Feel free to contact Travis Smith ([travis.smith@ottawa.ca](mailto:travis.smith@ottawa.ca)), Senior Project Manager, Hydrogeology, for follow-up questions.

## **Transportation**

Comments:

26. Right-of-way protection (Carp Road).
  - a. See [Schedule C16 of the Official Plan](#).
  - b. Any requests for exceptions to ROW protection requirements must be discussed with Transportation Planning and concurrence provided by Transportation Planning management.

Feel free to contact Mike Giampa, Transportation Project Manager, for follow-up questions.

## **Environment**

Comments:

## **Attachment B**

City of Ottawa – Formal Review Comments – November 14, 2025

- **Functional Servicing Brief**, prepared by Taskforce Engineering Inc., dated July 14, 2025.
- **Servicing Plan and Septic Details**, prepared by TaskForce Engineering Inc., revision 2 dated September 22, 2025.

Comments:

42. A copy of the approved septic permit from the Ottawa Septic System Office will be required prior to site plan control approval attached as an addendum to either the Hydrogeological Study or the Functional Servicing Brief.
43. In section 4.3 - *Septic System* of the Functional Servicing Brief, provide the manufacturer, model, fact sheet, and certification (NSF 245 or CAN/BNQ 3680-600) for the proposed treatment unit for nitrogen reduction.
44. In the *Quantity* section in the Hydrogeological Study, please expand on the Laurysen Building well's conformance with O.Reg. 903 and what remedial actions (drilling another well) would be required if there are future concerns.
45. In the *Quantity* section in the Hydrogeological Study, please expand on how the pumping test rate and duration are sufficient, possibly discussing the septic design flows and inferred aquifer properties from pumping test results as support.
46. In the *Quality* section in the Hydrogeological Study, please provide all the field sample results, some are included in the table, but not all, chlorine residual & apparent colour for example could not be found.
47. In the *Septic System Impact Assessment* section in the Hydrogeological Study, are there any concerns with septic system siting seemingly upgradient of the supply well?

Feel free to contact Travis Smith, Senior Project Manager, Hydrogeology, for follow-up questions.

**Mississippi Valley Conservation Authority**

48. See attached comment letter dated November 12, 2025 for MVCA comments. Please include responses to MVCA comments with the next resubmission.

**Environment**

Comments:

49. No further comments.

Feel free to contact Kim MacDonald, Environmental Planner, for follow-up questions.

## **Attachment C**

Well Record with Construction Details and Recent Photographs





Your P.O. #: 15068044  
 Your Project #: 250442  
 Site#: 200  
 Site Location: ON10  
 Your C.O.C. #: 1054915-01-01

**Attention: Jacqueline Brook**

BluMetric Environmental Inc.  
 1682 Woodward Drive  
 Ottawa, ON  
 CANADA K2C 3R8

**Report Date: 2025/08/13**  
 Report #: R8593353  
 Version: 4 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C591211**

**Received: 2025/07/28, 15:10**

Sample Matrix: Water  
 # Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity (1)	1	N/A	2025/07/30	CAM SOP-00448	SM 24 2320 B m
1,3-Dichloropropene Sum (1)	1	N/A	2025/07/30		EPA 8260C m
Chloride by Automated Colourimetry (1)	1	N/A	2025/07/30	CAM SOP-00463	SM 24 4500-Cl E m
Colour (1)	1	N/A	2025/07/29	CAM SOP-00412	SM 24 2120C m
Conductance in Water - On-site (1)	2	N/A	2025/07/30		
Conductivity (1)	1	N/A	2025/07/30	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1, 2)	1	N/A	2025/07/29	CAM SOP-00446	SM 24 5310 B m
Field Measured Dissolved Oxygen in Water (1)	2	N/A	2025/07/30		
Petroleum Hydrocarbons F2-F4 in Water (1, 3)	1	2025/07/29	2025/07/30	CAM SOP-00316	CCME PHC-CWS m
Fluoride (1)	1	2025/08/07	2025/08/07	CAM SOP-00449	SM 24 4500-F C m
Hardness (calculated as CaCO3) (1)	1	N/A	2025/07/30	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Metals by ICPMS (1)	1	N/A	2025/07/30	CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference) (1)	1	N/A	2025/08/06		
Total Coliforms/ E. coli, CFU/100mL (1)	1	N/A	2025/07/29	CAM SOP-00551	MECP-E3407
Heterotrophic plate count, (CFU/mL) (1)	1	N/A	2025/08/05	CAM SOP-00512	SM 9215 B
Total Ammonia-N (1)	1	N/A	2025/07/30	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 4)	1	N/A	2025/07/29	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (1, 5)	1	2025/07/29	2025/07/30	CAM SOP-00413	SM 24th - 4500H+ B
Field Measured pH (1, 6)	2	N/A	2025/07/30		Field pH Meter
Sulphate by Automated Turbidimetry (1)	1	N/A	2025/07/30	CAM SOP-00464	SM 24 4500-SO42- E m
Tannins & Lignins (1)	1	N/A	2025/08/08	CAM SOP-00410	SM 24 5550 B m
Total Dissolved Solids (1)	1	2025/07/29	2025/07/30	CAM SOP-00428	SM 24 2540C m
Field Temperature (1, 6)	2	N/A	2025/07/30		Field Thermometer
Total Kjeldahl Nitrogen in Water (1)	1	2025/08/07	2025/08/08	CAM SOP-00938	SM 4500-N B m
Turbidity (1)	1	N/A	2025/07/30	CAM SOP-00417	SM 24 2130 B
Turbidity - On-site (1)	2	N/A	2025/07/30		
Volatile Organic Compounds and F1 PHCs (1)	1	N/A	2025/07/30	CAM SOP-00230	EPA 8260C m

**Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.



Your P.O. #: 15068044  
Your Project #: 250442  
Site#: 200  
Site Location: ON10  
Your C.O.C. #: 1054915-01-01

**Attention: Jacqueline Brook**

BluMetric Environmental Inc.  
1682 Woodward Drive  
Ottawa, ON  
CANADA K2C 3R8

**Report Date: 2025/08/13**

Report #: R8593353

Version: 4 - Revision

## CERTIFICATE OF ANALYSIS – REVISED REPORT

**BUREAU VERITAS JOB #: C591211**

**Received: 2025/07/28, 15:10**

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd, Mississauga, ON, L5N 2L8

(2) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(4) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

(5) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(6) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.



Your P.O. #: 15068044  
Your Project #: 250442  
Site#: 200  
Site Location: ON10  
Your C.O.C. #: 1054915-01-01

**Attention: Jacqueline Brook**

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1682 Woodward Drive  
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**Report Date: 2025/08/13**  
Report #: R8593353  
Version: 4 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C591211**

**Received: 2025/07/28, 15:10**

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:  
Patricia Legette, Project Manager  
Email: Patricia.Legette@bureauveritas.com  
Phone# (905)817-5799

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

**RESULTS OF ANALYSES OF WATER**

<b>Bureau Veritas ID</b>				ATLS96	ATLS96		ATLS97	
<b>Sampling Date</b>				2025/07/28 14:00	2025/07/28 14:00		2025/07/28 14:10	
<b>COC Number</b>				1054915-01-01	1054915-01-01		1054915-01-01	
	<b>UNITS</b>	<b>MAC</b>	<b>A/O</b>	<b>COH6</b>	<b>COH6 Lab-Dup</b>	<b>RDL</b>	<b>O RE6 153</b>	<b>QC Batch</b>

<b>Calculated Parameters</b>								
Hardness (CaCO3)	mg/L	-	80:100	320	N/A	1.0	N/A	9978769
Ion Balance (% Difference)	%	-	-	0.380	N/A	N/A	N/A	9983773
<b>Field Measurements</b>								
Field Conductivity	uS/cm	-	-	726	N/A	N/A	726	ONSITE
Field Dissolved Oxygen	mg/L	-	-	6.40	N/A	N/A	6.40	ONSITE
Field Temperature	Celsius	-	-	12.16	N/A	N/A	12.16	ONSITE
Field Measured Field Turbidity	NTU	-	-	0.5	N/A	N/A	0.5	ONSITE
Field Measured pH	pH	-	6.5:8.5	7.35	N/A	N/A	7.35	ONSITE
<b>Inorganics</b>								
Total Ammonia-N	mg/L	-	-	<0.050	<0.050	0.050	N/A	9979312
Colour	TCU	-	5	<2	N/A	2	N/A	9978724
Conductivity	mS/cm	-	-	0.754	N/A	0.002	N/A	9979420
Total Dissolved Solids	mg/L	-	500	430	N/A	10	N/A	9979405
Fluoride (F-)	mg/L	1.5	-	<0.10	<0.10	0.10	N/A	9984480
Total Kjeldahl Nitrogen (TKN)	mg/L	-	-	<0.7	<0.7	0.7	N/A	9984674
Dissolved Organic Carbon	mg/L	-	5	1.3	N/A	0.40	N/A	9979155
pH	pH	-	6.5:8.5	7.82	N/A	N/A	N/A	9979421
Dissolved Sulphate (SO4)	mg/L	-	500	63	N/A	1.0	N/A	9979431
Tannins & Lignins	mg/L	-	-	<0.2	N/A	0.2	N/A	9985185
Turbidity	NTU	-	5	<0.1	N/A	0.1	N/A	9979593
Alkalinity (Total as CaCO3)	mg/L	-	30:500	270	N/A	1.0	N/A	9979419
Dissolved Chloride (Cl-)	mg/L	-	250	36	N/A	1.0	N/A	9979430
Nitrite (N)	mg/L	1	-	<0.010	N/A	0.010	N/A	9978964
Nitrate (N)	mg/L	10	-	2.43	N/A	0.10	N/A	9978964

RDL = Reportable Detection Limit  
 QC Batch = Quality Control Batch  
 Lab-Dup = Laboratory Initiated Duplicate  
 MAC,A/O: Ontario Drinking Water Standards - Maximum Acceptable Concentration [MAC] & Table 4-Chemical/Physical Objectives [A/O] - Not Health Related, respectively  
 (Made under the Ontario Safe Drinking Water Act, 2002)  
 N/A = Not Applicable



**BUREAU  
VERITAS**

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

**ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)**

Bureau Veritas ID				ATLS96		
Sampling Date				2025/07/28 14:00		
COC Number				1054915-01-01		
	UNITS	MAC	A/O	COH6	RDL	QC Batch
<b>Metals</b>						
Dissolved Aluminum (Al)	ug/L	-	100	<4.9	4.9	9979571
Dissolved Antimony (Sb)	ug/L	6	-	<0.50	0.50	9979571
Dissolved Arsenic (As)	ug/L	10	-	<1.0	1.0	9979571
Dissolved Barium (Ba)	ug/L	1000	-	98	2.0	9979571
Dissolved Beryllium (Be)	ug/L	-	-	<0.40	0.40	9979571
Dissolved Boron (B)	ug/L	5000	-	47	10	9979571
Dissolved Cadmium (Cd)	ug/L	5	-	<0.090	0.090	9979571
Dissolved Calcium (Ca)	ug/L	-	-	100000	200	9979571
Dissolved Chromium (Cr)	ug/L	50	-	<5.0	5.0	9979571
Dissolved Cobalt (Co)	ug/L	-	-	<0.50	0.50	9979571
Dissolved Copper (Cu)	ug/L	-	1000	1.4	0.90	9979571
Dissolved Iron (Fe)	ug/L	-	300	<100	100	9979571
Dissolved Lead (Pb)	ug/L	10	-	<0.50	0.50	9979571
Dissolved Magnesium (Mg)	ug/L	-	-	17000	50	9979571
Dissolved Manganese (Mn)	ug/L	-	50	<2.0	2.0	9979571
Dissolved Molybdenum (Mo)	ug/L	-	-	0.83	0.50	9979571
Dissolved Nickel (Ni)	ug/L	-	-	<1.0	1.0	9979571
Dissolved Potassium (K)	ug/L	-	-	2400	200	9979571
Dissolved Selenium (Se)	ug/L	50	-	<2.0	2.0	9979571
Dissolved Silver (Ag)	ug/L	-	-	<0.090	0.090	9979571
Dissolved Sodium (Na)	ug/L	-	200000	34000	100	9979571
Dissolved Strontium (Sr)	ug/L	-	-	310	1.0	9979571
Dissolved Thallium (Tl)	ug/L	-	-	<0.050	0.050	9979571
Dissolved Uranium (U)	ug/L	20	-	1.3	0.10	9979571
Dissolved Vanadium (V)	ug/L	-	-	<0.50	0.50	9979571
Dissolved Zinc (Zn)	ug/L	-	5000	<5.0	5.0	9979571
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
MAC,A/O: Ontario Drinking Water Standards - Maximum Acceptable Concentration [MAC] & Table 4-Chemical/Physical Objectives [A/O] - Not Health Related, respectively (Made under the Ontario Safe Drinking Water Act, 2002)						



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID				ATLS97		
Sampling Date				2025/07/28 14:10		
COC Number				1054915-01-01		
	UNITS	MAC	A/O	O RE6 153	RDL	QC Batch
<b>Calculated Parameters</b>						
1,3-Dichloropropene (cis+trans)	ug/L	-	-	<0.50	0.50	9978770
<b>Volatile Organics</b>						
Acetone (2-Propanone)	ug/L	-	-	<10	10	9977721
Benzene	ug/L	1	-	<0.17	0.17	9977721
Bromodichloromethane	ug/L	-	-	<0.50	0.50	9977721
Bromoform	ug/L	-	-	<1.0	1.0	9977721
Bromomethane	ug/L	-	-	<0.50	0.50	9977721
Carbon Tetrachloride	ug/L	2	-	<0.20	0.20	9977721
Chlorobenzene	ug/L	80	30	<0.20	0.20	9977721
Chloroform	ug/L	-	-	<0.20	0.20	9977721
Dibromochloromethane	ug/L	-	-	<0.50	0.50	9977721
1,2-Dichlorobenzene	ug/L	200	3	<0.50	0.50	9977721
1,3-Dichlorobenzene	ug/L	-	-	<0.50	0.50	9977721
1,4-Dichlorobenzene	ug/L	5	1	<0.50	0.50	9977721
Dichlorodifluoromethane (FREON 12)	ug/L	-	-	<1.0	1.0	9977721
1,1-Dichloroethane	ug/L	-	-	<0.20	0.20	9977721
1,2-Dichloroethane	ug/L	5	-	<0.50	0.50	9977721
1,1-Dichloroethylene	ug/L	14	-	<0.20	0.20	9977721
cis-1,2-Dichloroethylene	ug/L	-	-	<0.50	0.50	9977721
trans-1,2-Dichloroethylene	ug/L	-	-	<0.50	0.50	9977721
1,2-Dichloropropane	ug/L	-	-	<0.20	0.20	9977721
cis-1,3-Dichloropropene	ug/L	-	-	<0.30	0.30	9977721
trans-1,3-Dichloropropene	ug/L	-	-	<0.40	0.40	9977721
Ethylbenzene	ug/L	140	1.6	<0.20	0.20	9977721
Ethylene Dibromide	ug/L	-	-	<0.20	0.20	9977721
Hexane	ug/L	-	-	<1.0	1.0	9977721
Methylene Chloride(Dichloromethane)	ug/L	50	-	<2.0	2.0	9977721
Methyl Ethyl Ketone (2-Butanone)	ug/L	-	-	<10	10	9977721
Methyl Isobutyl Ketone	ug/L	-	-	<5.0	5.0	9977721
RDL = Reportable Detection Limit QC Batch = Quality Control Batch MAC,A/O: Ontario Drinking Water Standards - Maximum Acceptable Concentration [MAC] & Table 4-Chemical/Physical Objectives [A/O] - Not Health Related, respectively (Made under the Ontario Safe Drinking Water Act, 2002)						



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID				ATLS97		
Sampling Date				2025/07/28 14:10		
COC Number				1054915-01-01		
	UNITS	MAC	A/O	O RE6 153	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/L	-	15	<0.50	0.50	9977721
Styrene	ug/L	-	-	<0.50	0.50	9977721
1,1,1,2-Tetrachloroethane	ug/L	-	-	<0.50	0.50	9977721
1,1,2,2-Tetrachloroethane	ug/L	-	-	<0.50	0.50	9977721
Tetrachloroethylene	ug/L	10	-	<0.20	0.20	9977721
Toluene	ug/L	60	24	<0.20	0.20	9977721
1,1,1-Trichloroethane	ug/L	-	-	<0.20	0.20	9977721
1,1,2-Trichloroethane	ug/L	-	-	<0.50	0.50	9977721
Trichloroethylene	ug/L	5	-	<0.20	0.20	9977721
Trichlorofluoromethane (FREON 11)	ug/L	-	-	<0.50	0.50	9977721
Vinyl Chloride	ug/L	1	-	<0.20	0.20	9977721
p+m-Xylene	ug/L	-	-	<0.20	0.20	9977721
o-Xylene	ug/L	-	-	<0.20	0.20	9977721
Total Xylenes	ug/L	90	20	<0.20	0.20	9977721
F1 (C6-C10)	ug/L	-	-	<25	25	9977721
F1 (C6-C10) - BTEX	ug/L	-	-	<25	25	9977721
<b>Surrogate Recovery (%)</b>						
4-Bromofluorobenzene	%	-	-	96	N/A	9977721
D4-1,2-Dichloroethane	%	-	-	107	N/A	9977721
D8-Toluene	%	-	-	89	N/A	9977721
RDL = Reportable Detection Limit QC Batch = Quality Control Batch MAC,A/O: Ontario Drinking Water Standards - Maximum Acceptable Concentration [MAC] & Table 4-Chemical/Physical Objectives [A/O] - Not Health Related, respectively (Made under the Ontario Safe Drinking Water Act, 2002) N/A = Not Applicable						



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### PETROLEUM HYDROCARBONS (CCME)

<b>Bureau Veritas ID</b>		ATLS97		
<b>Sampling Date</b>		2025/07/28 14:10		
<b>COC Number</b>		1054915-01-01		
	<b>UNITS</b>	<b>O RE6 153</b>	<b>RDL</b>	<b>QC Batch</b>
<b>F2-F4 Hydrocarbons</b>				
F2 (C10-C16 Hydrocarbons)	ug/L	<90	90	9979157
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9979157
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9979157
Reached Baseline at C50	ug/L	Yes	N/A	9979157
<b>Surrogate Recovery (%)</b>				
o-Terphenyl	%	100	N/A	9979157
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable				



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Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### MICROBIOLOGY (WATER)

<b>Bureau Veritas ID</b>			ATLS96	
<b>Sampling Date</b>			2025/07/28 14:00	
<b>COC Number</b>			1054915-01-01	
	<b>UNITS</b>	<b>MAC</b>	<b>COH6</b>	<b>QC Batch</b>
<b>Microbiological</b>				
Heterotrophic plate count	CFU/mL	-	>5700	9984192
Background	CFU/100mL	-	14	9979169
Total Coliforms	CFU/100mL	0	0	9979169
Escherichia coli	CFU/100mL	0	0	9979169
QC Batch = Quality Control Batch				
MAC: Ontario Drinking Water Standards - Maximum Acceptable Concentration [MAC] & Table 4-Chemical/Physical Objectives [A/O] - Not Health Related, respectively (Made under the Ontario Safe Drinking Water Act, 2002)				



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### TEST SUMMARY

**Bureau Veritas ID:** ATLS96  
**Sample ID:** COH6  
**Matrix:** Water

**Collected:** 2025/07/28  
**Shipped:**  
**Received:** 2025/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9979419	N/A	2025/07/30	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9979430	N/A	2025/07/30	Alina Dobreanu
Colour	SPEC	9978724	N/A	2025/07/29	Viorica Rotaru
Field Temperature		ONSITE	N/A	2025/07/30	Patricia Legette
Conductivity	AT	9979420	N/A	2025/07/30	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9979155	N/A	2025/07/29	Gyulshen Idriz
Field Temperature		ONSITE	N/A	2025/07/30	Patricia Legette
Fluoride	ISE	9984480	2025/08/07	2025/08/07	Nachiketa Gohil
Hardness (calculated as CaCO3)		9978769	N/A	2025/07/30	Automated Statchk
Dissolved Metals by ICPMS	ICP/MS	9979571	N/A	2025/07/30	Nan Raykha
Ion Balance (% Difference)	CALC	9983773	N/A	2025/08/06	Automated Statchk
Total Coliforms/ E. coli, CFU/100mL	PL	9979169	N/A	2025/07/29	Jing (Sammy) Sun
Heterotrophic plate count, (CFU/mL)	PL	9984192	N/A	2025/08/05	Nadine Whyte
Total Ammonia-N	SKAL/NH4	9979312	N/A	2025/07/30	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9978964	N/A	2025/07/29	Chandra Nandlal
pH	AT	9979421	2025/07/29	2025/07/30	Nachiketa Gohil
Field Temperature	PH	ONSITE	N/A	2025/07/30	Patricia Legette
Sulphate by Automated Turbidimetry	SKAL	9979431	N/A	2025/07/30	Alina Dobreanu
Tannins & Lignins	SPEC	9985185	N/A	2025/08/08	Viorica Rotaru
Total Dissolved Solids	BAL	9979405	2025/07/29	2025/07/30	Razieh Tabesh
Field Temperature	PH	ONSITE	N/A	2025/07/30	Patricia Legette
Total Kjeldahl Nitrogen in Water	SKAL	9984674	2025/08/07	2025/08/08	Rajni Tyagi
Turbidity	AT	9979593	N/A	2025/07/30	Gurpartee KAU
Field Temperature	TURB	ONSITE	N/A	2025/07/30	Patricia Legette

**Bureau Veritas ID:** ATLS96 Dup  
**Sample ID:** COH6  
**Matrix:** Water

**Collected:** 2025/07/28  
**Shipped:**  
**Received:** 2025/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE	9984480	2025/08/07	2025/08/07	Nachiketa Gohil
Total Ammonia-N	SKAL/NH4	9979312	N/A	2025/07/30	Muskan
Total Kjeldahl Nitrogen in Water	SKAL	9984674	2025/08/07	2025/08/08	Rajni Tyagi

**Bureau Veritas ID:** ATLS97  
**Sample ID:** O RE6 153  
**Matrix:** Water

**Collected:** 2025/07/28  
**Shipped:**  
**Received:** 2025/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9978770	N/A	2025/07/30	Automated Statchk
Field Temperature		ONSITE	N/A	2025/07/30	Patricia Legette
Field Temperature		ONSITE	N/A	2025/07/30	Patricia Legette
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9979157	2025/07/29	2025/07/30	Mohammed Abdul Nafay Shoeb
Field Temperature	PH	ONSITE	N/A	2025/07/30	Patricia Legette



**BUREAU**  
**VERITAS**

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### TEST SUMMARY

**Bureau Veritas ID:** ATLS97  
**Sample ID:** O RE6 153  
**Matrix:** Water

**Collected:** 2025/07/28  
**Shipped:**  
**Received:** 2025/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Field Temperature	PH	ONSITE	N/A	2025/07/30	Patricia Legette
Field Temperature	TURB	ONSITE	N/A	2025/07/30	Patricia Legette
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9977721	N/A	2025/07/30	Gladys Guerrero



BUREAU  
VERITAS

Bureau Veritas Job #: C591211  
Report Date: 2025/08/13

BluMetric Environmental Inc.  
Client Project #: 250442  
Site Location: ON10  
Your P.O. #: 15068044  
Sampler Initials: JA

### GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.7°C
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Revised Report (2025/08/13): Additional parameters reported under metals scan.

**Results relate only to the items tested.**



BUREAU  
VERITAS

Bureau Veritas Job #: C591211

Report Date: 2025/08/13

### QUALITY ASSURANCE REPORT

BluMetric Environmental Inc.

Client Project #: 250442

Site Location: ON10

Your P.O. #: 15068044

Sampler Initials: JA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9977721	4-Bromofluorobenzene	2025/07/29	99	70 - 130	99	70 - 130	91	%				
9977721	D4-1,2-Dichloroethane	2025/07/29	126	70 - 130	121	70 - 130	127	%				
9977721	D8-Toluene	2025/07/29	103	70 - 130	106	70 - 130	91	%				
9979157	o-Terphenyl	2025/07/29	95	60 - 140	96	60 - 140	97	%				
9977721	1,1,1,2-Tetrachloroethane	2025/07/30	109	70 - 130	103	70 - 130	<0.50	ug/L	NC	30		
9977721	1,1,1-Trichloroethane	2025/07/30	114	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
9977721	1,1,2,2-Tetrachloroethane	2025/07/30	95	70 - 130	94	70 - 130	<0.50	ug/L	NC	30		
9977721	1,1,2-Trichloroethane	2025/07/30	122	70 - 130	118	70 - 130	<0.50	ug/L	NC	30		
9977721	1,1-Dichloroethane	2025/07/30	115	70 - 130	101	70 - 130	<0.20	ug/L	NC	30		
9977721	1,1-Dichloroethylene	2025/07/30	123	70 - 130	108	70 - 130	<0.20	ug/L	NC	30		
9977721	1,2-Dichlorobenzene	2025/07/30	93	70 - 130	92	70 - 130	<0.50	ug/L	NC	30		
9977721	1,2-Dichloroethane	2025/07/30	128	70 - 130	119	70 - 130	<0.50	ug/L	NC	30		
9977721	1,2-Dichloropropane	2025/07/30	114	70 - 130	104	70 - 130	<0.20	ug/L	NC	30		
9977721	1,3-Dichlorobenzene	2025/07/30	93	70 - 130	91	70 - 130	<0.50	ug/L	NC	30		
9977721	1,4-Dichlorobenzene	2025/07/30	97	70 - 130	95	70 - 130	<0.50	ug/L	NC	30		
9977721	Acetone (2-Propanone)	2025/07/30	127	60 - 140	133	60 - 140	<10	ug/L	NC	30		
9977721	Benzene	2025/07/30	108	70 - 130	97	70 - 130	<0.17	ug/L	NC	30		
9977721	Bromodichloromethane	2025/07/30	111	70 - 130	101	70 - 130	<0.50	ug/L	NC	30		
9977721	Bromoform	2025/07/30	97	70 - 130	96	70 - 130	<1.0	ug/L	NC	30		
9977721	Bromomethane	2025/07/30	88	60 - 140	87	60 - 140	<0.50	ug/L	NC	30		
9977721	Carbon Tetrachloride	2025/07/30	121	70 - 130	105	70 - 130	<0.20	ug/L	NC	30		
9977721	Chlorobenzene	2025/07/30	89	70 - 130	85	70 - 130	<0.20	ug/L	NC	30		
9977721	Chloroform	2025/07/30	115	70 - 130	102	70 - 130	<0.20	ug/L	NC	30		
9977721	cis-1,2-Dichloroethylene	2025/07/30	112	70 - 130	101	70 - 130	<0.50	ug/L	NC	30		
9977721	cis-1,3-Dichloropropene	2025/07/30	95	70 - 130	97	70 - 130	<0.30	ug/L	NC	30		
9977721	Dibromochloromethane	2025/07/30	104	70 - 130	101	70 - 130	<0.50	ug/L	NC	30		
9977721	Dichlorodifluoromethane (FREON 12)	2025/07/30	129	60 - 140	116	60 - 140	<1.0	ug/L	NC	30		
9977721	Ethylbenzene	2025/07/30	95	70 - 130	93	70 - 130	<0.20	ug/L	NC	30		
9977721	Ethylene Dibromide	2025/07/30	99	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
9977721	F1 (C6-C10) - BTEX	2025/07/30					<25	ug/L	NC	30		
9977721	F1 (C6-C10)	2025/07/30	86	60 - 140	92	60 - 140	<25	ug/L	NC	30		



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Bureau Veritas Job #: C591211

Report Date: 2025/08/13

### QUALITY ASSURANCE REPORT(CONT'D)

BluMetric Environmental Inc.

Client Project #: 250442

Site Location: ON10

Your P.O. #: 15068044

Sampler Initials: JA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9977721	Hexane	2025/07/30	136 (1)	70 - 130	127	70 - 130	<1.0	ug/L	NC	30		
9977721	Methyl Ethyl Ketone (2-Butanone)	2025/07/30	105	60 - 140	112	60 - 140	<10	ug/L	NC	30		
9977721	Methyl Isobutyl Ketone	2025/07/30	89	70 - 130	95	70 - 130	<5.0	ug/L	NC	30		
9977721	Methyl t-butyl ether (MTBE)	2025/07/30	109	70 - 130	101	70 - 130	<0.50	ug/L	NC	30		
9977721	Methylene Chloride(Dichloromethane)	2025/07/30	103	70 - 130	95	70 - 130	<2.0	ug/L	NC	30		
9977721	o-Xylene	2025/07/30	103	70 - 130	103	70 - 130	<0.20	ug/L	NC	30		
9977721	p+m-Xylene	2025/07/30	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30		
9977721	Styrene	2025/07/30	72	70 - 130	73	70 - 130	<0.50	ug/L	NC	30		
9977721	Tetrachloroethylene	2025/07/30	97	70 - 130	89	70 - 130	<0.20	ug/L	NC	30		
9977721	Toluene	2025/07/30	100	70 - 130	95	70 - 130	<0.20	ug/L	NC	30		
9977721	Total Xylenes	2025/07/30					<0.20	ug/L	NC	30		
9977721	trans-1,2-Dichloroethylene	2025/07/30	114	70 - 130	99	70 - 130	<0.50	ug/L	NC	30		
9977721	trans-1,3-Dichloropropene	2025/07/30	102	70 - 130	118	70 - 130	<0.40	ug/L	NC	30		
9977721	Trichloroethylene	2025/07/30	100	70 - 130	88	70 - 130	<0.20	ug/L	NC	30		
9977721	Trichlorofluoromethane (FREON 11)	2025/07/30	113	70 - 130	98	70 - 130	<0.50	ug/L	NC	30		
9977721	Vinyl Chloride	2025/07/30	120	70 - 130	103	70 - 130	<0.20	ug/L	NC	30		
9978724	Colour	2025/07/29			98	80 - 120	<2	TCU	NC	25		
9978964	Nitrate (N)	2025/07/29	96	80 - 120	96	80 - 120	<0.10	mg/L	NC	20		
9978964	Nitrite (N)	2025/07/29	109	80 - 120	106	80 - 120	<0.010	mg/L	NC	20		
9979155	Dissolved Organic Carbon	2025/07/29	92	80 - 120	95	80 - 120	<0.40	mg/L	0.28	20		
9979157	F2 (C10-C16 Hydrocarbons)	2025/07/30	93	60 - 140	95	60 - 140	<90	ug/L	NC	30		
9979157	F3 (C16-C34 Hydrocarbons)	2025/07/30	102	60 - 140	103	60 - 140	<200	ug/L	NC	30		
9979157	F4 (C34-C50 Hydrocarbons)	2025/07/30	94	60 - 140	95	60 - 140	<200	ug/L	NC	30		
9979312	Total Ammonia-N	2025/07/30	98	75 - 125	103	80 - 120	<0.050	mg/L	NC	20		
9979405	Total Dissolved Solids	2025/07/30			93	80 - 120	<10	mg/L	0.31	20		
9979419	Alkalinity (Total as CaCO3)	2025/07/30			95	85 - 115	<1.0	mg/L	1.3	20		
9979420	Conductivity	2025/07/30			102	85 - 115	<0.002	mS/cm	1.2	10		
9979421	pH	2025/07/30			102	98 - 103			0.27	N/A		
9979430	Dissolved Chloride (Cl-)	2025/07/30	NC	80 - 120	103	80 - 120	<1.0	mg/L	0.45	20		
9979431	Dissolved Sulphate (SO4)	2025/07/30	NC	75 - 125	102	80 - 120	<1.0	mg/L	0.45	20		
9979571	Dissolved Aluminum (Al)	2025/07/30	100	80 - 120	99	80 - 120	<4.9	ug/L				



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VERITAS

Bureau Veritas Job #: C591211

Report Date: 2025/08/13

### QUALITY ASSURANCE REPORT(CONT'D)

BluMetric Environmental Inc.

Client Project #: 250442

Site Location: ON10

Your P.O. #: 15068044

Sampler Initials: JA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9979571	Dissolved Antimony (Sb)	2025/07/30	105	80 - 120	102	80 - 120	<0.50	ug/L	NC	20		
9979571	Dissolved Arsenic (As)	2025/07/30	100	80 - 120	101	80 - 120	<1.0	ug/L	NC	20		
9979571	Dissolved Barium (Ba)	2025/07/30	96	80 - 120	101	80 - 120	<2.0	ug/L	1.5	20		
9979571	Dissolved Beryllium (Be)	2025/07/30	99	80 - 120	101	80 - 120	<0.40	ug/L	NC	20		
9979571	Dissolved Boron (B)	2025/07/30	94	80 - 120	93	80 - 120	<10	ug/L	2.5	20		
9979571	Dissolved Cadmium (Cd)	2025/07/30	100	80 - 120	99	80 - 120	<0.090	ug/L	NC	20		
9979571	Dissolved Calcium (Ca)	2025/07/30	NC	80 - 120	100	80 - 120	<200	ug/L				
9979571	Dissolved Chromium (Cr)	2025/07/30	97	80 - 120	97	80 - 120	<5.0	ug/L	NC	20		
9979571	Dissolved Cobalt (Co)	2025/07/30	97	80 - 120	99	80 - 120	<0.50	ug/L	5.0	20		
9979571	Dissolved Copper (Cu)	2025/07/30	97	80 - 120	99	80 - 120	<0.90	ug/L	NC	20		
9979571	Dissolved Iron (Fe)	2025/07/30	98	80 - 120	100	80 - 120	<100	ug/L				
9979571	Dissolved Lead (Pb)	2025/07/30	93	80 - 120	98	80 - 120	<0.50	ug/L	NC	20		
9979571	Dissolved Magnesium (Mg)	2025/07/30	NC	80 - 120	100	80 - 120	<50	ug/L				
9979571	Dissolved Manganese (Mn)	2025/07/30	94	80 - 120	99	80 - 120	<2.0	ug/L				
9979571	Dissolved Molybdenum (Mo)	2025/07/30	103	80 - 120	98	80 - 120	<0.50	ug/L	2.5	20		
9979571	Dissolved Nickel (Ni)	2025/07/30	93	80 - 120	97	80 - 120	<1.0	ug/L	5.3	20		
9979571	Dissolved Potassium (K)	2025/07/30	100	80 - 120	103	80 - 120	<200	ug/L				
9979571	Dissolved Selenium (Se)	2025/07/30	96	80 - 120	99	80 - 120	<2.0	ug/L	NC	20		
9979571	Dissolved Silver (Ag)	2025/07/30	95	80 - 120	97	80 - 120	<0.090	ug/L	NC	20		
9979571	Dissolved Sodium (Na)	2025/07/30	NC	80 - 120	97	80 - 120	<100	ug/L	2.1	20		
9979571	Dissolved Strontium (Sr)	2025/07/30	NC	80 - 120	100	80 - 120	<1.0	ug/L				
9979571	Dissolved Thallium (Tl)	2025/07/30	95	80 - 120	100	80 - 120	<0.050	ug/L	NC	20		
9979571	Dissolved Uranium (U)	2025/07/30	99	80 - 120	100	80 - 120	<0.10	ug/L	1.1	20		
9979571	Dissolved Vanadium (V)	2025/07/30	100	80 - 120	97	80 - 120	<0.50	ug/L	NC	20		
9979571	Dissolved Zinc (Zn)	2025/07/30	93	80 - 120	103	80 - 120	<5.0	ug/L	NC	20		
9979593	Turbidity	2025/07/30			101	80 - 120	<0.1	NTU	4.6	20		
9984480	Fluoride (F-)	2025/08/07	94	80 - 120	97	80 - 120	<0.10	mg/L	NC	20		
9984674	Total Kjeldahl Nitrogen (TKN)	2025/08/08	102	80 - 120	99	80 - 120	<0.7	mg/L	NC	20	94	80 - 120



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VERITAS

Bureau Veritas Job #: C591211

Report Date: 2025/08/13

### QUALITY ASSURANCE REPORT(CONT'D)

BluMetric Environmental Inc.

Client Project #: 250442

Site Location: ON10

Your P.O. #: 15068044

Sampler Initials: JA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9985185	Tannins & Lignins	2025/08/08	100	80 - 120	100	80 - 120	<0.2	mg/L	NC	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.



### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

---

Cristina Carriere, Senior Scientific Specialist

---

Jing (Sammy) Sun, M.Sc. Biotechnology, Analyst 1

---

Louise Harding, Scientific Specialist

---

Nadine Whyte, Senior Analyst

---

Patricia Legette, Project Manager

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Site Name: Ottawa Landfill LAURYSSEN  
 Site No: 250107 250441  
 Sample Point: LAURYSSEN PRODUCTION BLDG

This Waste Management Field Information Form is Required  
 this form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only: Lab ID: \_\_\_\_\_

---

**PURGE INFO**

PURGE DATE	PURGE TIME	LAPSED HRS	WATER VOL IN CASING	ACTUAL VOL PURGED	WELL VOLS PURGED
na	na	na	na	na	na

Note: For Passive sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ "Water Vol in Tubing Flow Cell Vols Purged". Mark changes, record field data, below

---

**PURGE/SAMPLE/EQUIPMENT**

Purging and Sampling Equipment Dedicated:  Y or  N Filter Device  Y or  N

Purging Device na A-Submersible Pump D-Bailer A-In-line Disposable C-Vacuum  
 B-Peristaltic Pump E-Piston Pump Filter Type: B-Pressure X-Other na  
 Sampling Device F C-Water Foot Valve F-Dipper/Bottle  
 Other: \_\_\_\_\_ Sample Tube Type: A-Teflon D-Polypropylene X-Other: na  
 B-Stainless Steel C-PVC

---

**WELL DATA**

Well Elevation na Depth to Water (DTW) na Groundwater Elevation na  
 (at TOC) (from TOC) (site datum, from TOC)

Total Well Depth na Stick Up na Riser ID (in) na Casing Material na  
 (from TOC) (from ground elevation) Riser construction na

Note: Total Well Depth, Stick Up, Casing id, etc are optional and can be from historical data, unless required by Site Permit. Well Elevation, DTW and Groundwater Elevation must be current.

---

**STABILIZATION DATE (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH	Conductivity (µS/cm)	Temp (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	DTW

Note: Provide 3 consecutive readings or note reason(s) why not provided.

---

**FIELD DATA**

Sample Time	Rate/Unit	pH	Conductance (µS/cm)	Temp (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	Other: _____
<u>14:00</u>	<u> </u>	<u>7.35</u>	<u>726</u>	<u>12.16</u>	<u>0.5</u>	<u>6.40</u>	<u>135</u>	<u> </u>
<u>14:10</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Note: Final field Readings are required: (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State Permit Site.)

---

**FIELD COMMENTS**

Sample Appearance: CLEAR Odour: NO Colour: NO Other: \_\_\_\_\_  
 Weather Conditions: SUNNY, 30°C Direction/Speed: NE / 5kph Outlook: SUNNY Precipitation: Y or (N)  
 (required daily, or as conditions change):  
 Specific Comments (including purge/well volume calculations if required):  
GPS: CONNECTED TUBING TO PRESSURE TANK OUTLET  
PURGED 1250 L at 12.5 L/min (100 min)  
TRUE COLOR + FREE CHLORINE DEEMED ACCEPTABLE  
SAMPLED COMG (6 BOTTLES) - 0 RES 153 (4 BOTTLES)

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if party than one sampler, all should sign):  
250728 JAMES REINER James Reiner BluMetric  
 \_\_\_\_\_ BluMetric  
 Date Name Signature Company

COMG  
0 RES 153

C591211  
2025/07/28 15:10

Bureau Veritas  
36 Antares Dr Unit 100, Nepean, Ontario Canada K2E 7W5 Tel: (613) 274-0573 Toll-free: 800-563-6266 Fax: (613) 274-0574 www.bvna.com

Received in Ottawa

CHAIN OF CUSTODY RECORD

Page 1 of 1

<b>INVOICE TO:</b>		<b>REPORT TO:</b>		<b>PROJECT INFORMATION:</b>		<b>Laboratory Use Only:</b>	
Company Name: #19298 Waste Management of Canada Corporation	Company Name: #8252 BluMetric Environmental Inc.	Quotation #: C45986	Bureau Veritas Job #:	Bottle Order #:	1054915		
Attention: Remi Godin - rgodin@wm.com	Attention: Jacqueline Brook	P.O. #: 15068044	COC #:		Project Manager:		
Address: 2301 Carp Rd RR 3	Address: PO Box 430 3108 Carp Rd	Project: 250442	C#1054915-01-01		Patricia Legette		
Carp ON K0A 1L0	Carp ON K0A 1L0	Project Name:					
Tel: (613) 371-1725 Fax: (613) 831-8928	Tel: (877) 487-8436 Ext: 406 Fax:	Site #: 200					
Email: rgodin@wm.com, invoiceuploads@bvlabs.com	Email: jbrook@blumetric.ca, dba_wmcc_ottawa@blumetric.ca, r	Sampled By:					

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

<b>Regulation 153 (2011)</b> <input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> For RSC <input type="checkbox"/> Table		<b>Other Regulations</b> <input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> Reg 558 <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Municipality _____ <input type="checkbox"/> PWQO <input type="checkbox"/> Reg 406 Table _____ <input type="checkbox"/> Other _____		<b>Special Instructions</b>  		<b>ANALYSIS REQUESTED (PLEASE BE SPECIFIC)</b>  		<b>Turnaround Time (TAT) Required:</b> Please provide advance notice for rush projects. <b>Regular (Standard) TAT:</b> (will be applied if Rush TAT is not specified.) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details. <b>Job Specific Rush TAT (if applies to entire submission)</b> Date Required: <u>ASAP</u> Time Required: <input checked="" type="checkbox"/> Rush Confirmation Number: _____ (call lab for #)	
--	--	---	--	-------------------------------------	--	--	--	--	--

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filled (please circle): Metals: Hg / Cr / V	City of Ottawa Hydrogeological Form	O.Reg. 153: VOCs by HS & F1-F4	# of Bottles	Comments
1	COHG	25 07 28	14:00	GW	X	X		6	
2	O REG 153	25 07 28	14:10	GW			X	4	
3									
4									
5									
6									
7									
8									
9									
10									

RUSH  
MICRO

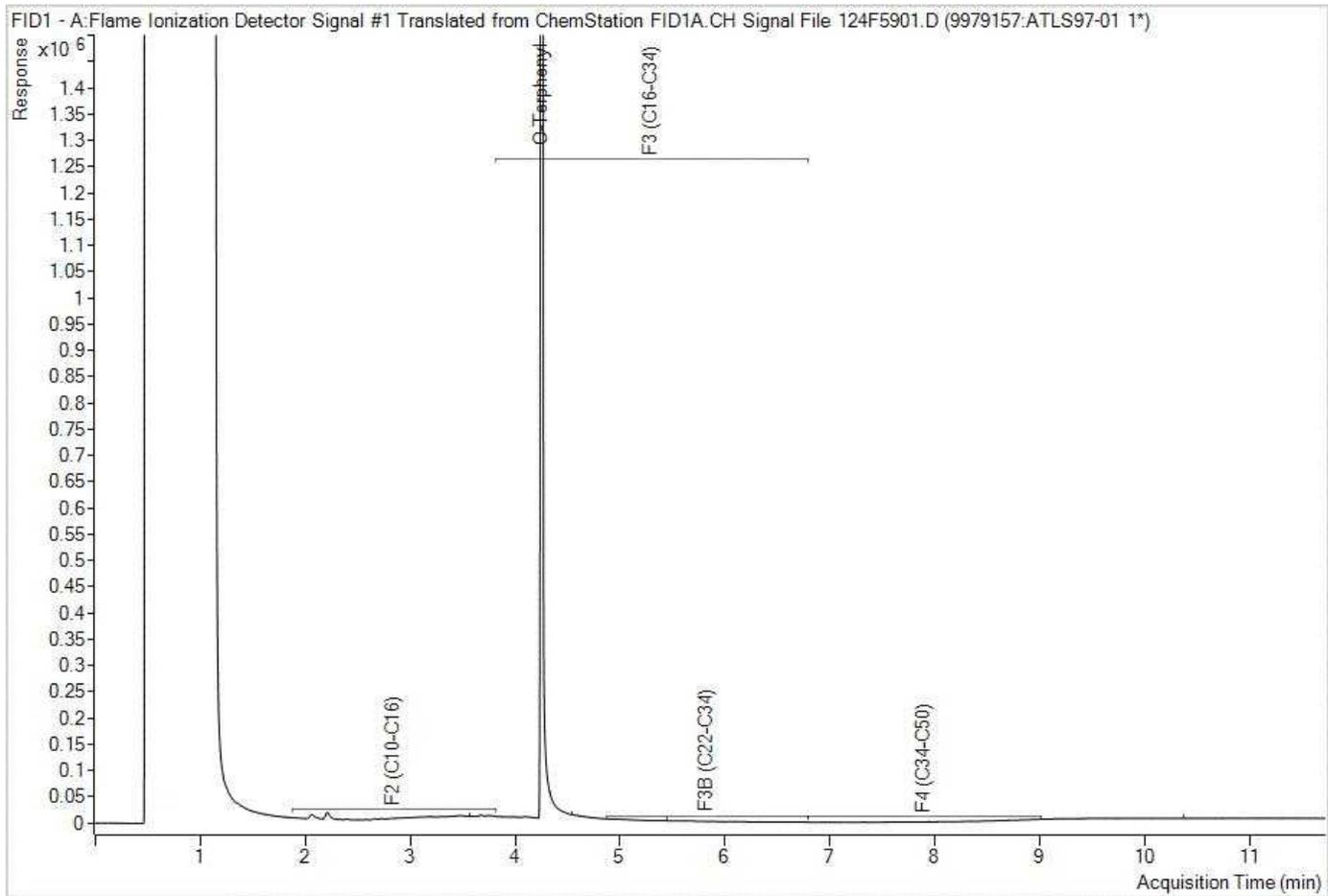


OTT-2025-07-345

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
James Carney JAMES ARMSTRONG		25 07 28	15:05	Pedro da Silva		2025/07/28	15:10		Time Sensitive	Temperature (°C) on Receipt	Custody Seal Present	Yes	No
										11/12/12 (Green)	Intact		✓

\* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COO-TERMS-AND-CONDITIONS.  
 \*\* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.  
 \*\*\* SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.  
 White: Bureau Veritas Yellow: Client  
 SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

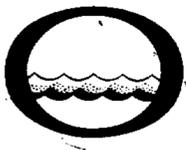
# Attachment D

Laboratory Results





BACK MAIL SLO



# The Ontario Water Resources Commission Act WATER WELL RECORD

314/5d

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT BOX WHERE APPLICABLE

11 1511894-18 15005 CON. CAN 03

COUNTY OR DISTRICT: Coquiton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Huntley CON., BLOCK, TRACT, SURVEY, ETC.: 3 LOT: 005

ADDRESS: Box 562, Stittsville DATE COMPLETED: 26 MO. 05 YR. 72

NORTHING: 1511894 ELEVATION: 18 BASIN CODE: 424034 RC. 5015334 RC. 4 ELEVATION: 390 BASIN CODE: 4 DATE: 26 JAN 12, 1975

### LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
<u>Brown</u>	<u>sand</u>	<u>Shale boulders</u>	<u>packed</u>	<u>0</u>	<u>28</u>
<u>Grey</u>	<u>limestone</u>		<u>hard</u>	<u>28</u>	<u>43</u>

31 0028/281/113 00432/15

32

#### 41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
10-13	1 <input checked="" type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	14	
	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL		
15-18	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	19	
	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL		
20-23	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	24	
	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL		
25-28	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	29	
	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL		
30-33	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	34	80
	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL		

#### 51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
<u>5 1/2</u>	1 <input checked="" type="checkbox"/> STEEL	<u>1.88</u>	<u>0</u>	<u>31</u>
	2 <input type="checkbox"/> GALVANIZED			
	3 <input type="checkbox"/> CONCRETE			
	4 <input checked="" type="checkbox"/> OPEN HOLE			
<u>5</u>	1 <input type="checkbox"/> STEEL		<u>31</u>	<u>43</u>
	2 <input type="checkbox"/> GALVANIZED			
	3 <input type="checkbox"/> CONCRETE			
	4 <input checked="" type="checkbox"/> OPEN HOLE			
<u>5</u>	1 <input type="checkbox"/> STEEL		<u>31</u>	<u>0043</u>
	2 <input type="checkbox"/> GALVANIZED			
	3 <input type="checkbox"/> CONCRETE			
	4 <input type="checkbox"/> OPEN HOLE			

#### SCREEN

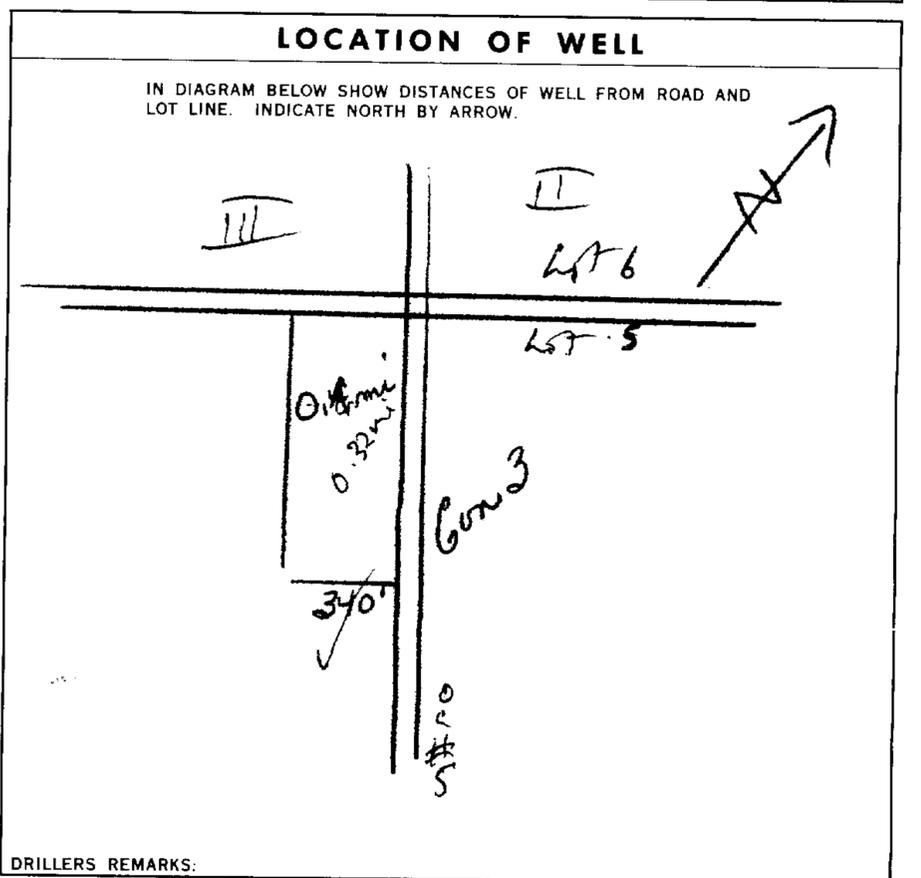
SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	31-33	34-38
	INCHES	FEET
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN
		41-44
		FEET
		80

#### 61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
FROM	TO	
10-13	14-17	
18-21	22-25	
26-29	30-33	80

#### 71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input type="checkbox"/> PUMP 2 <input checked="" type="checkbox"/> BAILER	<u>0025</u> GPM.	<u>01</u> HOURS <u>00</u> MINS.
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
19-21	22-24	15 MINUTES 26-28
<u>028</u> FEET	<u>030</u> FEET	30 MINUTES 29-31
		45 MINUTES 32-34
		60 MINUTES 35-37
		<u>030</u> FEET <u>030</u> FEET <u>030</u> FEET <u>030</u> FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	GPM.	FEET
		1 <input type="checkbox"/> CLEAR 2 <input checked="" type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
1 <input checked="" type="checkbox"/> SHALLOW 2 <input type="checkbox"/> DEEP	<u>030</u> FEET	<u>0004</u> GPM.
50-53 <u>002.5</u> GPM./FT. SPECIFIC CAPACITY		



#### FINAL STATUS OF WELL

1  WATER SUPPLY 5  ABANDONED, INSUFFICIENT SUPPLY  
 2  OBSERVATION WELL 6  ABANDONED, POOR QUALITY  
 3  TEST HOLE 7  UNFINISHED  
 4  RECHARGE WELL

#### WATER USE

1  DOMESTIC 5  COMMERCIAL  
 2  STOCK 6  MUNICIPAL  
 3  IRRIGATION 7  PUBLIC SUPPLY  
 4  INDUSTRIAL 8  COOLING OR AIR CONDITIONING  
 9  NOT USED

#### METHOD OF DRILLING

1  CABLE TOOL 6  BORING  
 2  ROTARY (CONVENTIONAL) 7  DIAMOND  
 3  ROTARY (REVERSE) 8  JETTING  
 4  ROTARY (AIR) 9  DRIVING  
 5  AIR PERCUSSION

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd LICENCE NUMBER: 1558

ADDRESS: Box 490, Stittsville, Ont.

NAME OF DRILLER OR BORER: Boyd Cameron LICENCE NUMBER: \_\_\_\_\_

SIGNATURE OF CONTRACTOR: Halton Kavanagh SUBMISSION DATE: 26 MO. 5 YR. 72

#### OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 1558 DATE RECEIVED: 041072

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: K

REMARKS: \_\_\_\_\_

P R  
WI

1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT BOX WHERE APPLICABLE

11 1521167

COUNTY OR DISTRICT <b>Ottawa-Carleton</b>	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE <b>West Carleton (Huntley)</b>	CONC. BLOCK, TRACT, SURVEY, ETC. <b>Conc. 3</b>	LOT <b>4</b>
OWNER (SURNAME FIRST) <b>John Laurysen Ltd.</b>	ADDRESS <b>Box 1235; Stittsville, Ont. KOA 3G0</b>	DATE COMPLETED DAY <b>19</b> MO <b>08</b> YR <b>86</b>	

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**LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)**

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Sand, Gravel & Boulders			0	6
Brown	Sand			6	14
Brown	Sand & Gravel			14	31
Gray	Limestone		Medium	31	200

31

32

**41 WATER RECORD**

WATER FOUND AT - FEET	KIND OF WATER
10-13 <b>196'</b>	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

**51 CASING & OPEN HOLE RECORD**

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11 <b>6 1/4</b>	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	<b>.188</b>	0	33
17-18 <b>5 15/16</b>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		33	200
24-25 <b>16</b>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			

**SCREEN**

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
	31-33	34-38
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN 41-44
		FEET 30

**61 PLUGGING & SEALING RECORD**

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT, LEAD PACKER, ETC.
FROM TO		
10-13	14-17	
18-21	22-25	
26-29	30-33	80

**71 PUMPING TEST**

PUMPING TEST METHOD 1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	PUMPING RATE <b>8</b> GPM	DURATION OF PUMPING 1 15-16 HOURS 17-18 MINS
STATIC LEVEL <b>30</b> FEET	WATER LEVEL END OF PUMPING <b>45</b> FEET	WATER LEVELS DURING 1 <input checked="" type="checkbox"/> PUMPING 2 <input type="checkbox"/> RECOVERY
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT <b>45</b> FEET	WATER AT END OF TEST 1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	RECOMMENDED PUMP SETTING <b>75</b> FEET	RECOMMENDED PUMPING RATE <b>5</b> GPM

**LOCATION OF WELL**

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

DRILLERS REMARKS:

**FINAL STATUS OF WELL**

1 <input checked="" type="checkbox"/> WATER SUPPLY	5 <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY
2 <input type="checkbox"/> OBSERVATION WELL	6 <input type="checkbox"/> ABANDONED, POOR QUALITY
3 <input type="checkbox"/> TEST HOLE	7 <input type="checkbox"/> UNFINISHED
4 <input type="checkbox"/> RECHARGE WELL	

**WATER USE**

1 <input checked="" type="checkbox"/> DOMESTIC	5 <input type="checkbox"/> COMMERCIAL
2 <input type="checkbox"/> STOCK	6 <input type="checkbox"/> MUNICIPAL
3 <input type="checkbox"/> IRRIGATION	7 <input type="checkbox"/> PUBLIC SUPPLY
4 <input type="checkbox"/> INDUSTRIAL	8 <input type="checkbox"/> COOLING OR AIR CONDITIONING
<input type="checkbox"/> OTHER	9 <input type="checkbox"/> NOT USED

**METHOD OF DRILLING**

1 <input type="checkbox"/> CABLE TOOL	5 <input type="checkbox"/> BORING
2 <input type="checkbox"/> ROTARY (CONVENTIONAL)	7 <input type="checkbox"/> DIAMOND
3 <input type="checkbox"/> ROTARY (REVERSE)	8 <input type="checkbox"/> JETTING
4 <input type="checkbox"/> ROTARY (AIR)	9 <input type="checkbox"/> DRIVING
5 <input checked="" type="checkbox"/> AIR PERCUSSION	

**CONTRACTOR**

NAME OF WELL CONTRACTOR <b>Capital Water Supply Ltd.</b>	LICENCE NUMBER <b>1558</b>
ADDRESS <b>Box 490; Stittsville, Ontario. KOA 3G0</b>	
NAME OF DRILLER OR BORER <b>S. Miller</b>	LICENCE NUMBER
SIGNATURE OF CONTRACTOR <i>[Signature]</i>	SUBMISSION DATE DAY <b>20</b> MO <b>08</b> YR <b>86</b>

**OFFICE USE ONLY**

DATA SOURCE	CONTRACTOR	DATE RECEIVED <b>060287</b>
DATE OF INSPECTION	INSPECTOR	
REMARKS		

*CS. E.S.*



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