REPORT

2025 Due Diligence Monitoring Programs

Oxford County - Blandford-Blenheim Closed Landfill Site
Oxford County - Otterville Closed Landfill Site
Oxford County - Tillsonburg Closed Landfill Site

Submitted to:

County of Oxford

21 Reeve Street
Woodstock, ON
N4S 7Y3

Submitted by:

WSP Canada Inc.

1821 Provincial Road, Windsor, ON
N8W 5V7 Canada

(519) 974-5887

CA0024089.5055-03

February 5, 2026

Distribution List

Pamela Antonio, MPA, BES, Supervisor of Waste Management, County of Oxford

Frank Gross, C.Tech, Senior Manager of Transportation & Waste Services, County of Oxford

Limitations

WSP Canada Inc. (“WSP”) prepared this report solely for the use of the intended recipient, COUNTY OF OXFORD, in accordance with the professional services agreement between the parties. In the event a contract has not been executed, the parties agree that the WSP General Terms for Consultant shall govern their business relationship which was provided to you prior to the preparation of this report.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment.

The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by WSP and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

WSP disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, WSP reserves the right to amend or supplement this report based on additional information, documentation or evidence.

WSP makes no other representations whatsoever concerning the legal significance of its findings.

The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

WSP has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by WSP and the recipient of this report that WSP provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by WSP and the recipient of this report that WSP makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, WSP has relied in good faith on information provided by others, as noted in the report. WSP has reasonably assumed that the information provided is correct and WSP is not responsible for the accuracy or completeness of such information.

Benchmark and elevations used in this report are primarily to establish relative elevation differences between the specific testing and/or sampling locations and should not be used for other purposes, such as grading, excavating, construction, planning, development, etc.

WSP disclaims any responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions /or costs.

Overall conditions can only be extrapolated to an undefined limited area around these testing and sampling locations. The conditions that WSP interprets to exist between testing and sampling points may differ from those that actually exist. The accuracy of any extrapolation and interpretation beyond the sampling locations will depend on natural conditions, the history of Site development and changes through construction and other activities. In addition, analysis has been carried out for the identified chemical and physical parameters only, and it should not be inferred that other chemical species or physical conditions are not present. WSP cannot warrant against undiscovered environmental liabilities or adverse impacts off-Site.

The original of this digital file will be kept by WSP for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP, its integrity cannot be assured. As such, WSP does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

This limitations statement is considered an integral part of this report.

Table of Contents

TABLES

FIGURES

APPENDICES

1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Oxford County (County) to provide consulting services for the 2025 annual landfill monitoring and reporting for the following three closed municipal landfill sites, owned by Oxford County:

- Blandford-Blenheim Closed Landfill Site
- Otterville Closed Landfill Site
- Tillsonburg Closed Landfill Site

It is our understanding that this undertaking was initiated by the County for due diligence purposes. The locations of the subject closed landfill sites are provided on **Figure 1**. As requested by Oxford County, the primary objective was to complete the recommended annual due diligence programs and provide an annual monitoring report each site.

1.1 BACKGROUND

At the request of the County, WSP conducted a records review and site visits of eight closed landfill sites owned by Oxford County, including the closed Blandford-Blenheim, Otterville and Tillsonburg Landfills, and prepared a report entitled “Inventory of Closed Municipal Landfill Sites – Oxford County” (WSP, 2019). This report included the following information, for each site:

- Compilation/list of all the records provided by Oxford County;
- History of the site and property information (if available):
  - Previous landowners, operations and site activities; and
  - Prior agreements, Certificates of Approval.
- Site information:
  - Location (site plan);
  - Geology/hydrogeology, potential receptors such as natural environments, neighbouring properties, water wells; and
  - Existing monitoring infrastructure and previous monitoring activities.
- Assessment of the risk to potential receptors from the current status of the site; and
- Recommendations and best practices (if any) for additional monitoring and inspections

The report was completed to develop an understanding of the potential risks at each closed landfill site and the possible need for additional works, investigations and/or monitoring.

Based upon the report, Oxford County chose to proceed with recommended medium and high priority action items at the Blandford-Blenheim closed landfill in 2022; and the Otterville and Tillsonburg closed landfills in 2023. These activities were detailed in the 2022 and 2023 Due Diligence Monitoring Program Reports for the Oxford County Closed Landfill Sites (WSP, 2023-2024). Following these activities, the County developed annual monitoring

programs specific to each landfill. This report documents the findings and monitoring program activities completed at these three landfills during the 2025 monitoring period.

A summary of the proposed 2025 monitoring program for each of the three landfill sites is provided in **Table 1**. The monitoring programs specified in the table were carried out at a minimum, with some complementary monitoring completed (i.e. some additional landfill gas monitoring and water levels were completed when on-site for other monitoring tasks).

2 BLANDFORD-BLENHEIM LANDFILL

2.1 Monitoring Program and Results

The monitoring program for the Blandford-Blenheim Landfill was based upon the recommendations that were provided in the Inventory of Closed Municipal Landfill Sites Report, completed by WSP in November 2019. These tasks included the following monitoring events in 2025:

- Gas monitoring of probe BB-GP1 and monitoring wells BB-MW1, BB-MW2, BB-MW3, BB-BH1-1 and BB-BH1-2 on March 19, July 15 and December 8, 2025;
- Surface water monitoring at BB-SW1, BB-SW2 and BB-SW3 on March 19, 2025;
- Groundwater sampling at BB-MW1, BB-MW2, BB-MW3, BB-BH1-1 and BB-BH1-2 on April 28, 2025;
- Groundwater level monitoring at all on-site monitors during each monitoring event; and
- Private well monitoring at a residential property located at 846635 Township Road 9 (BB-P1) on April 28, 2025.

Gas probe BB-GP1 was installed in 2022 within the unsaturated zone northwest of the refuse and east of the adjacent residential property for the purpose of assessing landfill gas migration from the refuse. The location of the landfill gas monitoring probe is shown on **Figure 2-1**. The gas monitoring was completed using an Elkins Earthworks Envision Landfill Gas Monitor. Groundwater level measurements were collected immediately following the gas measurements within the gas probe.

Surface water sampling was completed during the spring at three surface water locations, as shown on **Figures 2-1 and 2-2**. It is noted that each of the locations were not flowing (stagnant) at the time of the sampling event. The samples were obtained directly from the surface water source at each monitoring location and submitted to SGS Canada Inc., located in Lakefield, Ontario.

Groundwater monitoring wells BB-MW1, BB-MW2 and BB-MW3 were installed in 2022 to assess the shallow groundwater quality and flow direction. The shallow groundwater monitors were installed near the northwest, southwest and eastern boundaries of the Site, as shown on **Figures 2-1 and 2-2**. Monitoring wells BB-BH1-1 and BB-BH1-2 were existing wells, located within the southcentral portion of the Site. Groundwater monitoring and sampling was completed during the spring at the five groundwater monitoring wells. The samples were submitted to SGS Canada Inc. located in Lakefield, Ontario.

The private well sampling was completed during the spring at the residential property to the northwest of the landfill property, as shown on **Figure 2-1**. In discussions with the private well owner, the well was reported to be a dug well with a depth of approximately 40 foot (12.2 m). The presumed water well record was located and obtained from the MECP well record database by WSP. The presumed water well record for the private well is provided in **Appendix B-1**. The sample was obtained from a tap located outside of the corner of the garage, prior to any water treatment systems (e.g. UV treatment, filters, softeners, etc.).

2.1.1 Landfill Gas

Monitoring for combustible gas was completed three times during 2025, during different seasons. Monitoring occurred during the spring (March 19, 2025), summer (July 15, 2025), and winter (December 8, 2025). Monitoring occurred in December 2025 to correspond to frozen ground conditions, as landfill gas preferentially migrates horizontally when the ground is frozen and cannot escape vertically in the vicinity of the waste. The combustible gas monitoring results are presented in **Table 6,** with historical results provided in **Table E-1** of **Appendix E**.

Groundwater elevations were completed to ensure that the screen of gas probe BB-GP1 remained unsaturated, to allow the gas to accumulate in the gas probe. The monitor's well screen was not submerged for any of the monitoring events. Landfill gas monitoring and groundwater elevations were also collected within monitoring wells BB-MW1, BB-MW2 and BB-MW3, although these monitors' well screens were submerged for each of the monitoring events in 2025. Landfill gas monitoring and groundwater elevations were also collected within historic monitoring wells BB-BH1-1 and BB-BH1-2, but as the monitoring well details are unknown for these wells, it cannot be confirmed if the monitors' well screens were submerged or not.

During both frozen and unfrozen ground conditions, combustible gas was not detected at any of the monitors during the monitoring period. These results indicate that landfill gas does not appear to be present or migrating away from the property boundary, including toward the residential property to the northwest. Given the age and size of the landfill, it is unlikely that landfill gas will pose a risk to neighbouring properties.

2.1.2 Surface Water

Surface Water Flow

During the March 2025 sampling event at the Site, there was no apparent surface water flow (stagnant) at the designated monitoring stations.

Some surface drainage from the refuse mound appears to collect in the wetland/swampy area in the southeastern corner of the Site (BB-SW2), which is assumed to drain to the adjoining swampland to the east (BB-SW3). An inspection of the southeastern corner of the property was previously completed, to attempt to find the culvert that is presumed to connect the landfill property with the adjoining property. This culvert was unable to be found.

Station BB-SW1 is located within a wetland/swampy area to west of the Site and represents an upgradient location. There was also no surface water flow at this upgradient location in 2025.

Surface Water Quality

Project QA/QC was performed through each stage of sampling and analysis. QA/QC during data collection was ensured through the use of standard monitoring protocols and procedures. Field equipment was calibrated regularly. Water samples collected in the field were placed in coolers with ice to maintain a constant temperature of about 4ºC and delivered or couriered to the laboratory at the end of the day.

Analytical results for the field QA/QC sampling completed during the surface water sampling program were evaluated for the RPD of parameter concentrations. For concentrations greater than five times the RDL, a concentration difference of less than or equal to 20% was deemed acceptable. For concentrations less than or equal to five times the RDL, a concentration difference of equal to or less than twice the RDL was deemed acceptable.

Laboratory reports were reviewed as part of the laboratory QA/QC program. The surface water duplicate sample results are provided in **Table 5**. The RPDs between the blind duplicate and original sample collected on March 19,

2025 were acceptable for the tested constituents, with the exception of total phosphorus (42% RPD). The laboratory was consulted to validate the original and duplicate results for the sample. The laboratory's response indicated that these concentrations were within acceptable laboratory QA/QC ranges and the chemical results stand.

The surface water samples were analyzed for parameters that are typically associated with municipal landfills, as listed in Schedule 5, Column 3 of the Landfill Standards guideline (MECP, 2012). Summarized field and laboratory results for 2025 are presented in **Table 4**. Historical surface water chemistry results are presented in **Table D-1** of **Appendix D,** with concentration versus time graphs provided in **Figures D-1A** through **D-1F** for select parameters. For concentrations that were not detected, a value of half the RDL was plotted in the figures. Further data is required before historical trends can be accurately analyzed. Copies of the 2025 laboratory certificates of analysis are provided in **Appendix F**.

Concentrations of typical landfill related parameters were compared between downgradient surface water quality at BB-SW2 and BB-SW3 to upgradient surface water quality at BB-SW1. In the spring of 2025, the majority of parameter concentrations were similar or decreased when comparing results at BB-SW1 to BB-SW2, with the exceptions of TKN, ammonia, nitrate, boron and iron, which increased in concentration. Moving from BB-SW2 to BB-SW3, the majority of the parameter concentrations increased in concentration. These results indicate that the landfill may be influencing surface water quality. Concentrations of un-ionized ammonia at BB-SW2 and BB-SW3; and total phosphorus, phenols, and iron at all three stations, exceeded their respective PWQO in March 2025. It is noted that the iron concentration at BB-SW3 (7.85 mg/L) in March 2025 was a significant decrease from the historically high concentration noted in April 2024 (19.8 mg/L).

Although several parameters exceeded the PWQO at the downstream surface water locations, it is plausible that these exceedances were the result of the stagnant wetland conditions at these locations. The general increase of parameter concentrations from the upstream to downstream locations does suggest that the landfill may be partially influencing surface water quality. Nonetheless, as the surface water stations are normally ephemeral (dry in the fall), the downstream impact appears to be minimal. Continued surface water monitoring is recommended to corroborate these ephemeral conditions, and to monitor for any changing parameter concentration trends.

2.1.3 Groundwater

Groundwater Flow

According to the local Source Water Protection assessments, groundwater flow in the vicinity of the Site is inferred to flow towards the east to southeast. Based on the groundwater elevation measurements completed, the groundwater flow direction of the shallow overburden matches the Source Water Protection assessment. The groundwater table elevations measured in April 2025 and the interpreted shallow groundwater table contours are presented on **Figure 2-3**. Historical groundwater elevations are provided in **Table E-1** of **Appendix E**, with elevation versus time graphed on **Figure E-1**.

As per the inferred groundwater flow direction, the groundwater quality observed at monitoring well BB-MW3 is considered representative of background/upgradient groundwater conditions, while the remaining monitoring wells are considered downgradient of the Site.

Groundwater Quality

Project QA/QC was performed through each stage of sampling and analysis. QA/QC during data collection was ensured through the use of standard monitoring protocols and procedures. Field equipment was calibrated regularly. Water samples collected in the field were placed in coolers with ice to maintain a constant temperature of about 4ºC and delivered or couriered to the laboratory at the end of the day.

Analytical results for the field QA/QC sampling completed during the groundwater sampling program were evaluated for the RPD of parameter concentrations. For concentrations greater than five times the RDL, a concentration difference of less than or equal to 20% was deemed acceptable. For concentrations less than or equal to five times the RDL, a concentration difference of equal to or less than twice the RDL was deemed acceptable.

Laboratory reports were reviewed as part of the laboratory QA/QC program. The groundwater duplicate sample results are provided in **Table 3**. The RPDs between the blind duplicate and original sample collected on April 28, 2025 were acceptable for the tested constituents, with the exception of dissolved organic carbon (24% RPD) and total suspended solids (92% RPD). The laboratory was consulted to validate the original and duplicate results for the samples noted. The laboratory's response indicated that these concentrations were within acceptable laboratory QA/QC ranges and the chemical results stand.

The groundwater samples were analyzed for parameters that are typically associated with municipal landfills as listed in Schedule 5, Column 1 of the Landfill Standards guideline (MECP, 2012). Summarized field and laboratory results for 2025 are presented in **Table 2**. Historical groundwater chemistry results are presented in **Table C-1** of **Appendix C,** with concentration versus time graphs provided in **Figures C-1A** through **C-1G** for select parameters. For concentrations that were not detected, a value of half the RDL was plotted in the figures. Concentrations have remained stable at the monitoring wells, since monitoring began in 2022; there are currently no notable increasing concentration trends. Copies of the 2025 laboratory certificates of analysis are provided in **Appendix F**.

Parameter concentrations in the groundwater samples collected were generally highest at monitor BB-BH1-2 located within the landfill footprint, followed by concentrations at monitor BB-MW1 located downgradient in the east corner of the Site. Concentrations at monitors BB-BH1-1 and BB-MW2 were also generally elevated compared to background concentrations at monitor BB-MW3, but less elevated than at monitors BB-BH1-2 and BB-MW1. Manganese concentrations at BB-BH1-1 were greater than BB-BH1-2 in April 2025. These results correspond to those noted in 2022, 2023, and 2024.

Concentrations of volatile organic compounds (VOCs) were detected within the groundwater at monitor BB-BH1-2 for benzene, toluene and 1,4-dichlorobenzene during the 2025 monitoring event. These VOC parameters were also detected at this location in 2022, 2023 and 2024. VOCs were not detected in any of the other groundwater monitors, with the exception of a trace concentration of toluene at BB-MW2 (0.5 µg/L) at its detection limit, in April 2025.

It is noted that nested monitors BB-BH1-1 and BB-BH1-2 were existing monitoring wells within the landfill footprint, that were identified during the inventory of the closed municipal landfills in Oxford County (WSP, 2019). Well details were not available for these monitoring wells, but dedicated sampling equipment was installed by WSP in the spring of 2022 and the wells were developed to promote hydraulic connection to ensure that the adjacent groundwater was representative of natural conditions. Well depths were recorded after development of these wells. It is apparent that monitor BB-BH1-2 is a shallow monitoring well, likely installed within the refuse, and is representative of the leachate quality at the Site. Monitor BB-BH1-1 is a deeper monitoring well, assumed to be installed below the refuse. Therefore, the elevated parameter concentrations at monitor BB-BH1-2 can be considered representative of leachate at the Site.

Ontario Drinking Water Quality Standards

A review of the groundwater quality results indicates that all the parameters analyzed were within the ODWQS during 2025, with the exception of:

- Total dissolved solids (TDS), dissolved organic carbon (DOC), iron and manganese at monitors BB-BH1-2 and BB-MW1;

- Alkalinity at monitor BB-BH1-2;
- Manganese at monitor BB-BH1-1; and
- Benzene and 1-4-dichlorobenzene at monitor BB-BH1-2.

As discussed above, BB-BH1-2 is likely installed within the refuse and is representative of the leachate quality at the Site. As such, the ODWQS exceedances within this monitor are not unexpected.

In addition, TDS, DOC, iron, manganese and 1,4-dichlorobenzene have objectives or guidelines related to the aesthetic quality of the water and are not health related. Alkalinity has an operational guideline and is also not health related.

Guideline B-7 Compliance Assessment

Guideline B-7 (GB-7) was established by the MECP as a mechanism to assess the acceptable level of leachate impacts on the groundwater system. Guideline B-7 is applied to groundwater quality at the property boundary, and is intended to protect both existing and potential reasonable uses of the groundwater on adjacent properties. The Guideline states that, for non-health related parameters, the impact from the landfill should not raise the concentration by more than half the difference between the background concentration and the ODWQS. For health related parameters, the impact from the landfill should not raise the concentration by more than quarter the difference between the background concentration and the ODWQS.

GB-7 criteria were calculated for parameters that have ODWQS. The historical groundwater chemistry results from background monitor BB-MW3 (2022-2025) were used as reference concentrations for the calculations.

Table 7 provides a comparison of the calculated Guideline B-7 criteria and downgradient shallow wells on Site.

In summary, concentrations at the landfill property boundary complied with the GB-7 criteria in 2025, with the exception of:

- TDS at monitors BB-MW1 and BB-MW2; and
- DOC, alkalinity, barium, iron and manganese at monitor BB-MW1.

It is noted that most of these parameters have objectives or guidelines related to the aesthetic quality (TDS, DOC, iron and manganese) or operational treatment (alkalinity) of the water, and are not health related. Barium, which is a health related criterion, exceeded the GB-7 criteria at BB-MW1; however, the concentration was detected below the ODWQS criteria.

Based on the groundwater quality results, there is evidence of landfill impact to the shallow groundwater at the Site, particularly at eastern boundary well BB-MW1. This shallow groundwater may also influence the surface quality within the wetland areas to the east of the Site. It is noted that the adjacent property directly to the east of the Site was confirmed to be owned by Oxford County (WSP, 2019), and could be considered a buffer for landfill impacts to the east. If further lands to the east/southeast become available, the County may want to consider purchasing them for additional buffer and natural attenuation of shallow groundwater and surface water. Continued groundwater monitoring of the wells on-site is recommended, to monitor for any changing parameter concentration trends.

2.1.4 Private Well

Project QA/QC was performed through each stage of sampling and analysis. QA/QC during data collection was ensured through the use of standard monitoring protocols and procedures. Field equipment was calibrated regularly.

Water samples collected in the field were placed in coolers with ice to maintain a constant temperature of about 4ºC and delivered or couriered to the laboratory at the end of the day.

The private well groundwater sample was analyzed for parameters that are typically associated with municipal landfills as listed in Schedule 5, Column 1 of the Landfill Standards guideline (MECP, 2012). Summarized field and laboratory results for 2025 are presented in **Table 2**. Historic groundwater chemistry results are presented in **Table C-1** of **Appendix C,** with concentration versus time graphs provided in **Figures C-1A** through **C-1G** for select parameters. For concentrations that were not detected, a value of half the RDL was plotted in the figures. Further data is required before trends can be accurately analyzed. Copies of the 2025 laboratory certificates of analysis are provided in **Appendix F**.

A review of the groundwater quality results indicates that all the parameters analyzed were within the ODWQS.

Concentrations of volatile organic compounds were not detected in the groundwater sample.

In summary, groundwater quality within the private well tested did not show evidence of a leachate influence, and is considered representative of background/upgradient groundwater conditions.

3 OTTERVILLE LANDFILL

3.1 Monitoring Program and Results

The monitoring program for the Otterville Landfill was based upon the recommendations that were provided in the Inventory of Closed Municipal Landfill Sites Report, completed by WSP in November 2019. These tasks included the following monitoring events in 2025:

- Groundwater sampling at OT-MW1, OT-MW2, and OT-MW3 on April 9, 2025; and
- Groundwater level monitoring at all installed monitors during on April 9, July 15 and December 8, 2025.

Groundwater monitoring wells OT-MW1, OT-MW2, and OT-MW3 were installed in 2023 for the purpose of determining the shallow soil characteristics and to assess the shallow groundwater quality and flow direction. The shallow groundwater monitors were installed near the northeast corner, northwestern corner/limit and the south/southeast boundary of the Site, as shown on **Figure 3-1**. Groundwater monitoring and sampling was completed during the spring at the three groundwater monitoring wells. The samples were submitted to SGS Canada Inc. located in Lakefield, Ontario.

In addition to the groundwater monitoring and sampling, complimentary gas monitoring was also conducted on April 9, July 15 and December 8, 2025 at each of the groundwater monitors, as a supplemental measure. Combustible gas was not detected within the monitors during the monitoring period, although the well screens were submerged at monitors OT-MW1 and OT-MW2 for each event in 2025. These results generally indicate that landfill gas does not appear to be present or migrating from the property.

3.1.1 Groundwater

Groundwater Flow

According to the local Source Water Protection assessments, groundwater flow in the vicinity of the of the Site is towards the west. Based on the groundwater elevation measurements completed, the groundwater flow direction of the shallow overburden is towards the northwest, which generally matches the Source Water Protection assessment. The groundwater table elevations measured in April 2025 and the interpreted shallow groundwater

table contours are presented on **Figure 3-2**. Historical groundwater elevations are provided in **Table E-1** of **Appendix E**, with elevation versus time graphed in **Figure E-2**.

As per the inferred groundwater flow direction, the groundwater quality observed at monitoring well OT-MW3 is considered representative of background/upgradient groundwater conditions, while the remaining monitoring wells are considered downgradient of the Site.

Groundwater Quality

Project QA/QC was performed through each stage of sampling and analysis. QA/QC during data collection was ensured through the use of standard monitoring protocols and procedures. Field equipment was calibrated regularly. Water samples collected in the field were placed in coolers with ice to maintain a constant temperature of about 4ºC and delivered or couriered to the laboratory at the end of the day.

Analytical results for the field QA/QC sampling completed during the groundwater sampling program were evaluated for the RPD of parameter concentrations. For concentrations greater than five times the RDL, a concentration difference of less than or equal to 20% was deemed acceptable. For concentrations less than or equal to five times the RDL, a concentration difference of equal to or less than twice the RDL was deemed acceptable.

Laboratory reports were reviewed as part of the laboratory QA/QC program. The groundwater duplicate sample results are provided in **Table 3**. The RPDs between the blind duplicate and original sample collected on April 9, 2025 were acceptable for the tested constituents, with the exception of total suspended solids (29% RPD). The laboratory was consulted to validate the original and duplicate results for the sample. The laboratory's response indicated that these concentrations were within acceptable laboratory QA/QC ranges and the chemical results stand.

The groundwater samples were analyzed for parameters that are typically associated with municipal landfills as listed in Schedule 5, Column 1 of the Landfill Standards guideline (MECP, 2012). Summarized field and laboratory results for 2025 are presented in **Table 2**. Historic groundwater chemistry results are presented in **Table C-1** of **Appendix C,** with concentration versus time graphs provided in **Figures C-2A** through **C-2G** for select parameters. For concentrations that were not detected, a value of half the RDL was plotted in the figures. Further data is required before historical trends can be accurately analyzed. Copies of the 2025 laboratory certificates of analysis are provided in **Appendix F**.

Parameter concentrations in the samples collected were generally highest at background monitor OT-MW3 compared to OT-MW1 and OT-MW2 during the April 2025 monitoring event, with a few exceptions. The nitrate concentration at OT-MW1 was greatly elevated in comparison to the concentrations at other monitoring wells during the 2025 monitoring event, which also occurred during the 2023 and 2024 monitoring events. Given the agricultural practices that occur on the neighbouring properties, it is unlikely that the nitrate concentration detected at OT-MW1 is landfill related.

Concentrations of volatile organic compounds (VOCs) were not detected within the groundwater, with the exception of trace concentrations of toluene at OT-MW1 and OT-MW2 (0.6 µg/L), which were only slightly above the detection limit (0.5 µg/L).

Ontario Drinking Water Quality Standards

A review of the groundwater quality results indicates that all the parameters analyzed were within the ODWQS, with the exception of TDS at monitor OT-MW3, as well as iron and manganese at monitor OT-MW1.

It is noted that monitor OT-MW3 is considered to be representative of background/upgradient groundwater conditions, and concentrations that exceed the ODWQS at this location would likely be the result of off-site or background effects. In addition, TDS, iron and manganese have objectives or guidelines related to the aesthetic quality of the water and are not health related.

Guideline B-7 Compliance Assessment

Guideline B-7 (GB-7) was established by the MECP as a mechanism to assess the acceptable level of leachate impacts on the groundwater system. Guideline B-7 is applied to groundwater quality at the property boundary, and is intended to protect both existing and potential reasonable uses of the groundwater on adjacent properties. The Guideline states that, for non-health related parameters, the impact from the landfill should not raise the concentration by more than half the difference between the background concentration and the ODWQS. For health related parameters, the impact from the landfill should not raise the concentration by more than quarter the difference between the background concentration and the ODWQS.

GB-7 criteria were calculated for parameters that have ODWQS. The historical groundwater chemistry results from background monitor OT-MW3 (2023-2025) were used as reference concentrations for the calculations.

Table 7 provides a comparison of the calculated Guideline B-7 criteria and downgradient wells on Site.

In summary, concentrations at the landfill property boundary complied with the GB-7 criteria in 2025, with the exception of:

- Nitrate and iron at monitor OT-MW1.

It is noted that iron has an objective related to the aesthetic quality of the water, and is not health related. The elevated iron concentration at OT-MW1 exceeded the GB-7 criteria for the first time, in April 2025. It is assumed that this elevated concentration is related to entrained sediment within the groundwater sample, and is not a result of landfill leachate influence; the total suspended solids concentration in this sample was noted to be 246,000 mg/L.

Although nitrate, which is a health related criterion, exceeded the GB-7 criteria at OT-MW1, the concentration was below the ODWQS criteria in 2025. Nitrate also exceeded the GB-7 criteria at OT-MW1 during the 2023 and 2024 monitoring events, while remaining below the ODWQS. Given the agricultural practices that occur on the neighbouring properties, it is unlikely that the nitrate concentrations detected at OT-MW1 are landfill related.

Based on the groundwater quality results, there does not appear to be a landfill impact to the shallow groundwater at this time.

4 TILLSONBURG LANDFILL

Amended Environmental Compliance Approval (ECA) No. A070402 was issued to the County of Oxford on December 20, 2022 for the Closed Tillsonburg Landfill, and is provided in **Appendix A.**

In 2025, in accordance with the conditions listed under “Site Operation” of ECA No. A070402:

- no waste was deposited at the Site (satisfying Condition 3.1);
- a sign was maintained at the main entrance to the Site, displaying applicable information (satisfying Condition 3.2);
- the site was maintained in a secure manner against access by unauthorized persons (satisfying Condition 3.3);

- an annual inspection as per Condition 3.4 was conducted by the County, with no deficiencies discovered as a result of the inspection (satisfying Conditions 3.5 and 3.6); and
- a logbook containing records of the annual inspections was updated and maintained on file by the County (satisfying Conditions 3.7 and 3.8).

4.1 Monitoring Program and Results

The monitoring program for the Tillsonburg Landfill was based upon the recommendations that were provided in the Inventory of Closed Municipal Landfill Sites Report, completed by WSP in November 2019. These tasks included the following monitoring events in 2025:

- Surface water monitoring at TB-SW1, TB-SW2, TB-SW3, TB-SW4, TB-SW5 and TB-SW6 on March 12, 2025;

During the surface water monitoring event (completed during a period of high ground saturation), inspection of the ravine walls was completed for leachate seeps. No leachate seeps were discovered during the 2025 surface water monitoring event, and as such, no leachate seeps were able to be sampled. Surface water sampling was completed during the spring at six surface water locations, as shown in **Figure 4-1**. The samples were obtained directly from the surface water source at each monitoring location and submitted to SGS Canada Inc., located in Lakefield, Ontario.

4.1.1 Surface Water

Surface Water Flow

During the March 2025 sampling event at the Site, there was significant flow (>10,000 L/s) within Big Otter Creek, both upstream (TB-SW1) and downstream (TB-SW2) of the Site. The remaining surface water sampling locations had flows of less than 1 L/s during the spring event.

Surface water at the Site flows through Big Otter Creek from upstream station TB-SW1 to downstream station TB-SW2. Additional downstream surface water monitoring locations include TB-SW3, TB-SW4, TB-SW5 and TB-SW6, all located within ravines that flow through steep terrain to Big Otter Creek, between upgradient TB-SW1 and downgradient TB-SW2.

As noted earlier, the surface water monitoring event was completed during a period of high ground saturation, and inspections of the ravine walls were completed for leachate seeps. No leachate seeps were discovered during the 2025 surface water monitoring event, and as such, no leachate seeps were able to be sampled.

Surface Water Quality

Project QA/QC was performed through each stage of sampling and analysis. QA/QC during data collection was ensured through the use of standard monitoring protocols and procedures. Field equipment was calibrated regularly. Water samples collected in the field were placed in coolers with ice to maintain a constant temperature of about 4ºC and delivered or couriered to the laboratory at the end of the day.

Analytical results for the field QA/QC sampling completed during the surface water sampling program were evaluated for the RPD of parameter concentrations. For concentrations greater than five times the RDL, a concentration difference of less than or equal to 20% was deemed acceptable. For concentrations less than or equal to five times the RDL, a concentration difference of equal to or less than twice the RDL was deemed acceptable.

Laboratory reports were reviewed as part of the laboratory QA/QC program. The surface water duplicate sample results are provided in **Table 5**. The RPDs between the blind duplicate and original sample collected on March 12, 2025 were acceptable for the tested constituents, with the exception of total phosphorus (58% RPD). The laboratory was consulted to validate the original and duplicate results for the sample. The laboratory's response indicated that these concentrations were within acceptable laboratory QA/QC ranges and the chemical results stand.

The surface water samples were analyzed for parameters that are typically associated with municipal landfills, as listed in Schedule 5, Column 3 of the Landfill Standards guideline (MECP, 2012). Summarized field and laboratory results for 2025 are presented in **Table 4**. Historical surface water chemistry results are presented in **Table D-1** of **Appendix D,** with concentration versus time graphs provided in **Figures D-2A** through **D-2F** for select parameters. For concentrations that were not detected, a value of half the RDL was plotted in the figures. Further data is required before historical trends can be accurately analyzed. Copies of the 2025 laboratory certificates of analysis are provided in **Appendix F**.

Concentrations of typical landfill related parameters were compared between upgradient surface water quality at TB-SW1 to downgradient surface water quality at TB-SW2, within Big Otter Creek. Parameter concentrations at downstream station TB-SW2 were very similar to slightly higher than concentrations at upstream station TB-SW1.

In comparison to upstream station TB-SW1, some parameters at stations TB-SW3 and TB-SW4 (located within ravines downstream to the southeast of the landfilled area) were consistently higher in concentration during the March 2025 event; specifically conductivity, TDS, alkalinity, ammonia, barium, boron and iron concentrations. Based upon the concentrations at downstream station TB-SW2, surface water originating from TB-SW3 and TB-SW4 may have a minor influence on increased iron concentrations downstream, although with the minimal rates of surface water flow within the ravines (<1 L/s in 2025), there should be no significant influence to Big Otter Creek.

Some parameters at stations TB-SW5 and TB-SW6 (located within a ravine to the east of the landfilled area) were also consistently higher in concentration during the March 2025 event, in comparison to upstream station TB-SW1; specifically conductivity, TDS, alkalinity, chloride, ammonia, barium and boron concentrations. Based upon the concentrations at downstream station TB-SW2, surface water originating from TB-SW5 and TB-SW6 does not appear to influence concentrations downstream. With the minimal rates of surface water flow within the ravine (<1 L/s in 2025), there appears to be no influence to Big Otter Creek from these surface water locations.

A review of the surface water quality results indicates that all the parameters analyzed were within the PWQO during March 2025, with the exception of:

- Un-ionized ammonia at TB-SW4;
- Total phosphorus at TB-SW1, TB-SW2 and TB-SW4;
- Phenols at TB-SW2, TB-SW-3 and TB-SW4;
- Boron at TB-SW3 and TB-SW4; and
- Iron at all six monitor stations.

Due to elevated concentrations of total phosphorus and iron in the background surface water quality, above the PWQO, there is a potential that these parameters are elevated due to natural or non-landfill related activities. Select elevated parameter concentrations from surface water station locations TB-SW3 and TB-SW4, when compared to upstream location TB-SW1, suggest that the landfill has the potential to influence surface water quality. However,

with the minimal rates of surface water flow within the ravines leading from the landfill, there does not appear to be an impact to the surface water quality of Big Otter Creek.

5 CONCLUSIONS AND RECOMMENDATIONS

This report provides a summary of the monitoring programs completed as part of the 2025 due diligence monitoring at the Blandford-Blenheim, Otterville and Tillsonburg Closed Landfill Sites.

The program was based upon the medium and high potential risks identified in the Inventory of Closed Municipal Landfill Sites Report, completed by WSP in November 2019, and as requested by the County for due diligence purposes.

Blandford-Blenheim Landfill

The monitoring tasks completed at the Blandford-Blenheim Landfill in 2025 included the following:

- Gas monitoring of probe BB-GP1 and monitoring wells BB-MW1, BB-MW2, BB-MW3, BB-BH1-1 and BB-BH1-2 on March 19, July 15 and December 8, 2025;
- Surface water monitoring at BB-SW1, BB-SW2 and BB-SW3 on March 19, 2025;
- Groundwater sampling at BB-MW1, BB-MW2, BB-MW3, BB-BH1-1 and BB-BH1-2 on April 28, 2025;
- Groundwater level monitoring at all on-site monitors during each monitoring event; and
- Private well monitoring at a residential property located at 846635 Township Road 9 (BB-P1) on April 28, 2025.

Based on the monitoring program completed at the Blandford-Blenheim Landfill, the monitoring results do not appear to indicate landfill impacts via landfill gas movement, however continued monitoring is recommended to observe parameter concentration trends of potential historical landfill impacts to the surface water and shallow groundwater to the east of the Site.

Otterville Landfill

The monitoring tasks completed at the Otterville Landfill in 2025 included the following:

- Groundwater sampling at OT-MW1, OT-MW2 and OT-MW3 on April 9, 2025; and
- Groundwater level monitoring at all monitors on April 9, July 15 and December 8, 2025.

Based on the monitoring program completed at the Otterville Landfill, the monitoring results do not appear to indicate landfill impacts via groundwater; however, continued monitoring is recommended to verify the isolated trace VOC concentrations noted in 2025.

Tillsonburg Landfill

The monitoring tasks completed at the Tillsonburg Landfill in 2025 included the following:

- Surface water monitoring at TB-SW1, TB-SW2, TB-SW3, TB-SW4, TB-SW5, and TB-SW6 on March 12, 2025;

Based on the monitoring program completed at the Tillsonburg Landfill, the monitoring results do not appear to indicate landfill impacts to the downstream station in Big Otter Creek via surface water; however, continued monitoring is recommended to observe parameter concentration and flow rate trends at surface water monitoring locations to the east/southeast of the Site.

6 REFERENCES

Ministry of the Environment, 1994. *Water Management Policies, Guidelines, Provincial Water Quality Objectives of the Ministry of Environment and Energy*; July 1994. Reprinted February 1999.

Ministry of the Environment, 2004. *Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines*. Revised June 2006.

Ministry of the Environment, 2012. *Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites*. January 2012.

WSP Canada Inc., 2019. *Oxford County: Inventory of Closed Municipal Landfill Sites*. November 2019.

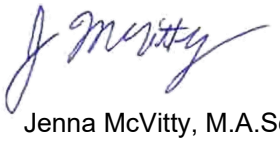
WSP Canada Inc., 2022. *2021 Due Diligence Monitoring Programs*. January 2022.

WSP Canada Inc., 2023. *2022 Due Diligence Monitoring Programs*. January 2023.

WSP Canada Inc., 2024. *2023 Due Diligence Monitoring Programs*. February 2024.

Signature Page

WSP Canada Inc.



Jenna McVitty, M.A.Sc., P.Eng.
Project Engineer, Earth & Environment

Albert Siertsema, P.Eng., PMP
Project Engineer, Earth & Environment

JM/AMS/ams

https://wsponlinecan.sharepoint.com/sites/ca-ca00240894861/shared documents/06. deliverables/03-oxco closed/2025/01-text/oxford county closed landfill sites_2025 due diligence monitoring.docx

TABLES

TABLE 1
2025 ENVIRONMENTAL MONITORING PROGRAMS
Oxford County Closed Landfill Sites

BLANDFORD-BLENHEIM LANDFILL

Landfill Annual Monitoring Program

ACTIVITY	LOCATION	SAMPLING FREQUENCY	ANALYSIS / PARAMETERS
Landfill Gas Monitoring	**Landfill Gas Probe**: BB-GP1 **Groundwater Monitoring Wells**: BB-MW1, BB-MW2, BB-MW3 **Existing Monitoring Wells**: BB-BH1-1, BB-BH1-2	3 times annually	Methane, as well as water level
Surface Water Sampling	**Surface Water Station**: BB-SW1, BB-SW2, BB-SW3	Annual (spring)	**Field Parameters:** pH, conductivity, temperature, dissolved oxygen, flow rate **General Parameters:** pH, conductivity, TDS, COD, BOD_5, TSS **Major and Minor Ions:** alkalinity, chloride, sulphate **Nutrients and Organics:** TKN, ammonia, nitrate, nitrite, total phosphorus, phenols **Total Metals:** arsenic, barium, boron, cadmium, chromium, copper, iron, lead, dissolved mercury, zinc **Volatile Organic Compounds:** benzene, 1,4-dichlorobenzene, dichloromethane, toluene, vinyl chloride
Groundwater Monitoring	**Groundwater Monitoring Wells**: BB-MW1, BB-MW2, BB-MW3 **Existing Monitoring Wells**: BB-BH1-1, BB-BH1-2 **Private Well**: BB-P1	Annual (spring)	**Field Parameters:** pH, conductivity, temperature, water level **General Parameters:** pH, conductivity, TDS, COD, DOC, BOD_5, TSS **Major and Minor Ions:** alkalinity, chloride, sulphate, calcium, magnesium, sodium, potassium **Nutrients and Organics:** TKN, ammonia, nitrate, nitrite, total phosphorus, phenols **Dissolved Metals:** arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, zinc **Volatile Organic Compounds:** benzene, 1,4-dichlorobenzene, dichloromethane, toluene, vinyl chloride

TABLE 1
2025 ENVIRONMENTAL MONITORING PROGRAMS
Oxford County Closed Landfill Sites

OTTERVILLE LANDFILL

Annual Monitoring Program

ACTIVITY	LOCATION	SAMPLING FREQUENCY	ANALYSIS / PARAMETERS
Groundwater Monitoring	**Groundwater Monitoring Wells**: OT-MW1, OT-MW2, OT-MW3	Annual (spring)	**Field Parameters:** pH, conductivity, temperature, water level **General Parameters:** pH, conductivity, TDS, COD, DOC, BOD_5, TSS **Major and Minor Ions:** alkalinity, chloride, sulphate, calcium, magnesium, sodium, potassium **Nutrients and Organics:** TKN, ammonia, nitrate, nitrite, total phosphorus, phenols **Dissolved Metals:** arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, zinc **Volatile Organic Compounds:** benzene, 1,4-dichlorobenzene, dichloromethane, toluene, vinyl chloride

TILLSONBURG LANDFILL

Annual Monitoring Program

ACTIVITY	LOCATION	SAMPLING FREQUENCY	ANALYSIS / PARAMETERS
Seep Inspection	Southeast slope of landfill property	Annual (spring)	Inspection of southeast slope of landfill property, for any possible leachate seeps leading to the ravines and Big Otter Creek.
Surface Water Sampling	**Surface Water Station**: TB-SW1, TB-SW2, TB-SW3, TB-SW4, TB-SW5, TB-SW6	Annual (spring)	**Field Parameters:** pH, conductivity, temperature, dissolved oxygen, flow rate **General Parameters:** pH, conductivity, TDS, COD, BOD_5, TSS **Major and Minor Ions:** alkalinity, chloride, sulphate **Nutrients and Organics:** TKN, ammonia, nitrate, nitrite, total phosphorus, phenols **Total Metals:** arsenic, barium, boron, cadmium, chromium, copper, iron, lead, dissolved mercury, zinc **Volatile Organic Compounds:** benzene, 1,4-dichlorobenzene, dichloromethane, toluene, vinyl chloride

Table 2: 2025 Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Blandford-Blenheim Landfill					
		BB-MW1	BB-MW2	BB-MW3	BB-BH1-1	BB-BH1-2	BB-P1
		28-Apr-25	28-Apr-25	28-Apr-25	28-Apr-25	28-Apr-25	28-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	6.85	7.28	7.51	6.67	6.72	7.28
Conductivity (field - µS/cm)		1160	710	390	860	2420	650
Temperature (field - °C)	15 AO	9.9	10.9	11.2	12.9	12.7	10.0
pH (lab - pH units)	6.5 - 8.5 OG	7.99	7.93	7.95	7.96	7.32	8.03
Conductivity (lab - µS/cm)		1040	645	354	521	2010	596
Total Dissolved Solids	500 AO	**517**	377	183	257	**820**	340
Chemical Oxygen Demand		33	<8	8	13	147	9
Dissolved Organic Carbon	5 AO	**8.9**	1.2	1.5	2.2	**25**	1.7
Alkalinity	30 - 500 OG	491	252	192	255	**1030**	318
Chloride	250 AO	39	22	<1	16	31	7
Sulphate	500 AO	30	69	<2	<2	<20	5
Calcium		114	92.4	62.7	131	224	91.5
Magnesium		43.5	31.4	11.4	26.5	44.6	23.1
Sodium	200 AO	29.7	5.03	2.40	5.74	35.5	3.46
Potassium		11.7	1.49	0.778	4.12	60.6	5.04
Total Kjehldahl Nitrogen		15.1	<0.5	<0.5	0.6	97.3	<0.5
Ammonia		15.0	<0.1	<0.1	0.50	97.4	<0.1
Nitrate	10.0 MAC	<0.06	0.87	0.26	0.31	<0.06	5.64
Nitrite	1.0 MAC	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Total Phosphorus		0.35	<0.03	0.03	0.07	0.60	<0.03
Phenols		<0.002	<0.002	<0.002	<0.002	0.010	<0.002
Arsenic	0.01 MAC	0.0002	0.0005	<0.0002	<0.0002	0.0011	<0.0002
Barium	1.0 MAC	0.544	0.0789	0.00813	0.0661	0.274	0.0330
Boron	5.0 IMAC	0.130	0.013	0.006	0.061	0.772	0.049
Cadmium	0.005 MAC	<0.000003	<0.000003	<0.000003	0.000011	0.000013	0.000005
Chromium	0.05 MAC	0.00050	0.00018	0.00049	0.00017	0.00381	0.00077
Copper	1 AO	<0.001	0.005	0.001	0.001	0.001	0.009
Iron	0.3 AO	**3.91**	0.030	0.032	0.187	**76.5**	<0.007
Lead	0.010 MAC	<0.00009	<0.00009	<0.00009	0.00011	0.00024	<0.00009
Manganese	0.05 AO	**0.0822**	0.0220	0.00211	**0.996**	**0.557**	0.00029
Mercury	0.001 MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	<0.002	0.006	<0.002	0.021	0.007	0.244
Total Suspended Solids		289	54600	22000	133	648	3
Biological Oxygen Demand		<4	<4	<4	<4	22.0	<4
Benzene (µg/L)	1 MAC	<0.5	<0.5	<0.5	<0.5	**4.9**	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	<0.5	<0.5	<0.5	<0.5	**3.5**	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	<0.5	0.5	<0.5	<0.5	0.5	<0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- ºC - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table 2: 2025 Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Otterville Landfill		
		OT-MW1	OT-MW2	OT-MW3
		9-Apr-25	9-Apr-25	9-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	7.58	7.84	7.39
Conductivity (field - µS/cm)		582	468	1050
Temperature (field - °C)	15 AO	10.2	9.3	9.4
pH (lab - pH units)	6.5 - 8.5 OG	8.12	8.03	8.10
Conductivity (lab - µS/cm)		603	458	1150
Total Dissolved Solids	500 AO	403	386	**740**
Chemical Oxygen Demand		8	<8	<8
Dissolved Organic Carbon	5 AO	2.3	1.5	1.1
Alkalinity	30 - 500 OG	213	286	306
Chloride	250 AO	22	7	210
Sulphate	500 AO	42	7	48
Calcium		101	75.1	95.9
Magnesium		20.8	10.5	31.2
Sodium	200 AO	3.72	3.42	82.3
Potassium		1.46	0.561	1.49
Total Kjehldahl Nitrogen		<0.5	<0.5	<0.5
Ammonia		<0.1	<0.1	<0.1
Nitrate	10.0 MAC	8.25	1.66	1.31
Nitrite	1.0 MAC	<0.03	<0.03	<0.03
Total Phosphorus		<0.03	<0.03	1.81
Phenols		<0.002	<0.002	<0.002
Arsenic	0.01 MAC	0.0015	0.0002	0.0005
Barium	1.0 MAC	0.0556	0.0224	0.237
Boron	5.0 IMAC	0.013	0.011	0.010
Cadmium	0.005 MAC	0.000040	0.000004	0.000003
Chromium	0.05 MAC	0.00140	0.00052	0.00031
Copper	1 AO	0.006	<0.001	<0.001
Iron	0.3 AO	**0.938**	<0.007	<0.007
Lead	0.010 MAC	0.00263	<0.00009	<0.00009
Manganese	0.05 AO	**0.132**	0.00107	0.0129
Mercury	0.001 MAC	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	0.009	<0.002	<0.002
Total Suspended Solids		246000	294000	19600
Biological Oxygen Demand		6.0	<4	<4
Benzene (µg/L)	1 MAC	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	0.6	0.6	<0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- ºC - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table 3: 2025 Summary of Groundwater Duplicate Sample Results
Oxford County Closed Landfill Sites

Parameter	Unit	RDL	April 9, 2025			RDL	April 28, 2025		
			Original	Duplicate	RPD		Original	Duplicate	RPD
			OT-MW3	OT-DUP			BB-MW1	GW-DUP	
Conductivity (lab)	µS/cm	2	1150	1270	10	2	1040	1060	2
Total Dissolved Solids	mg/L	30	740	677	9	30	517	517	<1
Chemical Oxygen Demand	mg/L	8	<8	<8	<2RDL	8	33	44	<2RDL
Dissolved Organic Carbon	mg/L	1	1.1	<1.0	<2RDL	1	8.9	11.3	**24**
Alkalinity	mg/L	2	306	332	8	2	491	496	1
Chloride	mg/L	1	210	220	5	1	39	38	3
Sulphate	mg/L	2	48	49	2	2	30	31	3
Calcium	mg/L	0.01	96	94	2	0.01	114	118	3
Magnesium	mg/L	0.001	31.2	31.4	1	0.001	43.5	43.0	1
Sodium	mg/L	0.01	82.3	86.3	5	0.01	29.7	29.8	<1
Potassium	mg/L	0.009	1.49	1.51	1	0.009	11.7	11.9	2
Total Kjehldahl Nitrogen	mg/L	0.5	<0.5	<0.5	<2RDL	0.5	15.1	14.9	1
Ammonia	mg/L	0.1	<0.1	<0.1	<2RDL	0.1	15.0	15.0	<1
Nitrate	mg/L	0.06	1.31	1.31	<1	0.06	<0.06	<0.06	<2RDL
Nitrite	mg/L	0.03	<0.03	<0.03	<2RDL	0.03	<0.03	<0.03	<2RDL
Total Phosphorus	mg/L	0.03	1.81	1.54	16	0.03	0.35	0.34	3
Phenols	mg/L	0.002	<0.002	<0.002	<2RDL	0.002	<0.002	<0.002	<2RDL
Arsenic	mg/L	0.0002	0.0005	0.0005	<1	0.0002	0.0002	0.0002	<2RDL
Barium	mg/L	0.00002	0.237	0.247	4	0.00002	0.544	0.543	<1
Boron	mg/L	0.002	0.010	0.010	<1	0.002	0.130	0.132	2
Cadmium	mg/L	0.000003	0.000003	0.000004	<2RDL	0.000003	<0.000003	<0.000003	<2RDL
Chromium	mg/L	0.00001	0.00031	0.00028	10	0.00001	0.00050	0.00046	8
Copper	mg/L	0.001	<0.001	<0.001	<2RDL	0.001	<0.001	0.001	<2RDL
Iron	mg/L	0.01	<0.007	<0.007	<2RDL	0.01	3.91	3.88	1
Lead	mg/L	0.00001	<0.00009	<0.00009	<2RDL	0.00009	<0.00009	0.00018	<2RDL
Manganese	mg/L	0.00001	0.0129	0.0152	16	0.00001	0.082	0.084	3
Mercury	mg/L	0.00001	<0.00001	<0.00001	<2RDL	0.00001	<0.00001	<0.00001	<2RDL
Zinc	mg/L	0.002	<0.002	<0.002	<2RDL	0.002	<0.002	0.002	<2RDL
Total Suspended Solids	mg/L	2	19600	26300	**29**	2	289	783	**92**
Biological Oxygen Demand	mg/L	4	<4	<4	<2RDL	4	<4	5	<2RDL

Notes:
- RDL - Reported Detection Limit
- RPD - Relative Percent Difference
- Bold indicates RPD >20% (or >2RDL)

Table 4: 2025 Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Blandford-Blenheim Landfill		
		BB-SW1	BB-SW2	BB-SW3
		19-Mar-25	19-Mar-25	19-Mar-25
pH (field - pH units)		7.67	7.87	7.58
Conductivity (field - µS/cm)		583	355	700
Temperature (field - °C)		8.79	10.09	8.66
Dissolved Oxygen (field)	4-7 (temp dependent)	**0.67**	**3.75**	**2.68**
Flow Rate (L/s)		no flow	no flow	no flow
pH (lab - pH units)	6.5 - 8.5	7.72	7.86	7.62
Conductivity (lab - µS/cm)		462	446	734
Total Dissolved Solids		271	229	371
Chemical Oxygen Demand		36	23	26
Biological Oxygen Demand		<4	<4	<4
Total Suspended Solids		3	4	17
Alkalinity	<75% background	222	219	376
Chloride		18	11	16
Sulphate		<2	6	10
TKN		0.7	4.7	12.2
Ammonia		0.2	4.2	10.9
Un-ionized Ammonia	0.02	0.002	**0.057**	**0.069**
Nitrate		<0.06	0.22	0.49
Nitrite		<0.03	<0.03	0.04
Total Phosphorus	0.03*	**0.054**	**0.052**	**0.061**
Phenols	0.001	**0.004**	**0.004**	**0.004**
Arsenic	0.005*	0.002	<0.001	0.001
Barium		0.033	0.038	0.075
Boron	0.200*	0.012	0.106	0.160
Cadmium	0.0001*	<0.0001	<0.0001	<0.0001
Chromium	0.0089**	<0.003	<0.003	<0.003
Copper	0.005	0.001	<0.001	<0.001
Iron	0.3	**0.66**	**1.23**	**7.85**
Lead	0.003*	<0.001	<0.001	<0.001
Mercury	0.0002	<0.0001	<0.0001	<0.0001
Zinc	0.02*	0.006	<0.005	0.013
Benzene (µg/L)	100*	<0.5	<0.5	0.6
1,4 - Dichlorobenzene (µg/L)	4	<0.5	<0.5	1.1
Dichloromethane (µg/L)	100*	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (*f*) in the total ammonia.

  where: *f* = 1/(10^{pKa-pH})+1)

  pKa=0.09018 + 2729.92/T

  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table 4: 2025 Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Tillsonburg Landfill					
		TB-SW1	TB-SW2	TB-SW3	TB-SW4	TB-SW5	TB-SW6
		12-Mar-25	12-Mar-25	12-Mar-25	12-Mar-25	12-Mar-25	12-Mar-25
pH (field - pH units)		7.78	7.93	7.47	8.25	7.80	7.85
Conductivity (field - µS/cm)		533	538	763	877	784	787
Temperature (field - °C)		3.50	3.48	2.21	3.61	3.20	3.71
Dissolved Oxygen (field)	4-7 (temp dependent)	15.23	7.48	13.94	14.10	12.14	9.73
Flow Rate (L/s)		>10,000	>10,000	<1	<1	<1	<1
pH (lab - pH units)	6.5 - 8.5	8.03	8.02	8.16	8.02	8.12	8.11
Conductivity (lab - µS/cm)		499	534	773	884	784	766
Total Dissolved Solids		269	291	426	466	403	400
Chemical Oxygen Demand		14	9	13	18	22	15
Biological Oxygen Demand		<4	<4	<4	5	<4	<4
Total Suspended Solids		89	76	54	88	16	16
Alkalinity	<75% background	179	175	392	465	275	279
Chloride		32	32	14	12	64	62
Sulphate		30	29	14	12	38	35
TKN		<0.5	0.5	1.2	2.5	0.7	0.8
Ammonia		<0.1	0.1	0.9	2.1	0.6	0.7
Un-ionized Ammonia	0.02	<0.001	0.001	0.003	**0.041**	0.004	0.006
Nitrate		8.44	8.47	2.49	1.18	0.88	0.89
Nitrite		0.09	0.10	<0.03	<0.03	<0.03	<0.03
Total Phosphorus	0.03*	**0.156**	**0.163**	0.018	**0.048**	0.011	0.014
Phenols	0.001	0.001	**0.002**	**0.002**	**0.002**	0.001	0.001
Arsenic	0.005*	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Barium		0.040	0.041	0.075	0.082	0.084	0.079
Boron	0.200*	0.019	0.017	**0.217**	**0.220**	0.172	0.174
Cadmium	0.0001*	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	0.0089**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Copper	0.005	0.003	0.003	0.001	0.001	<0.001	<0.001
Iron	0.3	**0.67**	**1.04**	**1.15**	**3.50**	**0.45**	**0.41**
Lead	0.003*	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc	0.02*	0.005	0.006	<0.005	<0.005	<0.005	<0.005
Benzene (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table 5: 2025 Summary of Surface Water Duplicate Sample Results
Oxford County Closed Landfill Sites

Parameter	Unit	RDL	March 12, 2025			RDL	March 19, 2025		
			Original TB-SW5	Duplicate SW DUP	RPD		Original BB-SW3	Duplicate SW-DUP	RPD
Conductivity (lab)	µS/cm	2	784	777	1	2	734	742	1
Total Dissolved Solids	mg/L	30	403	417	3	30	371	369	1
Chemical Oxygen Demand	mg/L	8	22	10	<2RDL	8	26	21	<2RDL
Biological Oxygen Demand	mg/L	2	<4	<4	<2RDL	2	<4	5	<2RDL
Total Suspended Solids	mg/L	2	16	16	<1	2	17	16	<2RDL
Alkalinity	mg/L	2	275	272	1	2	376	374	1
Chloride	mg/L	1	64	64	<1	1	16	15	6
Sulphate	mg/L	2	38	38	<1	2	10	10	<1
TKN	mg/L	0.5	0.7	0.8	<2RDL	0.5	12.2	12.2	<1
Ammonia	mg/L	0.1	0.6	0.6	<2RDL	0.1	10.9	10.9	<1
Un-ionized Ammonia	mg/L	0.001	0.004	0.004	<2RDL	0.001	0.069	0.069	<1
Nitrate	mg/L	0.03	0.88	0.88	<1	0.06	0.49	0.49	<1
Nitrite	mg/L	0.06	<0.03	<0.03	<2RDL	0.03	0.04	0.04	<2RDL
Total Phosphorus	mg/L	0.003	0.011	0.020	**58**	0.003	0.061	0.040	**42**
Phenols	mg/L	0.001	0.001	0.001	<2RDL	0.001	0.004	0.005	<2RDL
Arsenic	mg/L	0.002	<0.001	<0.001	<2RDL	0.002	0.001	0.001	<2RDL
Barium	mg/L	0.002	0.084	0.077	9	0.002	0.075	0.072	4
Boron	mg/L	0.002	0.172	0.166	4	0.002	0.160	0.167	4
Cadmium	mg/L	0.0001	<0.0001	<0.0001	<2RDL	0.0001	<0.0001	<0.0001	<2RDL
Chromium	mg/L	0.003	<0.003	<0.003	<2RDL	0.003	<0.003	<0.003	<2RDL
Copper	mg/L	0.001	<0.001	<0.001	<2RDL	0.001	<0.001	0.001	<2RDL
Iron	mg/L	0.01	0.45	0.43	5	0.01	7.85	4.35	**57**
Lead	mg/L	0.001	<0.001	<0.001	<2RDL	0.00001	<0.001	<0.001	<2RDL
Mercury	mg/L	0.0001	<0.0001	<0.0001	<2RDL	0.00001	<0.0001	<0.0001	<2RDL
Zinc	mg/L	0.005	<0.005	<0.005	<2RDL	0.005	0.013	0.011	<2RDL

Notes:
- RDL - Reported Detection Limit
- RPD - Relative Percent Difference
- Bold indicates RPD >20% (or >2RDL)

Table 6
2025 Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Blandford-Blenheim Landfill								
BB-GP1	19-Mar-25	0	0.00	304.95	4.43	300.52	302.68	No
	15-Jul-25	0	0.00	304.95	4.31	300.64	302.68	No
	8-Dec-25	0	0.00	304.95	4.85	300.10	302.68	No
BB-MW1	19-Mar-25	0	0.00	300.08	2.33	297.75	293.55	Yes
	28-Apr-25	-	-	300.08	2.48	297.60	293.55	Yes
	15-Jul-25	0	0.00	300.08	2.36	297.72	293.55	Yes
	8-Dec-25	0	0.00	300.08	2.57	297.51	293.55	Yes
BB-MW2	19-Mar-25	0	0.00	303.88	4.34	299.54	296.52	Yes
	28-Apr-25	-	-	303.88	4.10	299.78	296.52	Yes
	15-Jul-25	0	0.00	303.88	3.91	299.97	296.52	Yes
	8-Dec-25	0	0.00	303.88	4.68	299.20	296.52	Yes
BB-MW3	19-Mar-25	0	0.00	305.22	4.76	300.46	298.02	Yes
	28-Apr-25	-	-	305.22	4.41	300.81	298.02	Yes
	15-Jul-25	0	0.00	305.22	4.10	301.12	298.02	Yes
	8-Dec-25	0	0.00	305.22	5.13	300.09	298.02	Yes
BB-BH1-1	19-Mar-25	0	0.00	303.52	4.89	298.63	N/A	N/A
	28-Apr-25	-	-	303.52	4.09	299.43	N/A	N/A
	15-Jul-25	0	0.00	303.52	4.02	299.50	N/A	N/A
	8-Dec-25	0	0.00	303.52	4.99	298.53	N/A	N/A
BB-BH1-2	19-Mar-25	0	0.00	303.50	4.26	299.24	N/A	N/A
	28-Apr-25	-	-	303.50	3.93	299.57	N/A	N/A
	15-Jul-25	0	0.00	303.50	3.88	299.62	N/A	N/A
	8-Dec-25	0	0.00	303.50	4.36	299.14	N/A	N/A

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Table 6
2025 Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Otterville Landfill								
OT-MW1	9-Apr-25	0	0.00	251.54	7.49	244.05	243.44	Yes
	15-Jul-25	0	0.00	251.54	7.58	243.96	243.44	Yes
	8-Dec-25	0	0.00	251.54	7.65	243.89	243.44	Yes
OT-MW2	9-Apr-25	0	0.00	251.74	6.89	244.85	243.85	Yes
	15-Jul-25	0	0.00	251.74	6.99	244.75	243.85	Yes
	8-Dec-25	0	0.00	251.74	7.09	244.65	243.85	Yes
OT-MW3	9-Apr-25	0	0.00	255.64	10.07	245.57	245.81	No
	15-Jul-25	0	0.00	255.64	10.26	245.38	245.81	No
	8-Dec-25	0	0.00	255.64	10.30	245.34	245.81	No

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Table 7: 2025 Guideline B-7 Compliance
Oxford County Closed Landfill Sites

Parameter	Reference Quality	ODWQS	Guideline B-7	BB-MW1 28-Apr-25	BB-MW2 28-Apr-25
Total Dissolved Solids	218	500 AO	359	**517**	**377**
Dissolved Organic Carbon	1.4	5 AO	3.2	**8.9**	1.2
Alkalinity	201	30 - 500 OG	351	**491**	252
Chloride	1	250 AO	126	39	22
Sulphate	22	500 AO	261	30	69
Sodium	7.56	200 AO	104	29.7	5.03
Nitrate	0.36	10.0 MAC	2.77	<0.06	0.87
Nitrite	0.015	1.0 MAC	0.26	<0.03	<0.03
Arsenic	0.0003	0.01 MAC	0.0028	0.0002	0.0005
Barium	0.009	1.0 MAC	0.257	**0.544**	0.0789
Boron	0.016	5.0 IMAC	1.26	0.130	0.013
Cadmium	0.000004	0.005 MAC	0.0013	<0.000003	<0.000003
Chromium	0.0004	0.05 MAC	0.013	0.00050	0.00018
Copper	0.0015	1 AO	0.50	<0.001	0.005
Iron	0.0056	0.3 AO	0.15	**3.91**	0.030
Lead	0.00005	0.010 MAC	0.0025	<0.00009	<0.00009
Manganese	0.0016	0.05 AO	0.026	**0.0822**	0.0220
Mercury	0.000005	0.001 MAC	0.00025	<0.00001	<0.00001
Zinc	0.001	5.0 AO	2.50	<0.002	0.006
Benzene (µg/L)	0.25	1 MAC	0.44	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	0.25	5 MAC	1.44	<0.5	<0.5
	0.25	1 AO	0.63		
Dichloromethane (µg/L)	0.25	50 MAC	12.7	<0.5	<0.5
Toluene (µg/L)	0.25	60 MAC	15.2	<0.5	0.5
	0.25	24 AO	12.1		
Vinyl Chloride (µg/L)	0.1	1 MAC	0.33	<0.2	<0.2

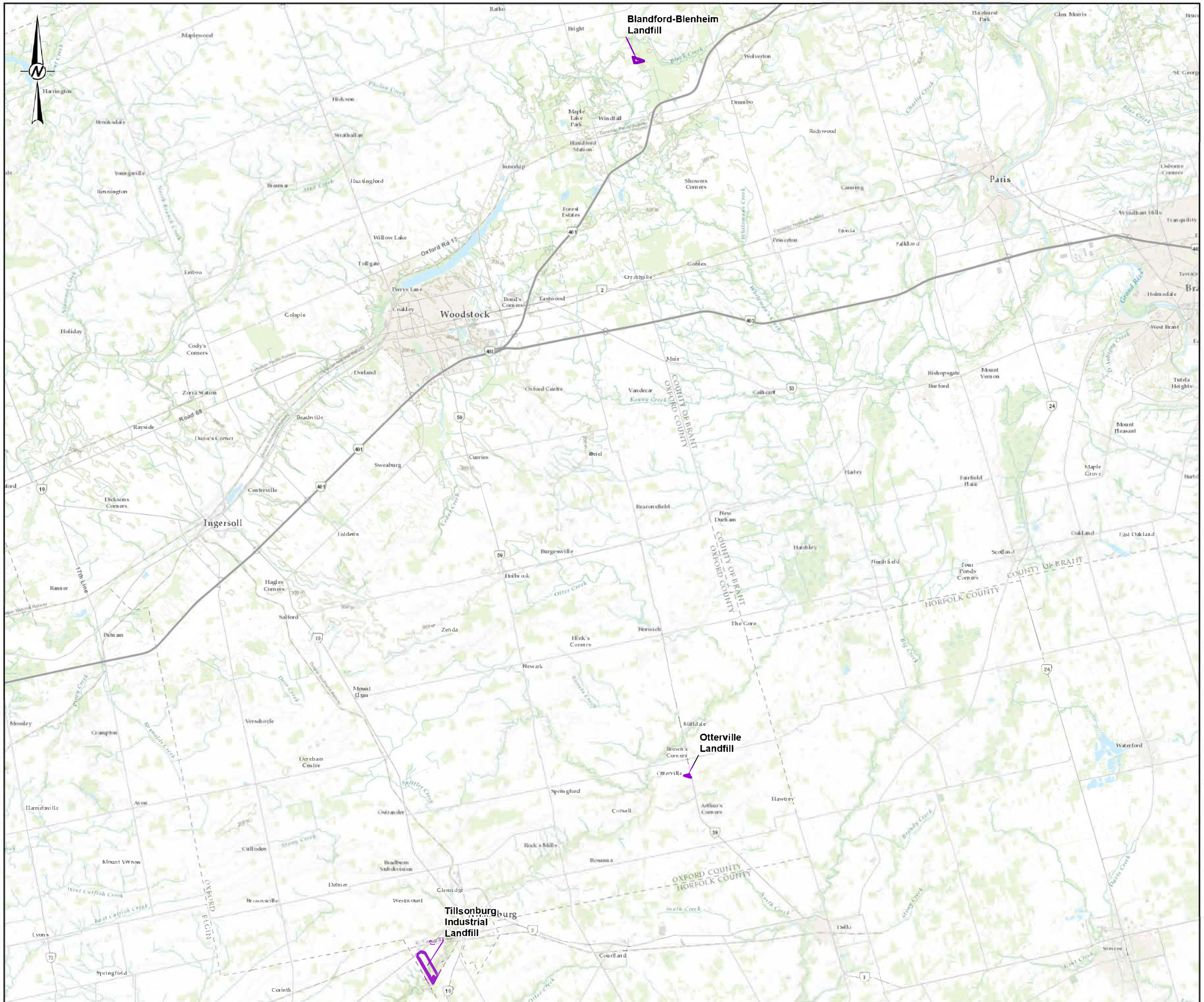
Notes:
- All units in mg/L unless otherwise noted
- Reference Quality based on groundwater quality measured from background observation well BB-MW3 (2022-2025)
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of GB-7 value
- All units in mg/L unless otherwise noted
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- * When the reference concentration is greater than the ODWQS, the reference value is used as the Guideline B-7 Criterion.
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table 7: 2025 Guideline B-7 Compliance
Oxford County Closed Landfill Sites

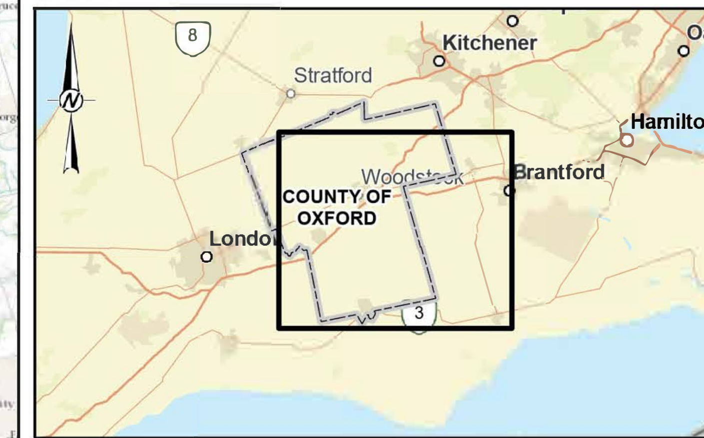
Parameter	Reference Quality	ODWQS	Guideline B-7	OT-MW1 9-Apr-25	OT-MW2 9-Apr-25
Total Dissolved Solids	800	500 AO	800*	403	386
Dissolved Organic Carbon	2.6	5 AO	3.8	2.3	1.5
Alkalinity	307	30 - 500 OG	403	213	286
Chloride	260	250 AO	260*	22	7
Sulphate	52	500 AO	276	42	7
Sodium	108	200 AO	154	3.72	3.42
Nitrate	1.01	10.0 MAC	3.26	**8.25**	1.66
Nitrite	0.015	1.0 MAC	0.26	<0.03	<0.03
Arsenic	0.0009	0.01 MAC	0.0031	0.0015	0.0002
Barium	0.317	1.0 MAC	0.488	0.0556	0.0224
Boron	0.018	5.0 IMAC	1.26	0.013	0.011
Cadmium	0.000010	0.005 MAC	0.0013	0.000040	0.000004
Chromium	0.0003	0.05 MAC	0.013	0.00140	0.00052
Copper	0.005	1 AO	0.50	0.006	<0.001
Iron	0.031	0.3 AO	0.17	**0.938**	<0.007
Lead	0.0002	0.010 MAC	0.0026	0.0026	<0.00009
Manganese	0.142	0.05 AO	0.142*	0.132	0.00107
Mercury	0.000005	0.001 MAC	0.00025	<0.00001	<0.00001
Zinc	0.001	5.0 AO	2.50	0.009	<0.002
Benzene (µg/L)	0.25	1 MAC	0.44	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	0.25	5 MAC	1.44	<0.5	<0.5
	0.25	1 AO	0.63		
Dichloromethane (µg/L)	0.25	50 MAC	12.7	<0.5	<0.5
Toluene (µg/L)	0.25	60 MAC	15.2	0.6	0.6
	0.25	24 AO	12.1		
Vinyl Chloride (µg/L)	0.1	1 MAC	0.33	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- Reference Quality based on groundwater quality measured from background observation well OT-MW3 (2023-2025)
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of GB-7 value
- All units in mg/L unless otherwise noted
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- * When the reference concentration is greater than the ODWQS, the reference value is used as the Guideline B-7 Criterion.
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

FIGURES



KEY MAP



SCALE 1:2,000,000

LEGEND

CLOSED LANDFILL LOCATION

0 2,000 4,000 6,000 8,000

1:200,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD STREET MAP: SOURCES: ESRI, TOMTOM, GARMIN, FAO, NOAA, USGS, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
WORLD TOPOGRAPHIC MAP: OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

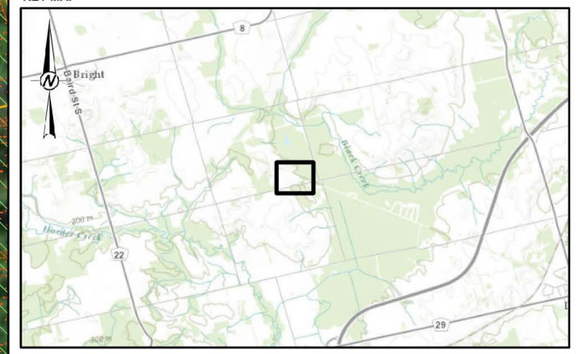
PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
SITE LOCATION MAP

CONSULTANT		
	YYYY-MM-DD	2026-01-10
	DESIGNED	---
	PREPARED	AS
	REVIEWED	---
	APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	1

KEY MAP



SCALE 1:100,000

LEGEND

- MONITORING WELL LOCATION
- GAS PROBE LOCATION
- SURFACE WATER SAMPLING LOCATION
- PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY
- ESTIMATED EXTENT OF REFUSE
- ANSI, LIFE SCIENCE
- WATER BODY
- PROVINCIALLY SIGNIFICANT WETLAND

DRAFT

0 12.5 25 50 75

1:2,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
   WORLD IMAGERY: MICROSOFT, VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
BLANDFORD-BLENHEIM CLOSED LANDFILL SITE PLAN

CONSULTANT

wsp

YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	2-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: S:\Clients\County_of_Oxford\Oxford_County_Waste_Management_Facility\99_PROJ\CA0024089_5055\40_PROD\0003_Closed_Landfills_2025\CA0024089_5055-0003-GW-0000.aprx PRINTED ON: AT 10:49:17 AM

KEY MAP

SCALE 1:100,000

LEGEND

- PRIVATE DRINKING WATER WELL
- SURFACE WATER SAMPLING LOCATION
- PROPERTY BOUNDARY
- WATERCOURSE
- APPROXIMATE SITE BOUNDARY
- ESTIMATED EXTENT OF REFUSE
- ANSI, LIFE SCIENCE
- WATER BODY
- PROVINCIALLY SIGNIFICANT WETLAND

0 50 100 200

1:6,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
   WORLD IMAGERY: VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
BLANDFORD-BLENHEIM CLOSED LANDFILL
PRIVATE WELL AND SURFACE WATER SAMPLING LOCATIONS

CONSULTANT

wsp

YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

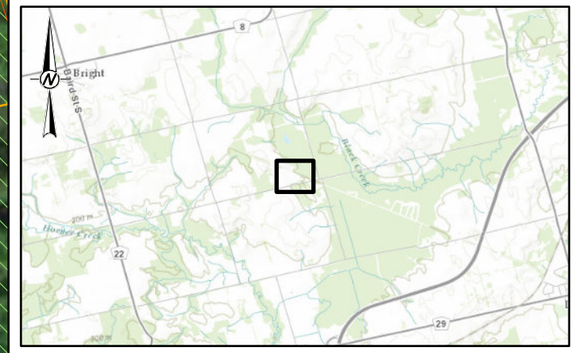
PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	2-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: S:\Clients\County_of_Oxford\Oxford_County_Waste_Management_Facility\99_PROJ\CA0024089_5055\40_PROD\0003_Closed_Landfills_2025\CA0024089_5055-0003-CVX-0000.aprx PRINTED ON: AT 10:48:35 AM

KEY MAP



SCALE 1:100,000

LEGEND

- MONITORING WELL LOCATION
- INFERRED GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER CONTOUR FOR APRIL 2025 (mASL)
- PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY
- ESTIMATED EXTENT OF REFUSE
- ANSI, LIFE SCIENCE
- WATER BODY
- PROVINCIALLY SIGNIFICANT WETLAND
- 297.81 GROUNDWATER ELEVATION FOR APRIL 2025 (mASL)

0 15 30 60

1:2,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. mASL = METRES ABOVE SEA LEVEL

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
WORLD IMAGERY: MICROSOFT, VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
BLANDFORD-BLENHEIM CLOSED LANDFILL GROUNDWATER ELEVATIONS - APRIL 2025

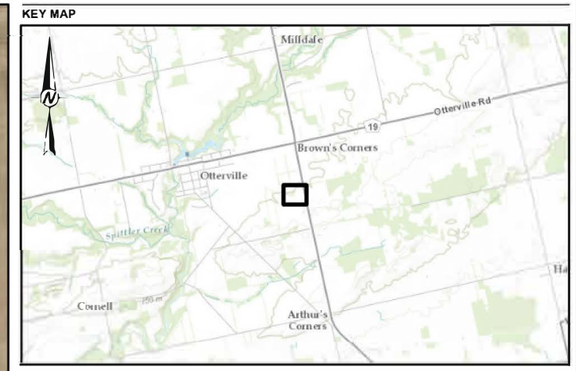
CONSULTANT

wsp

YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	2-3

KEY MAP



SCALE 1:100,000

LEGEND

- MONITORING WELL LOCATION
- DRAINAGE SWALE
- PROPERTY BOUNDARY
- UTILITY LINE
- APPROXIMATE SITE BOUNDARY
- ESTIMATED EXTENT OF REFUSE

0 5 10 20 30 40 50

1:1,250 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: NORFOLK COUNTY, OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
   WORLD IMAGERY: MICROSOFT, VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
OTTERVILLE CLOSED LANDFILL SITE PLAN

CONSULTANT

wsp

YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	3-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: S:\Clients\County_of_Oxford\Oxford_County_Waste_Management_Facility\99_PROJ\CA0024089_5055\40_PROD\0003_Closed_Landfills_2025\CA0024089_5055-0003-CW-0000.aprx PRINTED ON: AT 11:21:40 AM

KEY MAP

SCALE 1:100,000

LEGEND

- MONITORING WELL LOCATION
- INFERRED GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER CONTOUR FOR APRIL 2025 (mASL)
- PROPERTY BOUNDARY
- UTILITY LINE
- APPROXIMATE SITE BOUNDARY
- ESTIMATED EXTENT OF REFUSE
- 245.57 GROUNDWATER ELEVATION FOR APRIL 2025 (mASL)

0 5 10 20 30 40 50

1:1,250 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE
2. mASL = METRES ABOVE SEA LEVEL

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: NORFOLK COUNTY, OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
WORLD IMAGERY: MICROSOFT, VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
OTTERVILLE CLOSED LANDFILL
GROUNDWATER ELEVATIONS - APRIL 2025

CONSULTANT

wsp

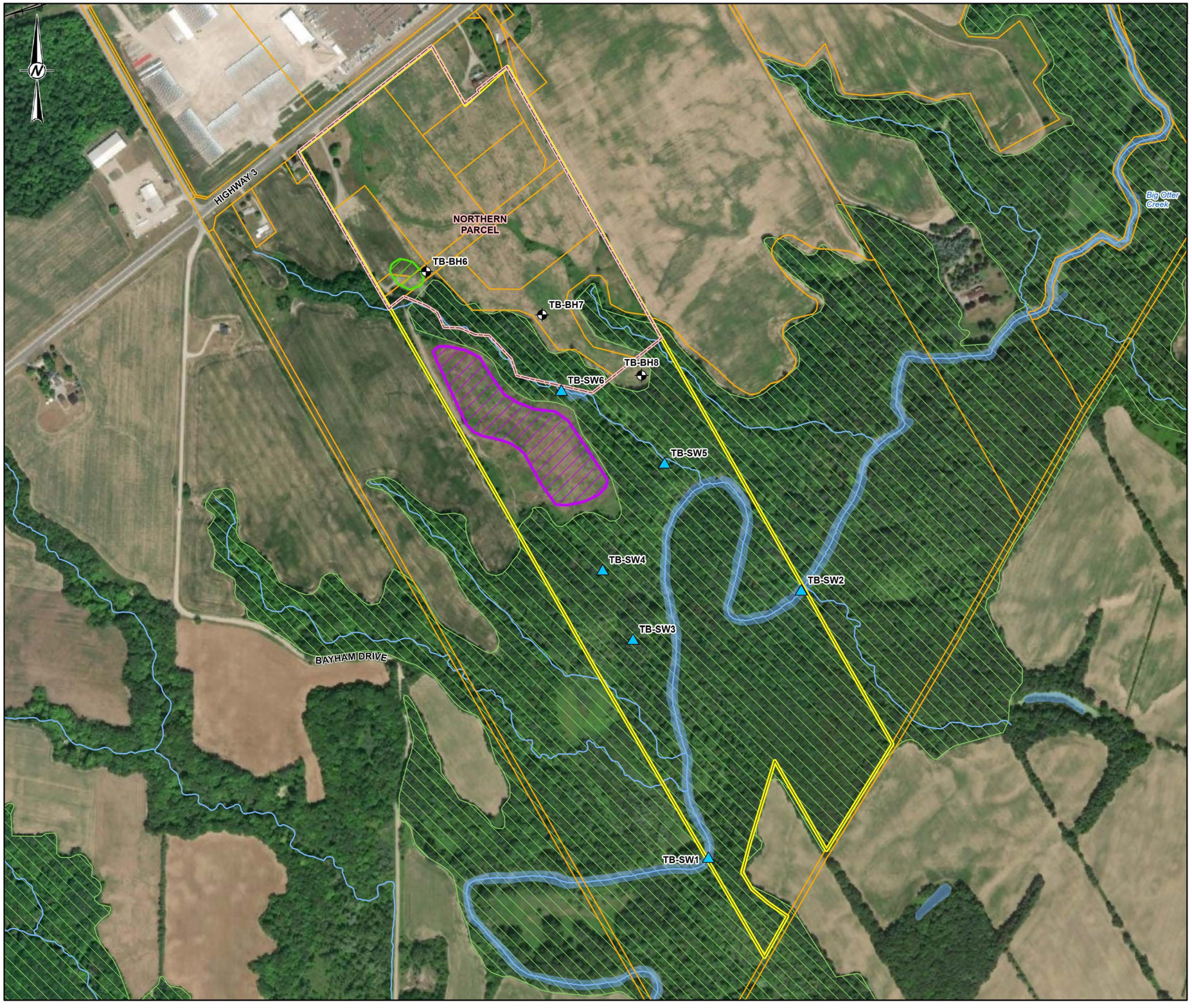
YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	3-2

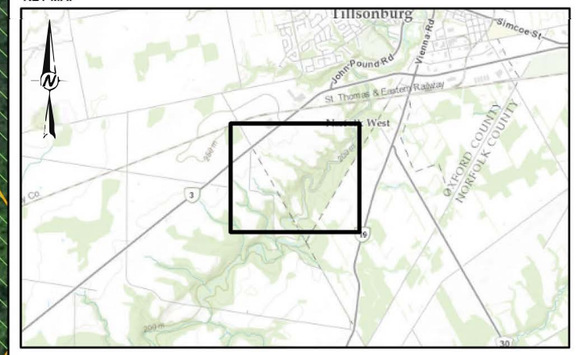
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

PATH: S:\Clients\County_of_Oxford\Oxford_County_Waste_Management_Facility\99_PROJ\CA0024089_5055\40_PROD\0003_Closed_Landfills_2025\CA0024089_5055-0003-CW-0000.aprx PRINTED ON: AT: 12:56:23 PM



KEY MAP



SCALE 1:100,000

LEGEND

- MONITORING WELL LOCATION
- SURFACE WATER SAMPLING LOCATION
- PROPERTY BOUNDARY
- WATERCOURSE
- RAILWAY
- APPROXIMATE SITE BOUNDARY
- NORTHERN PARCEL
- ESTIMATED EXTENT OF REFUSE
- ESTIMATED EXTENT OF BORROW AREA
- ANSI, LIFE SCIENCE
- WATER BODY

DRAFT

0 180 360

1:7,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. IMAGERY CREDITS: WORLD TOPOGRAPHIC MAP: OXFORD COUNTY, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN
   WORLD IMAGERY: VANTOR
3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
OXFORD COUNTY

PROJECT
OXFORD COUNTY CLOSED LANDFILLS

TITLE
TILLSONBURG CLOSED LANDFILL SITE PLAN

CONSULTANT

wsp

YYYY-MM-DD	2026-01-10
DESIGNED	---
PREPARED	AS
REVIEWED	---
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
CA0024089.5055	0003	A	4-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI H

0 25mm

PATH: S:\Clients\County_of_Oxford\Oxford_County_Waste_Management_Facility\99_PROJ\CA0024089_5055\40_PROD\0003_Closed_Landfills_2025\CA0024089_5055-0003-CW-0000.aprx PRINTED ON: AT 11:54:32 AM

APPENDIX A

Environmental Compliance Approvals

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER A070402
Issue Date: December 20, 2022

County of Oxford
21 Reeve St
Woodstock, Ontario
N4S 7Y3

Site Location: Closed Tillsonburg Landfill
PIN 00038-0377
Part 14, 16, 17 & 18 of Plan 41R-8326
Lot 1-2, Concession 5-NTR
Tillsonburg Town, County of Oxford

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the use and operation of a closed landfill within a total site area of 36.8 hectares.

For the purpose of this environmental compliance approval, the following definitions apply:

1. DEFINITIONS

"Director" means any Ministry employee appointed in writing by the Minister pursuant to section 5 of the EPA as a Director for the purposes of Part V of the EPA;

"District Manager" means the District Manager of the local district office of the Ministry in which the Site is geographically located;

"ECA" means this Environmental Compliance Approval and any Schedules to it, including the application and supporting documentation listed in Schedule "A".

"EPA" means the *Environmental Protection Act,* R.S.O. 1990, c. E. 19;

"Minister" means the Minister of the Environment, Conservation and Parks or such other member of the Executive Council as may be assigned the administration of the EPA and OWRA under the *Executive Council Act,* R.S.O. 1990, c. E.25;

"Ministry" means the ministry of the Minister and includes all employees or other persons acting on its behalf;

"Operator" means any person, other than the Owner's employees, authorized by the Owner as having the charge, management or control of any aspect of the Site;

"Owner" means the County of Oxford, including any successors and assignees, and has the same meaning set out in section 25 of the EPA as applicable;

"OWRA" means the *Ontario Water Resources Act,* R.S.O. 1990, c.O.40;

"PA" means the *Pesticides Act,* R.S.O. 1990, c. P.11;

"Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA or section 5 of the EPA or section 17 of the PA.

"Site" means the entire waste disposal site, located at PIN 00038-0377, meeting the following legal description PT LT 1-2 CON 5 NTR MIDDLETON PARTS 14, 16, 17 & 18 41R-8326; SUBJECT TO AN EASEMENT OVER PARTS 14, 16, 17 & 18 41R8326 IN FAVOUR OF PT LT 1-2 CON 5 NTR MIDDLETON PARTS 1, 2, 3, 4, 13 & 15 41R8326 AS IN CO85675; TOWN OF TILLSONBURG.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

2. GENERAL

Compliance

2.1 The Owner and Operator shall ensure compliance with all the conditions of this ECA and shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of this ECA and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2.2 Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this ECA.

In Accordance

2.3 Except as otherwise provided for in this ECA, the Site shall be designed, developed, built, operated and maintained in accordance with supporting documentation listed in Schedule “A”.

Interpretation

2.4 Where there is a conflict between a provision of any document, including the application, referred to in this ECA, and the conditions of this ECA, the conditions in this ECA shall take precedence.

2.5 Where there is a conflict between the application and a provision in any documents listed in Schedule "A", the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the Ministry approved the amendment.

2.6 Where there is a conflict between any two documents listed in Schedule "A", other than the application, the document bearing the most recent date shall take precedence.

2.7 The conditions of this ECA are severable. If any condition of this ECA, or the application of any condition of this ECA to any circumstance, is held to be invalid or unenforceable, the application of such condition to other circumstances and the remainder of this ECA shall not be affected thereby.

Other Legal Obligations

2.8 The issuance of, and compliance with, this ECA does not:

a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; or
b. limit in any way the authority of the Ministry to require certain steps be taken or to require the Owner and Operator to furnish any further information related to compliance with this ECA.

Adverse Effect

2.9 The Owner and Operator shall take steps to minimize and ameliorate any adverse effect (as defined under the EPA), on the natural environment or impairment of water quality resulting from the Site, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

2.10 Despite an Owner, Operator or any other person fulfilling any obligations imposed by this ECA the person remains responsible for any contravention of any other condition of this ECA or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect to the natural environment or impairment of water quality.

Change of Owner

2.11 The Owner shall notify the Director, in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any changes to:

a. the ownership of the Site;
b. the Operator of the Site;
c. the address of the Owner or Operator; or
d. the partners, where the Owner or Operator is or at any time becomes a partnership and a copy of the most recent declaration filed under the Business Names Act, R. S. O. 1990, c. B.17, shall be included in the notification.
e. the name of the corporation where the Owner is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C.39, shall be included in the notification.

2.12 No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance.

2.13 In the event of any change in Ownership of the Site, other than a change to a successor municipality, the Owner shall notify the successor or assignee of the existence of this ECA and provide the successor with a copy of this ECA, and the Owner shall provide a copy of the notification to the District Manager and the Director.

Registration on Title Requirement

2.14 Prior to dealing with the Site in any way, the Owner shall provide a copy of this ECA; and any amendments, to any person who will acquire an interest in the property as a result of the dealing.

2.15 The Owner shall:

(a) Within sixty (60) calendar days of the issuance of this ECA:
   (i) register in the Land Titles Division of the Land Registry Office in Oxford (No. 41), a Discharge of Interest or such other instrument as may be required by the Land Registrar or Director of Titles to delete the Certificate of Approval registered as Instrument No. 271306 from title to those lands which are not part of the legal description of the Site; and;
   (ii) submit to the Director written verification that the above Discharge of Interest or such other instrument as may be required by the Land Registrar or Director of Titles has been registered on title to those lands which are not part of the legal description of the Site.

(b) Within six months from the date of issuance of this ECA:
   (i) register in the Land Titles Division of the Land Registry Office in Oxford (No. 41), a Discharge of Interest or such other instrument as may be required by the Land Registrar or Director of Titles to delete the Certificate of Approval registered as Instrument No. 271306 from title to those lands which are part of the legal description of the Site; and;
   (ii) submit to the Director written verification that the above Discharge of Interest or such other instrument as may be required by the Land Registrar or Director of Titles has been registered on title to those lands which are part of the legal description of the Site.

(c) Within six months from the date of issuance of this ECA, submit to the Director:
   (i) a plan of survey of the area where waste was deposited that is prepared, signed and sealed by an Ontario Land Surveyor for the Site; and
   (ii) a letter signed by a member of the Law Society of Upper Canada, or other qualified legal practitioner acceptable to the Director, providing proof of ownership of the Site and a registerable description of the Site.

(d) Within fifteen (15) calendar days of receiving a certificate of requirement authorized by the Director:
   (i) register the certificate of requirement in the Land Titles Division of the Land Registry Office in Oxford (No. 41) on the title to the Site; and

(ii) submit to the Director written verification that the certificate of requirement has been registered on title.

Inspections

2.16 No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the OWRA, the EPA, or the PA, of any place to which this ECA relates, and without limiting the foregoing:

a. to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this ECA are kept;
b. to have access to, inspect, and copy any records required to be kept by the conditions of this ECA;
c. to inspect the Site, related equipment and appurtenances;
d. to inspect the practices, procedures, or operations required by the conditions of this ECA; and
e. to sample and monitor for the purposes of assessing compliance with the terms and conditions of this ECA or the EPA, the OWRA or the PA.

Information and Record Retention

2.17 Any information requested, by the Ministry, concerning the Site under this ECA, including but not limited to any records required to be kept by this ECA shall be provided to the Ministry, upon request**,** in a timely manner.

a. Except as authorized in writing by the Director, all records required by this ECA shall be retained at the Owner's Offices for a minimum of two (2) years from their date of creation.
b. The Owner shall retain all documentation listed in Schedule "A" for as long as this ECA is valid.

2.18 The receipt of any information by the Ministry or the failure of the Ministry to prosecute any person or to require any person to take any action, under this ECA or under any statute, regulation or other legal requirement, in relation to the information, shall not be construed as:

a. an approval, waiver, or justification by the Ministry of any act or omission of any person that contravenes any term or condition of this ECA or any statute, regulation or other legal requirement; or
b. acceptance by the Ministry of the information's completeness or accuracy.

3. SITE OPERATION

3.1 No waste shall be deposited at this Site. The landfill at this Site is closed and has the approximate extent as shown in Item 5 of Schedule "A" of this ECA.

Sign

3.2 A sign shall be installed and maintained at the main entrance/exit to the Site on which is legibly displayed the following information:

a. the name of the Site and Owner;
b. the number of the ECA;

c. indication that the landfill is closed;
d. identifying any alternative waste disposal arrangements;
e. a twenty-four (24) hour emergency telephone number; and
f. a warning against dumping outside the Site.

Site Security

3.3 The Site shall be maintained in a secure manner against access by unauthorized persons.

Site Inspection

3.4 An annual inspection, at a minimum, of the landfill fill area (and its immediate vicinity) shall be conducted to ensure that:
a. the Site is secure and the sign is in good condition;
b. the closed landfill is not causing any nuisances;
c. the closed landfill is not causing any adverse effects on the environment;
d. there is no litter or waste exposed/abandoned at the Site;
e. the cap and vegetation of the closed landfill is in good condition and functioning appropriately; and
f. there is no evidence of leachate seeps.

3.5 Any deficiencies discovered as a result of the inspection shall be remedied within twenty (20) business days.

3.6 Within two (2) business days of discovering the deficiencies as a result of the inspection the Owner shall notify the District Manager in writing about the deficiencies and the plan to remediate those deficiencies.

3.7 A record of the inspections shall be kept in a log book that includes:
a. the name of person that conducted the inspection;
b. the date and time of the inspection;
c. the list of any deficiencies discovered;
d. the recommendations for remedial action; and
e. the date, time and description of actions taken.

3.8 A copy of the log shall be maintained at the Owner's Office and may be in either written or electronic format.

Schedule "A"

1. Application and supporting information forms for a Waste Disposal Site.

2. Report prepared by M.M.Dillon Limited entitled "County of Oxford Tillsonburg Landfill Site Operations Report" dated January, 1980.

3. Letter with attachments dated November 10, 2022 to Mohsen Keyvani, Manager, Waste Approvals, Ministry of Environment, Conservation and Parks from Peter J. Penner, CJDL CLnsulting Engineers. Re: Oxford County Landfill - Tillsonburg, Van Norman Innovation Park, Provisional Certificate N° A070402, Tillsonburg, County of Oxford.

4. Environmental Compliance Approval Application. Administrative amendment to existing ECA A070402. Applied by Oxford County for the Correction to designation limits of Closed Landfill. Dated November 9, 2022 and signed by David Simpson, Director of Public Works.

5. Figure 8-2, Titled "Tillsonburg Industrial Landfill (Middleton) Site Plan". Oxford County Closed Landfills. WSP. September 2019.

The reasons for the imposition of these terms and conditions are as follows:

1. *The reason for Condition 1 is to define the specific meaning of terms and simplify the wording of conditions in this ECA.*

2. *The reason for Conditions 2.1, 2.2, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.17 and 2.18 are to clarify the legal rights and responsibilities of the Owner and Operator under this ECA.*

3. *The reason for Condition 2.3 is to ensure that the Site is designed, operated, monitored and maintained in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider.*

4. *The reasons for Conditions 2.11 are to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.*

5. *The reasons for Condition 2.12 are to restrict potential transfer or encumbrance of the Site without the approval of the Director and to ensure that any transfer of encumbrance can be made only on the basis that it will not endanger compliance with this ECA.*

6. *The reason for Condition 2.13 is to ensure that the successor is aware of its legal responsibilities as detailed in the ECA.*

7. *Conditions 2.14 and 2.15 are included, to provide that any persons having an interest in the Site are aware that the land has been approved and used for the purposes of waste disposal. The Part II.1*

Director is an individual with authority pursuant to Section 197 of the EPA to require any person with an interest in property before dealing with the property in any way to give a copy of an ECA to any person who will acquire an interest in the property as a result of the dealing. The registration requirements ensure that, with the revised legal description of the Site and the creation of an updated survey of the Site, the Land Registry Office titles will properly reflect the Site which is the subject matter of the ECA.

8. *The reason for Condition 2.16 is to ensure that appropriate Ministry staff have ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this ECA. This condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the EPA and OWRA.*

9. *The reason for Condition 3.1 to ensure that no waste is received at the site and the site is closed.*

10. *The reason for Condition 3.2 is to ensure that the public are fully aware that the Site is closed, alternative locations for waste disposal and emergency contact information.*

11. *The reason for Condition 3.3 is to ensure that the Site is secured in a safe manner.*

12. *The reasons for Conditions 3.4 through 3.6 are to maintain regular annual inspection to ensure that the Site does not result in a hazard or nuisance to the natural environment.*

18. *The reasons for Conditions 3.7 and 3.8 are to ensure that detailed records of Site inspections are recorded and maintained for inspection and information purposes and to ensure that deficiency corrective measures are taken in a timely manner.*

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A070402 issued on October 23, 1980

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act,* a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;

6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Director appointed for the purposes of Part II.1 of the *Environmental Protection Act*
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.oltt.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*

DATED AT TORONTO this 20th day of December, 2022

Mohsen Keyvani, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

CM/

c: District Manager, MECP London - District
Peter Penner, P. Eng., Cyril J. Demeyere Limited

APPENDIX B

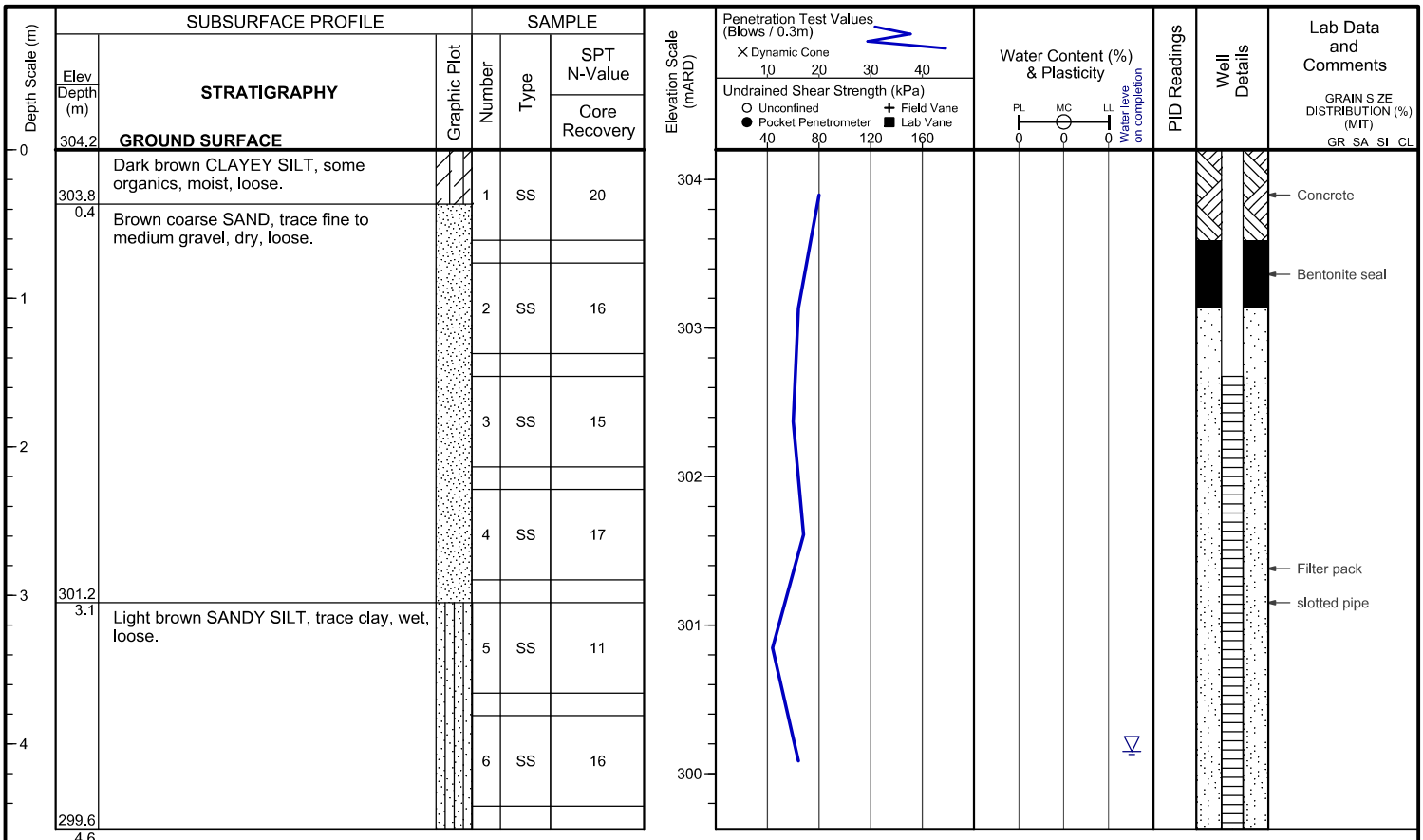
Borehole Logs

APPENDIX B-1

Blandford-Blenheim Landfill

LOG OF BOREHOLE BB-GP1

project |	Oxford County Closed Landfills			**project no. |**	191-06761-02
client |	County of Oxford	**rig type |**	CME 75, track-mounted	**date started |**	2022-01-18
location |	Blandford-Blenheim Landfill, Ontario	**method |**	Hollow stem augers, 215 mm dia.	**supervisor |**	MEQ
position |		**coring |**	*n/a*	**reviewer |**	AMS

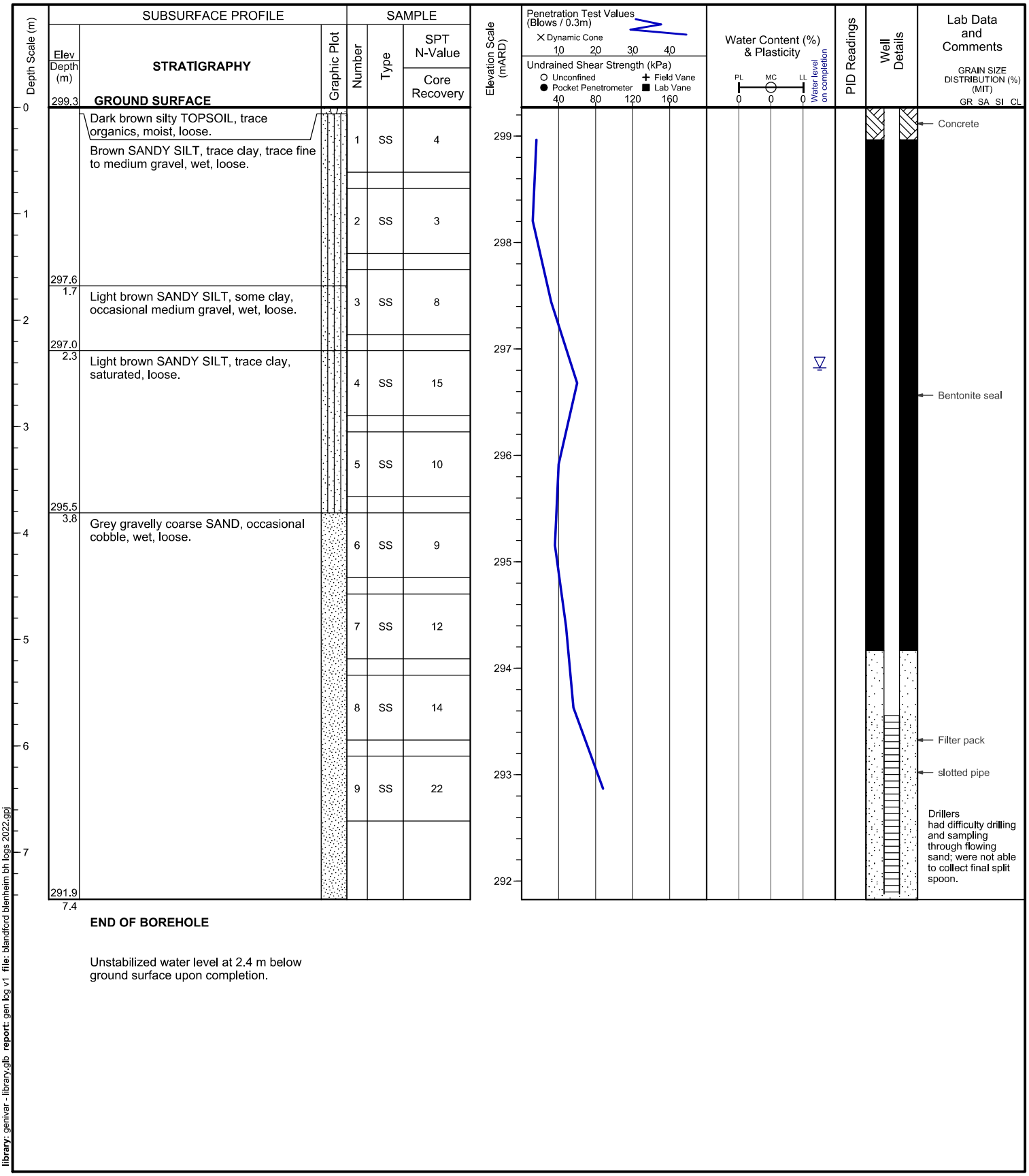


END OF BOREHOLE

Unstabilized water level at 4.1 m below ground surface upon completion.

LOG OF BOREHOLE BB-MW1

project |	Oxford County Closed Landfills			**project no. |**	191-06761-02
client |	County of Oxford	**rig type |**	CME 75, track-mounted	**date started |**	2022-01-19
location |	Blandford-Blenheim Landfill, Ontario	**method |**	Hollow stem augers, 215 mm dia.	**supervisor |**	MEQ
position |		**coring |**	*n/a*	**reviewer |**	AMS

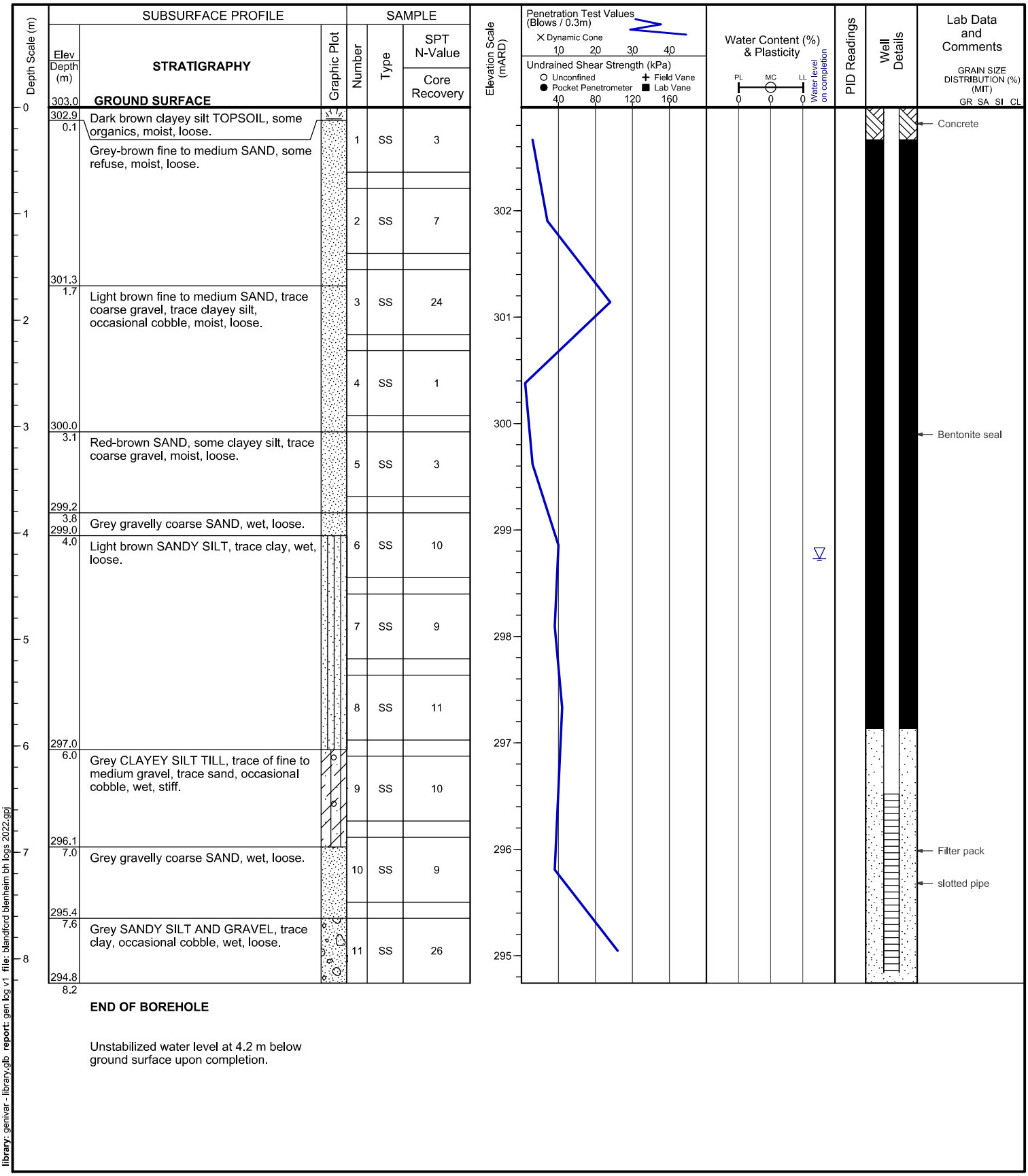


Number	Type	SPT N-Value / Core Recovery
1	SS	4
2	SS	3
3	SS	8
4	SS	15
5	SS	10
6	SS	9
7	SS	12
8	SS	14
9	SS	22

Unstabilized water level at 2.4 m below ground surface upon completion.

LOG OF BOREHOLE BB-MW2

project |	Oxford County Closed Landfills			**project no. |**	191-06761-02
client |	County of Oxford	**rig type |**	CME 75, track-mounted	**date started |**	2022-01-19
location |	Blandford-Blenheim Landfill, Ontario	**method |**	Hollow stem augers, 215 mm dia.	**supervisor |**	MEQ
position |		**coring |**	*n/a*	**reviewer |**	AMS



END OF BOREHOLE

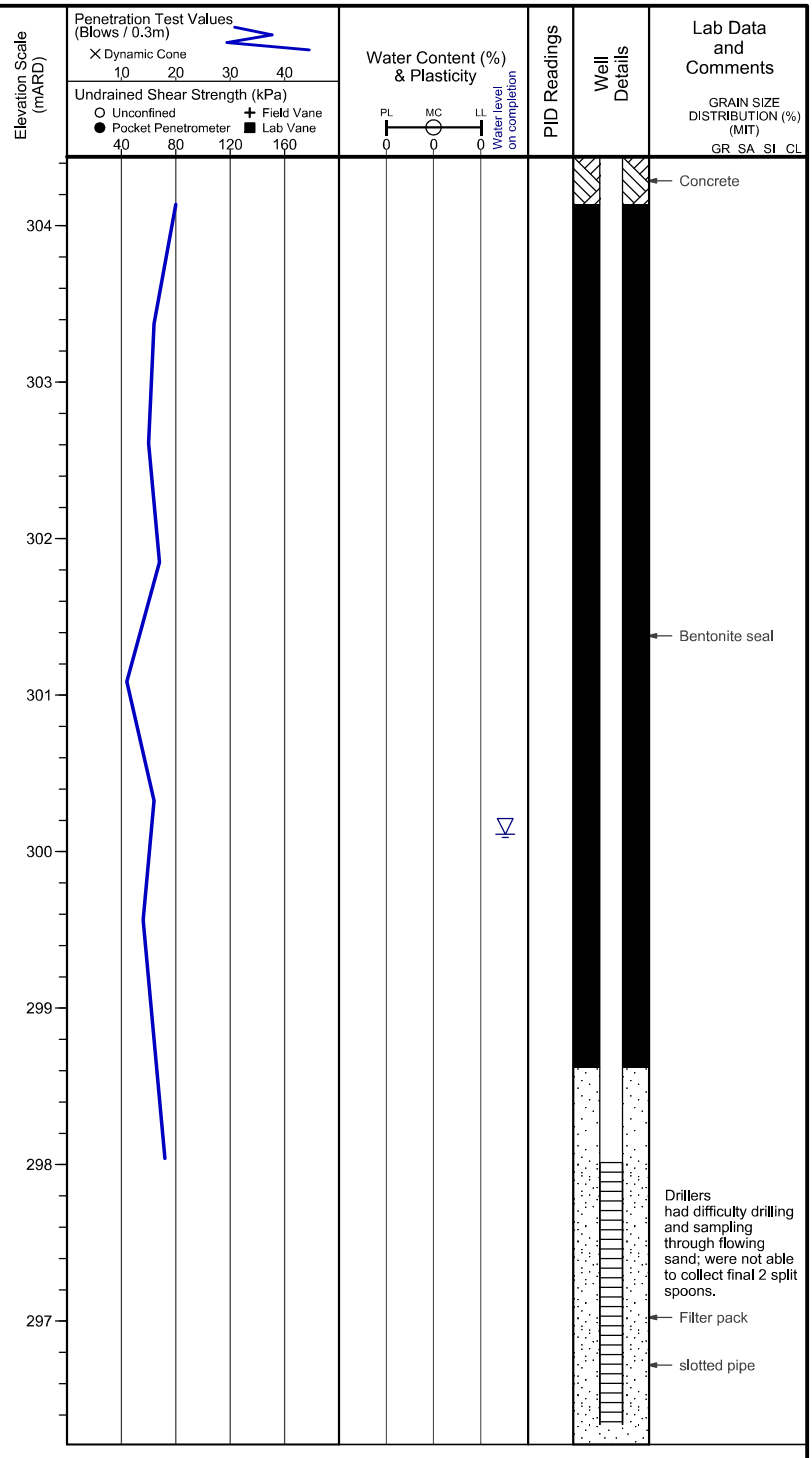
Unstabilized water level at 4.2 m below ground surface upon completion.

LOG OF BOREHOLE BB-MW3

project |	Oxford County Closed Landfills			**project no. |**	191-06761-02
client |	County of Oxford	**rig type |**	CME 75, track-mounted	**date started |**	2022-01-18
location |	Blandford-Blenheim Landfill, Ontario	**method |**	Hollow stem augers, 215 mm dia.	**supervisor |**	MEQ
position |		**coring |**	*n/a*	**reviewer |**	AMS

Depth Scale (m)	Elev / Depth (m)	STRATIGRAPHY	Graphic Plot	Sample Number	Sample Type	SPT N-Value / Core Recovery
0	304.4	**GROUND SURFACE**				
	304.0 / 0.4	Dark brown CLAYEY SILT, some organics, moist, loose.		1	SS	20
1		Brown coarse SAND, trace fine to medium gravel, dry, loose.		2	SS	16
2				3	SS	15
				4	SS	17
3	301.4 / 3.1	Light brown SANDY SILT, trace clay, wet, loose.		5	SS	11
4				6	SS	16
5	299.2 / 5.2	Grey gravelly coarse SAND, occasional cobble, wet, loose.		7	SS	14
				8	SS	16
6				9	SS	18
7						
8	296.2 / 8.2	**END OF BOREHOLE**				

Unstabilized water level at 4.3 m below ground surface upon completion.



Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11

4706488

MUNICIP 47002 CON. CON 109

COUNTY OR DISTRICT [redacted]

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE BLANDFORD-BLENHEIM

CON. BLOCK, TRACT, SURVEY, ETC 9

LOT 19

DATE COMPLETED DAY 15 MO 03 YR 89

[redacted] RR #3 BRIGHT

RC. ELEVATION 1000 RC. BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	TO
				0	1
TOP SOIL					
BROWN	SAND	WITH	STONES	1	3
BROWN	SAND		COARSE DRY	3	4
BROWN	SAND			4	20
BROWN	SAND		FINE	20	40

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
20-40	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	TO
36	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☒ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	3"	0'	40'
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE: GRAVEL	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☐ BAILER

PUMPING RATE: GPM

DURATION OF PUMPING: HOURS MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING (1 ☐ PUMPING 2 ☐ RECOVERY) 15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
20 FEET	FEET	FEET	FEET	FEET	FEET

IF FLOWING, GIVE RATE: GPM

PUMP INTAKE SET AT: FEET

WATER AT END OF TEST: 1 ☐ CLEAR 2 ☐ CLOUDY

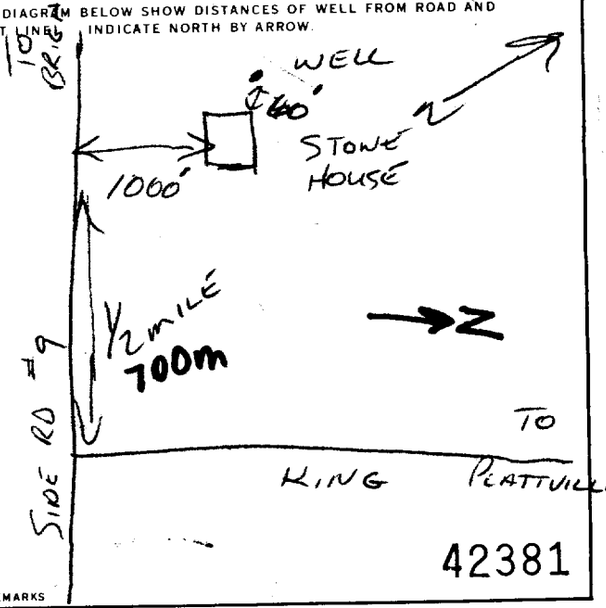
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP

RECOMMENDED PUMP SETTING: 38 FEET

RECOMMENDED PUMPING RATE: 1 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 42381

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: ~~D~~ JOHNSON & BAETZ

WELL CONTRACTOR'S LICENCE NUMBER: 3030

ADDRESS: RR #1 MT. PLEASANT

NAME OF WELL TECHNICIAN: DON BAETZ

WELL TECHNICIAN'S LICENCE NUMBER: T0338

SIGNATURE OF TECHNICIAN/CONTRACTOR: [signature]

SUBMISSION DATE: DAY ____ MO ____ YR ____

OFFICE USE ONLY

DATA SOURCE

CONTRACTOR: 3030

DATE RECEIVED: APR 20 1989

DATE OF INSPECTION

INSPECTOR

REMARKS: CSS.S8

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

APPENDIX B-2

Otterville Landfill

LOG OF BOREHOLE OT-MW1

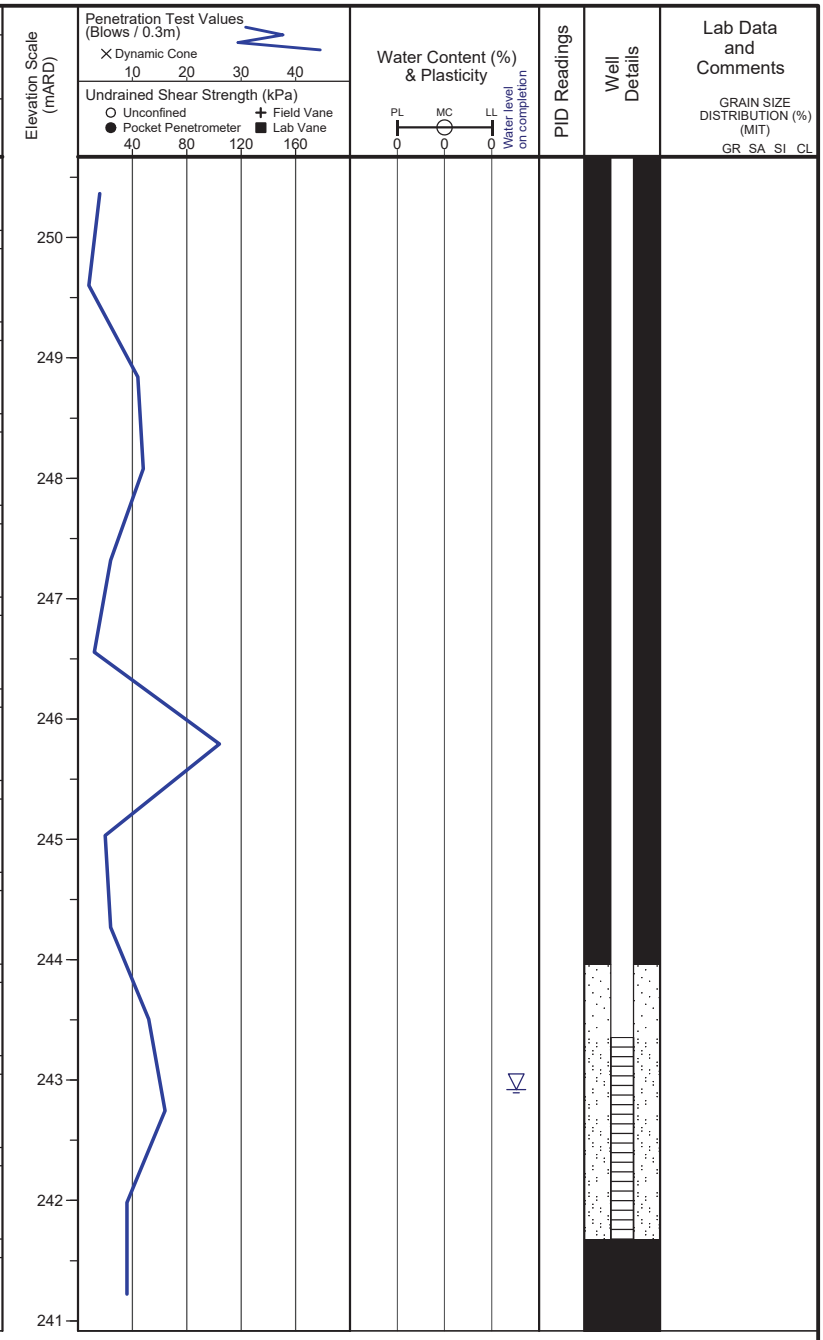
project | Oxford County Closed Landfills
client | County of Oxford
location | Otterville, Ontario
position | E: 534048 N: 4752248 (17T, Geodetic (mASL))

rig type | D50, track-mounted
method | Hollow stem augers, 215 mm dia.
coring | *n/a*

project no. | 191-06761-03
date started | 2023-02-21
supervisor | MEQ
reviewer | AMS

Elev Depth (m)	STRATIGRAPHY	Graphic Plot	Number	Type	SPT N-Value / Core Recovery
250.7 0	**GROUND SURFACE**				
	Dark brown **TOPSOIL**, some rootlets and organics, trace sand, trace silt, moist, loose.		1	SS	4
	Brown **SILTY SAND**, trace clay, trace gravel, dry, loose.		2	SS	2
			3	SS	11
248.4 2.3	Brown **CLAYEY SILT TILL**, trace gravel, dry, firm.		4	SS	12
247.7 3.1	Light brown fine **SILTY SAND**, occasional gravel, dry to moist, loose.		5	SS	6
			6	SS	3
			7	SS	26
			8	SS	5
244.6 6.1	Light brown fine **SILTY SAND**, trace clay, trace gravel, occasional cobble, wet, loose.		9	SS	6
			10	SS	13
			11	SS	16
242.3 8.4	Brown to grey **SANDY SILT**, wet, compact.		12	SS	9
			13	SS	9
240.9 9.8	**END OF BOREHOLE**				

Unstabilized water level at 7.8 m below ground surface upon completion.



LOG OF BOREHOLE OT-MW2

project | Oxford County Closed Landfills
client | County of Oxford
location | Otterville, Ontario
position | E: 534206 N: 4752284 (17T, Geodetic (mASL))

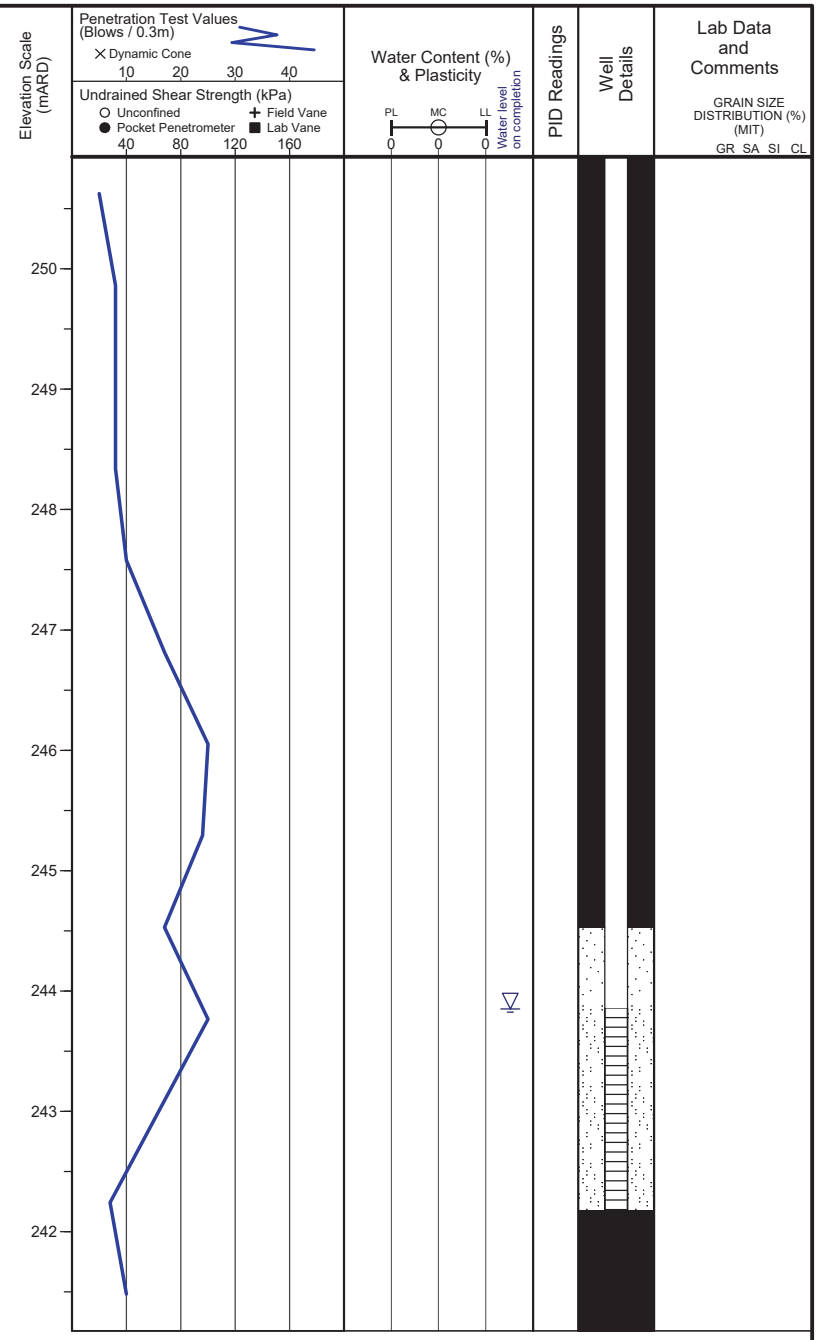
rig type | D50, track-mounted
method | Hollow stem augers, 215 mm dia.
coring | *n/a*

project no. | 191-06761-03
date started | 2023-02-21
supervisor | MEQ
reviewer | AMS

Elev Depth (m)	STRATIGRAPHY	Number	Type	SPT N-Value / Core Recovery
250.9	**GROUND SURFACE**			
250.8 / 0.1	Dark brown **TOPSOIL**, some rootlets and organics, trace sand, trace silt, moist, loose.	1	SS	5
	Brown **SAND**, some silt, trace gravel, dry, loose.	2	SS	8
		3	SS	8
248.6 / 2.3	Light brown fine **SILTY SAND**, occasional gravel, dry, loose.	4	SS	8
		5	SS	10
		6	SS	17
		7	SS	25
245.1 / 5.8		8	SS	24
	Brown fine **SILTY SAND**, trace clay, occasional gravel, wet, loose to compact.	9	SS	17
		10	SS	25
		11	SS	16
		12	SS	7
241.1 / 9.8		13	SS	10

END OF BOREHOLE

Unstabilized water level at 7.1 m below ground surface upon completion.



LOG OF BOREHOLE OT-MW3

project | Oxford County Closed Landfills
project no. | 191-06761-03
client | County of Oxford
rig type | D50, track-mounted
date started | 2023-02-22
location | Otterville, Ontario
method | Hollow stem augers, 215 mm dia.
supervisor | MEQ
position | E: 534194 N: 4752176 (17T, Geodetic (mASL))
coring | *n/a*
reviewer | AMS

Depth Scale (m)	Elev / Depth (m)	STRATIGRAPHY	Graphic Plot	Sample Number	Sample Type	SPT N-Value / Core Recovery
0	254.8	**GROUND SURFACE**				
	254.7 / 0.1	Dark brown **TOPSOIL**, some rootlets and organics, trace silt, moist, loose.		1	SS	3
	254.0 / 0.8	Brown **CLAYEY SILT**, trace gravel, moist, loose.				
1		Brown **CLAYEY SILT TILL**, trace medium and fine gravel, moist to dry, firm.		2	SS	4
2				3	SS	22
				4	SS	23
3	251.8 / 3.1	Mottled brown/grey **CLAYEY SILT TILL**, trace medium and fine gravel, dry, firm to compact.		5	SS	24
4				6	SS	20
				7	SS	20
5	249.6 / 5.2	Light brown fine **SILTY SAND**, trace gravel, dry, compact.		8	SS	50
6				9	SS	27
7				10	SS	20
				11	SS	24
8	246.4 / 8.4	Brown to grey **SILTY SAND**, wet, compact.		12	SS	20
9				13	SS	22
10				14	SS	20
11	243.5 / 11.3			15	SS	7

END OF BOREHOLE

Unstabilized water level at 10.2 m below ground surface upon completion.

Elevation Scale (mASL): 254, 253, 252, 251, 250, 249, 248, 247, 246, 245, 244

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40
Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Water Content (%) & Plasticity: PL MC LL; 0 0 0; Water level on completion

PID Readings

Well Details

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT): GR SA SI CL

APPENDIX C

Historical Groundwater Chemistry Results

Table C-1: Historical Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Blandford-Blenheim Landfill									
		BB-MW1					BB-MW2				
		11-Apr-22	18-Oct-22	4-Apr-23	26-Apr-24	28-Apr-25	11-Apr-22	18-Oct-22	4-Apr-23	26-Apr-24	28-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	6.98	6.97	7.00	6.75	6.85	6.78	7.25	7.19	7.21	7.28
Conductivity (field - µS/cm)		1070	1000	1110	1020	1160	595	634	684	606	710
Temperature (field - °C)	15 AO	8.35	11.10	9.41	9.90	9.9	8.52	10.11	9.88	9.55	10.9
pH (lab - pH units)	6.5 - 8.5 OG	7.93	8.16	7.80	7.50	7.99	8.13	8.09	8.03	7.98	7.93
Conductivity (lab - µS/cm)		1190	1080	1120	1040	1040	651	627	638	623	645
Total Dissolved Solids	500 AO	**617**	**574**	**614**	480	**517**	420	394	411	389	377
Chemical Oxygen Demand		30	23	29	34	33	11	<8	9	<8	<8
Dissolved Organic Carbon	5 AO	**9.3**	**8**	**7**	**7.5**	**8.9**	1.1	3	2	1.3	1.2
Alkalinity	30 - 500 OG	**597**	498	**503**	496	491	248	231	234	240	252
Chloride	250 AO	48	79	58	34	39	27	37	25	22	22
Sulphate	500 AO	22	24	32	31	30	73	82	89	77	69
Calcium		118	101	113	106	114	90.5	73.6	88.7	82.9	92.4
Magnesium		45.5	37.4	43.5	42.3	43.5	31.1	23.8	29.0	28.3	31.4
Sodium	200 AO	35.4	29.0	37.6	26.5	29.7	5.02	3.85	4.75	4.37	5.03
Potassium		15.4	9.69	12.1	10.7	11.7	1.34	1.16	1.34	1.26	1.49
Total Kjehldahl Nitrogen		24.6	16.2	19.0	17.6	15.1	<0.5	<0.5	<0.05	<0.5	<0.5
Ammonia		23.9	15.2	18.1	16.8	15.0	0.2	0.1	0.08	<0.1	<0.1
Nitrate	10.0 MAC	<0.06	<0.06	<0.06	<0.06	<0.06	0.70	0.45	0.44	0.48	0.87
Nitrite	1.0 MAC	<0.03	<0.03	<0.03	<0.03	<0.03	0.14	0.11	<0.03	<0.03	<0.03
Total Phosphorus		0.73	0.26	0.10	0.06	0.35	0.05	<0.03	<0.03	<0.03	<0.03
Phenols		<0.002	0.002	0.002	<0.002	<0.002	<0.002	<0.002	0.002	0.002	<0.002
Arsenic	0.01 MAC	0.0005	0.0003	<0.0002	<0.0002	0.0002	0.0011	0.0007	0.0016	0.0005	0.0005
Barium	1.0 MAC	0.519	0.358	0.458	0.481	0.544	0.0633	0.0613	0.0627	0.0665	0.0789
Boron	5.0 IMAC	0.176	0.103	0.166	0.152	0.130	0.013	0.007	0.015	0.010	0.013
Cadmium	0.005 MAC	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003	0.000005	<0.000003	0.000006	<0.000003	<0.000003
Chromium	0.05 MAC	0.00064	0.00044	0.00040	0.00043	0.00050	0.00014	0.00013	0.00009	0.00009	0.00018
Copper	1 AO	0.0003	<0.0002	0.0025	<0.001	<0.001	0.0008	<0.0002	0.0043	<0.001	0.005
Iron	0.3 AO	**3.84**	**3.28**	**3.30**	**3.25**	**3.91**	0.198	0.095	0.293	0.086	0.030
Lead	0.010 MAC	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	0.00019	<0.00009	<0.00009	<0.00009	<0.00009
Manganese	0.05 AO	**0.0972**	**0.0636**	**0.0751**	**0.0772**	**0.0822**	0.0318	0.0190	0.0229	0.0168	0.0220
Mercury	0.001 MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002	0.006
Total Suspended Solids		-	-	227	84	289	-	-	49900	44400	54600
Biological Oxygen Demand		-	-	<4	<4	<4	-	-	<4	<4	<4
Benzene (µg/L)	1 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- °C - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table C-1: Historical Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Blandford-Blenheim Landfill										
		BB-MW3					BB-BH1-1					
		11-Apr-22	18-Oct-22	4-Apr-23	26-Apr-24	28-Apr-25	18-Apr-22	18-Oct-22	25-Nov-22	4-Apr-23	26-Apr-24	28-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	6.89	7.51	7.51	7.43	7.51	6.89	6.94	6.94	7.48	6.74	6.67
Conductivity (field - µS/cm)		351	382	472	331	390	740	671	671	745	782	860
Temperature (field - °C)	15 AO	9.25	10.29	9.92	9.64	11.2	9.7	9.60	9.60	11.0	11.8	12.9
pH (lab - pH units)	6.5 - 8.5 OG	8.20	8.16	8.04	8.06	7.95	7.86	8.01	7.72	7.85	7.53	7.96
Conductivity (lab - µS/cm)		381	372	437	335	354	573	676	687	687	812	521
Total Dissolved Solids	500 AO	234	206	260	209	183	331	446	369	400	471	257
Chemical Oxygen Demand		<8	<8	<8	<8	8	<8	8	20	<8	<8	13
Dissolved Organic Carbon	5 AO	1.3	<1	2	1.7	1.5	2	2	1.8	2	3.8	2.2
Alkalinity	30 - 500 OG	213	202	216	183	192	304	335	334	345	417	255
Chloride	250 AO	3	0.9	<1	<1	<1	15	13	15	16	18	16
Sulphate	500 AO	7	3.5	24	<2	<2	12	9.0	4	11	10	<2
Calcium		56.3	52.3	66.2	54.0	62.7	92.4	-	111	108	104	131
Magnesium		10.9	8.97	11.9	9.44	11.4	18.9	-	18.4	20.0	20.3	26.5
Sodium	200 AO	13.2	4.50	15.1	2.59	2.40	4.30	-	3.90	4.13	4.64	5.74
Potassium		0.833	0.652	0.922	0.625	0.778	3.81	-	4.56	4.91	4.58	4.12
Total Kjehldahl Nitrogen		1.6	<0.5	<0.05	<0.5	<0.5	2.46	<0.5	2.00	2.00	1.6	0.6
Ammonia		<0.1	<0.1	<0.04	<0.1	<0.1	<0.1	<0.1	1.8	1.81	1.50	0.50
Nitrate	10.0 MAC	0.34	0.32	0.55	0.32	0.26	2.53	3.88	0.56	1.72	0.15	0.31
Nitrite	1.0 MAC	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.07	0.32	<0.03	<0.03
Total Phosphorus		<0.03	0.06	<0.03	1.73	0.03	0.12	0.16	0.16	0.07	0.08	0.07
Phenols		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	0.003	<0.002	<0.002	<0.002
Arsenic	0.01 MAC	0.0009	0.0003	0.0003	<0.0002	<0.0002	0.0004	-	0.0004	0.0008	0.0009	<0.0002
Barium	1.0 MAC	0.0104	0.00835	0.0110	0.00769	0.00813	0.0398	-	0.0561	0.0533	0.0571	0.0661
Boron	5.0 IMAC	0.018	0.005	0.045	0.005	0.006	0.125	-	0.063	0.075	0.063	0.061
Cadmium	0.005 MAC	0.000003	0.000010	<0.000003	0.000004	<0.000003	0.000137	-	0.000004	0.000045	0.000011	0.000011
Chromium	0.05 MAC	0.00057	0.00037	0.00043	0.00032	0.00049	0.00014	-	0.00019	0.00014	0.00018	0.00017
Copper	1 AO	0.0011	0.0006	0.0037	<0.001	0.001	0.0022	-	0.0010	0.0038	0.001	0.001
Iron	0.3 AO	<0.007	<0.007	0.012	<0.007	0.032	0.045	-	0.08	**0.528**	**0.592**	0.187
Lead	0.010 MAC	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	0.00014	-	<0.001	0.00012	0.00019	0.00011
Manganese	0.05 AO	0.00477	0.00041	0.00021	0.00045	0.00211	**0.657**	-	**0.852**	**0.826**	**0.829**	**0.996**
Mercury	0.001 MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	0.003	<0.002	<0.002	<0.002	<0.002	0.026	-	0.011	0.010	0.013	0.021
Total Suspended Solids		-	-	17500	11800	22000	-	238	89	89	665	133
Biological Oxygen Demand		-	-	<4	<4	<4	-	<4	22	<4	<4	<4
Benzene (µg/L)	1 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- °C - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table C-1: Historical Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Blandford-Blenheim Landfill									
		BB-BH1-2						BB-P1			
		18-Apr-22	18-Oct-22	25-Nov-22	4-Apr-23	26-Apr-24	28-Apr-25	11-Apr-22	4-Apr-23	18-Apr-24	28-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	6.75	6.65	6.65	6.54	**6.26**	6.72	7.38	7.53	7.25	7.28
Conductivity (field - µS/cm)		2050	2100	2100	2360	2010	2420	527	599	559	650
Temperature (field - °C)	15 AO	9.3	9.75	9.75	11.8	11.7	12.7	4.58	7.89	9.05	10.0
pH (lab - pH units)	6.5 - 8.5 OG	7.15	7.42	7.20	7.39	7.22	7.32	8.08	8.09	8.10	8.03
Conductivity (lab - µS/cm)		2110	2350	2100	2110	2080	2010	557	564	584	596
Total Dissolved Solids	500 AO	**780**	**880**	**820**	**851**	**866**	**820**	346	320	346	340
Chemical Oxygen Demand		116	250	131	117	101	147	<8	<8	<8	9
Dissolved Organic Carbon	5 AO	**27**	**25**	**30.5**	**24**	**29.5**	**25**	1.5	1	1.6	1.7
Alkalinity	30 - 500 OG	**1150**	455	**1070**	**1080**	**1080**	**1030**	295	284	286	318
Chloride	250 AO	31	34	37	36	30	31	2	6	2	7
Sulphate	500 AO	<2	47	<20	11	<2	<20	5	7	5	5
Calcium		184	-	195	188	171	224	82.3	84.6	89.2	91.5
Magnesium		48.9	-	40.7	43.1	40.4	44.6	22.4	20.9	22.1	23.1
Sodium	200 AO	50.4	-	31.9	34.9	32.2	35.5	4.94	4.38	3.21	3.46
Potassium		70.4	-	60.7	63.0	52.3	60.6	5.12	4.45	5.28	5.04
Total Kjehldahl Nitrogen		122	109	99.2	112	100	97.3	<0.5	0.20	<0.5	<0.5
Ammonia		112	105	100	108	99.3	97.4	<0.1	<0.04	<0.1	<0.1
Nitrate	10.0 MAC	<0.06	<0.06	<0.06	0.18	0.18	<0.06	5.28	5.45	5.95	5.64
Nitrite	1.0 MAC	<0.3	<0.03	<0.3	<0.3	<0.3	<0.03	<0.03	<0.03	<0.03	<0.03
Total Phosphorus		0.60	1.03	0.58	0.54	0.44	0.60	<0.03	<0.03	<0.03	<0.03
Phenols		0.008	-	0.016	0.010	0.015	0.010	<0.002	<0.002	<0.002	<0.002
Arsenic	0.01 MAC	0.0014	-	0.0016	0.0016	0.0010	0.0011	<0.0002	<0.0002	<0.0002	<0.0002
Barium	1.0 MAC	0.217	-	0.278	0.228	0.219	0.274	0.0304	0.0301	0.0334	0.0330
Boron	5.0 IMAC	0.765	-	0.750	0.787	0.684	0.772	0.045	0.048	0.048	0.049
Cadmium	0.005 MAC	0.000003	-	0.000010	0.000011	0.000006	0.000013	0.000007	0.000008	0.000010	0.000005
Chromium	0.05 MAC	0.00376	-	0.00377	0.00447	0.00299	0.00381	0.00096	0.00064	0.00072	0.00077
Copper	1 AO	0.0006	-	0.0008	0.0025	<0.001	0.001	0.0048	0.0070	0.026	0.009
Iron	0.3 AO	**44.3**	**-**	**73.5**	**64.6**	**46.4**	**76.5**	<0.007	<0.007	<0.007	<0.007
Lead	0.010 MAC	<0.00009	**-**	<0.001	0.00014	0.00047	0.00024	0.00017	<0.00009	0.00019	<0.00009
Manganese	0.05 AO	**0.701**	-	**0.548**	**0.547**	**0.453**	**0.557**	0.00024	0.00026	0.00026	0.00029
Mercury	0.001 MAC	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	0.011	-	0.007	0.006	0.014	0.007	0.218	0.503	0.248	0.244
Total Suspended Solids		-	1590	238	239	674	648	-	<2	<2	3
Biological Oxygen Demand		-	28	8	11.0	24.0	22.0	-	<4	<4	<4
Benzene (µg/L)	1 MAC	**5.9**	**-**	**5.7**	**4.2**	**4.7**	**4.9**	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	**2.6**	**-**	**3.2**	**2.2**	**3.5**	**3.5**	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	0.5	-	1.2	0.7	1.5	0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- °C - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table C-1: Historical Groundwater Chemistry Results
Oxford County Closed Landfill Sites

Parameter	ODWQS	Otterville Landfill											
		OT-MW1				OT-MW2				OT-MW3			
		4-Apr-23	17-Oct-23	4-Apr-24	9-Apr-25	4-Apr-23	17-Oct-23	4-Apr-24	9-Apr-25	4-Apr-23	17-Oct-23	4-Apr-24	9-Apr-25
pH (field - pH units)	6.5 - 8.5 OG	7.37	7.26	7.10	7.58	7.50	7.33	7.39	7.84	7.16	7.10	7.13	7.39
Conductivity (field - µS/cm)		605	358	616	582	516	410	500	468	1420	1343	1450	1050
Temperature (field - °C)	15 AO	11.2	10.1	8.5	10.2	10.6	9.6	8.2	9.3	12.3	11.4	8.7	9.4
pH (lab - pH units)	6.5 - 8.5 OG	7.91	7.93	8.01	8.12	8.03	7.97	7.91	8.03	7.94	8.01	8.19	8.10
Conductivity (lab - µS/cm)		584	698	608	603	479	454	481	458	1430	1320	1540	1150
Total Dissolved Solids	500 AO	371	343	454	403	274	217	309	386	**843**	**726**	**889**	**740**
Chemical Oxygen Demand		<8	12	<8	8	<8	8	<8	<8	<8	20	<8	<8
Dissolved Organic Carbon	5 AO	1	1.1	1.1	2.3	1	1.4	1.0	1.5	2	**6.7**	<1.0	1.1
Alkalinity	30 - 500 OG	232	293	261	213	244	233	227	286	303	309	309	306
Chloride	250 AO	23	22	17	22	14	5	11	7	**320**	180	**330**	210
Sulphate	500 AO	35	34	33	42	10	6	7	7	56	50	54	48
Calcium		91.8	130	104	101	88.6	86.0	79.7	75.1	133	116	120	95.9
Magnesium		17.8	20.4	19.7	20.8	12.6	11.5	11.7	10.5	43.6	32.5	38.5	31.2
Sodium	200 AO	3.34	3.56	3.99	3.72	4.68	3.51	4.17	3.42	150	57.4	142	82.3
Potassium		1.11	1.01	1.62	1.46	0.841	0.564	0.652	0.561	2.42	2.19	2.17	1.49
Total Kjehldahl Nitrogen		0.86	<0.5	<0.5	<0.5	0.36	<0.5	<0.5	<0.5	<0.05	2.10	<0.5	<0.5
Ammonia		0.05	<0.1	<0.1	<0.1	0.04	<0.1	<0.1	<0.1	<0.04	1.30	<0.1	<0.1
Nitrate	10.0 MAC	8.73	9.24	7.32	8.25	1.81	0.39	2.18	1.66	0.60	1.77	0.37	1.31
Nitrite	1.0 MAC	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Total Phosphorus		0.80	1.52	<0.03	<0.03	1.50	0.04	1.76	<0.03	1.96	1.74	1.37	1.81
Phenols		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.022	<0.002	<0.002
Arsenic	0.01 MAC	0.0004	0.0004	0.0003	0.0015	<0.0002	<0.0002	<0.0002	0.0002	0.0009	0.0013	0.0007	0.0005
Barium	1.0 MAC	0.0614	0.0575	0.0787	0.0556	0.0237	0.0164	0.0193	0.0224	0.397	0.289	0.346	0.237
Boron	5.0 IMAC	0.037	0.016	0.016	0.013	0.015	0.021	0.013	0.011	0.019	0.023	0.019	0.010
Cadmium	0.005 MAC	0.000012	0.000007	0.000022	0.000040	0.000006	0.000004	0.000005	0.000004	0.000013	<0.000003	0.000022	0.000003
Chromium	0.05 MAC	0.00070	0.00077	0.00098	0.00140	0.00054	0.00085	0.00069	0.00052	0.00020	0.00020	0.00053	0.00031
Copper	1 AO	0.0044	0.0026	0.004	0.006	0.0114	0.0035	<0.001	<0.001	0.0173	0.0008	0.001	<0.001
Iron	0.3 AO	0.008	<0.01	<0.007	**0.938**	0.018	<0.01	<0.007	<0.007	0.021	0.09	0.010	<0.007
Lead	0.010 MAC	<0.00009	<0.001	<0.00009	0.00263	<0.00009	<0.001	<0.00009	<0.00009	<0.00009	<0.001	<0.00009	<0.00009
Manganese	0.05 AO	0.0149	0.003	0.0399	**0.132**	0.0030	<0.002	0.00087	0.00107	**0.257**	**0.065**	**0.234**	0.0129
Mercury	0.001 MAC	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Zinc	5.0 AO	0.002	<0.002	<0.002	0.009	0.002	0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002
Total Suspended Solids		8760	291000	184000	246000	2640	77600	172000	294000	3300	66700	33000	19600
Biological Oxygen Demand		<4	<4	<4	6.0	<4	<4	<4	<4	<4	7.0	<4	<4
Benzene (µg/L)	1 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	5 MAC, 1 AO	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	50 MAC	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	60 MAC, 24 AO	<0.5	0.5	<0.5	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	1 MAC	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All units in mg/L unless otherwise noted
- ODWQS - Ontario Drinking Water Quality Standard (June 2003)
- Bold values indicate exceedance of ODWQS
- All units in mg/L unless otherwise noted
- µS/cm - microSiemens per centimetre
- °C - degrees Celsius
- µg/L - micrograms per litre
- MAC - Maximum Acceptable Concentration
- IMAC - Interim Maximum Acceptable Concentration
- AO - Aesthetic Objective
- OG - Operational Guideline
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Figure C-1A
Time-Concentration Graph - Chloride
Blandford-Blenheim Landfill Site

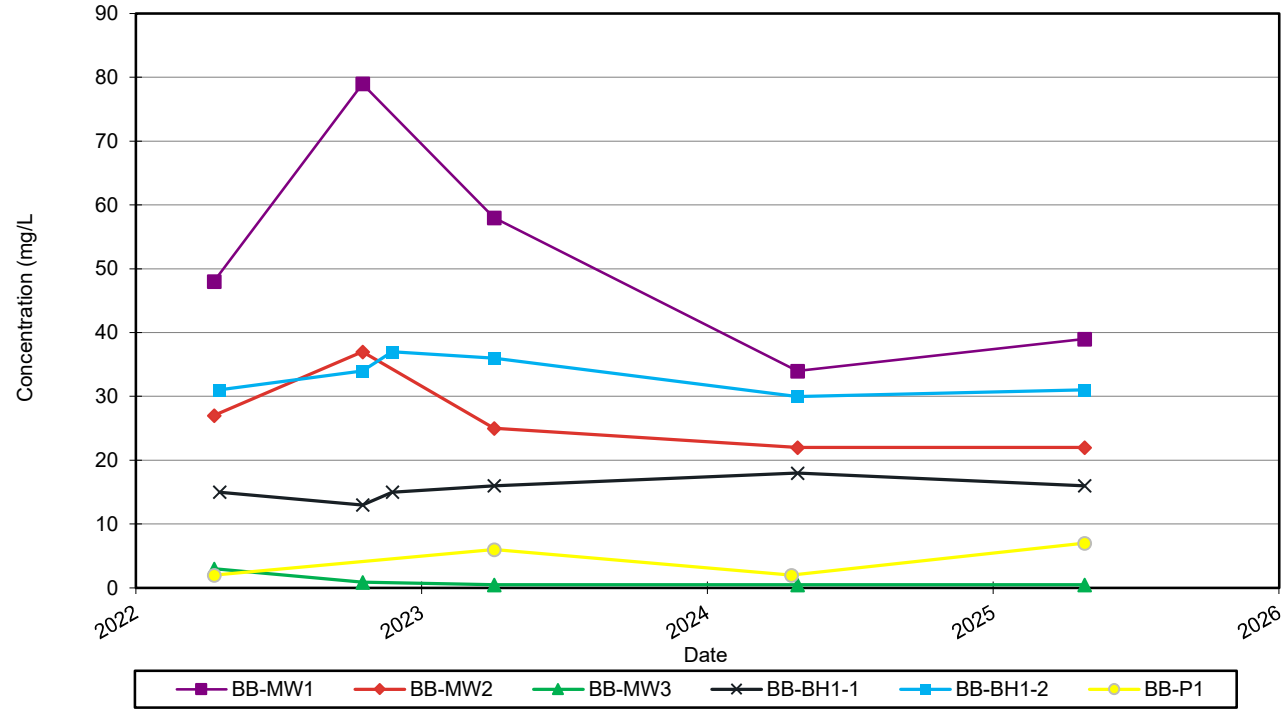


Figure C-1B
Time-Concentration Graph - Boron
Blandford-Blenheim Landfill Site

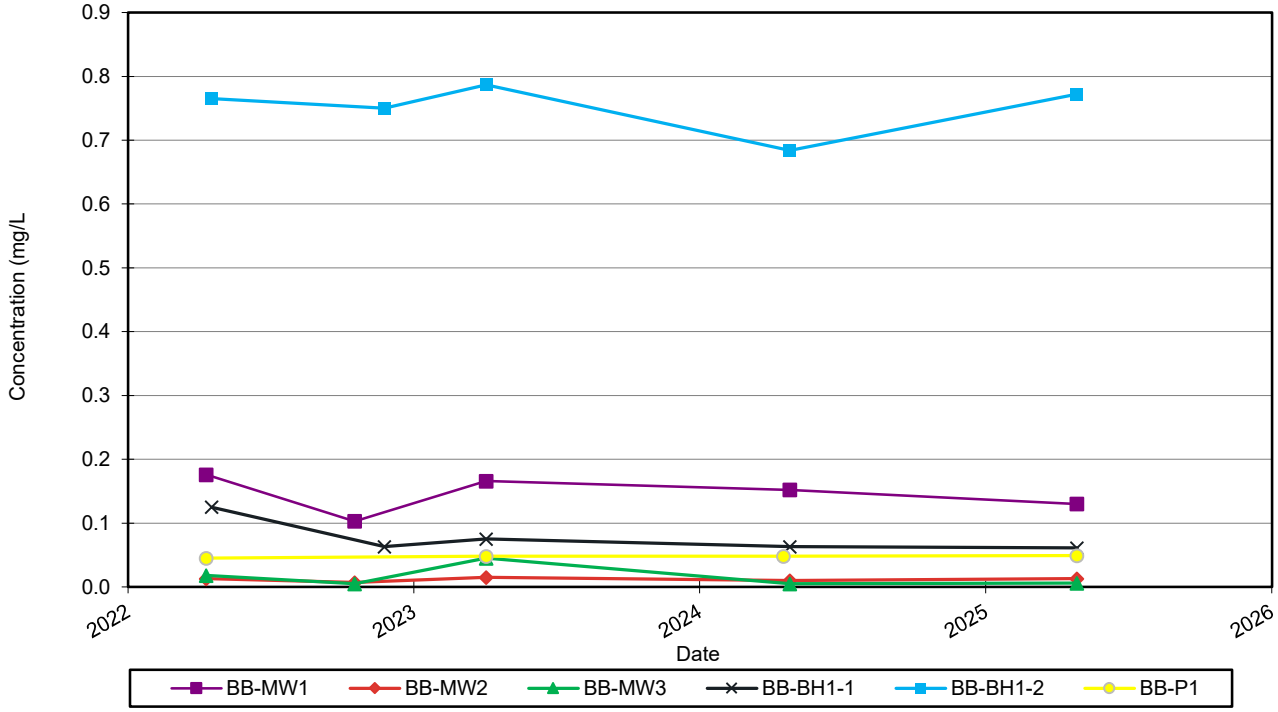


Figure C-1C
Time-Concentration Graph - Iron
Blandford-Blenheim Landfill Site

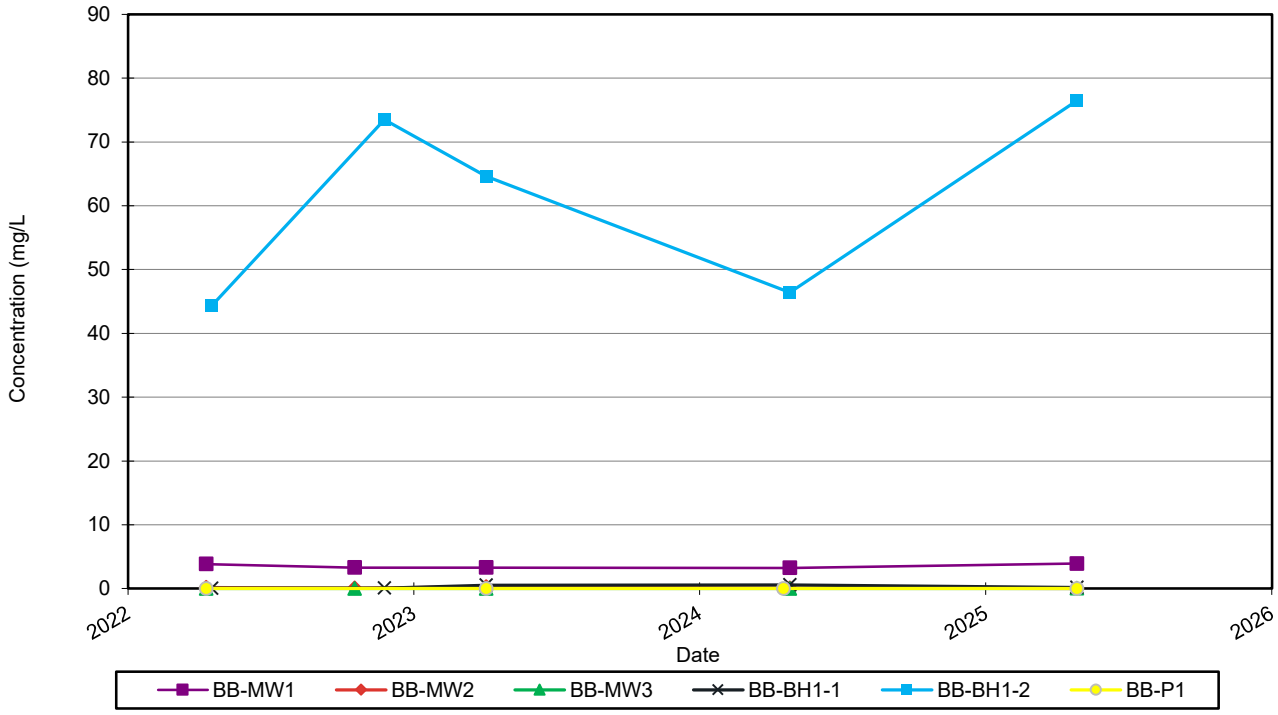


Figure C-1D
Time-Concentration Graph - Alkalinity
Blandford-Blenheim Landfill Site

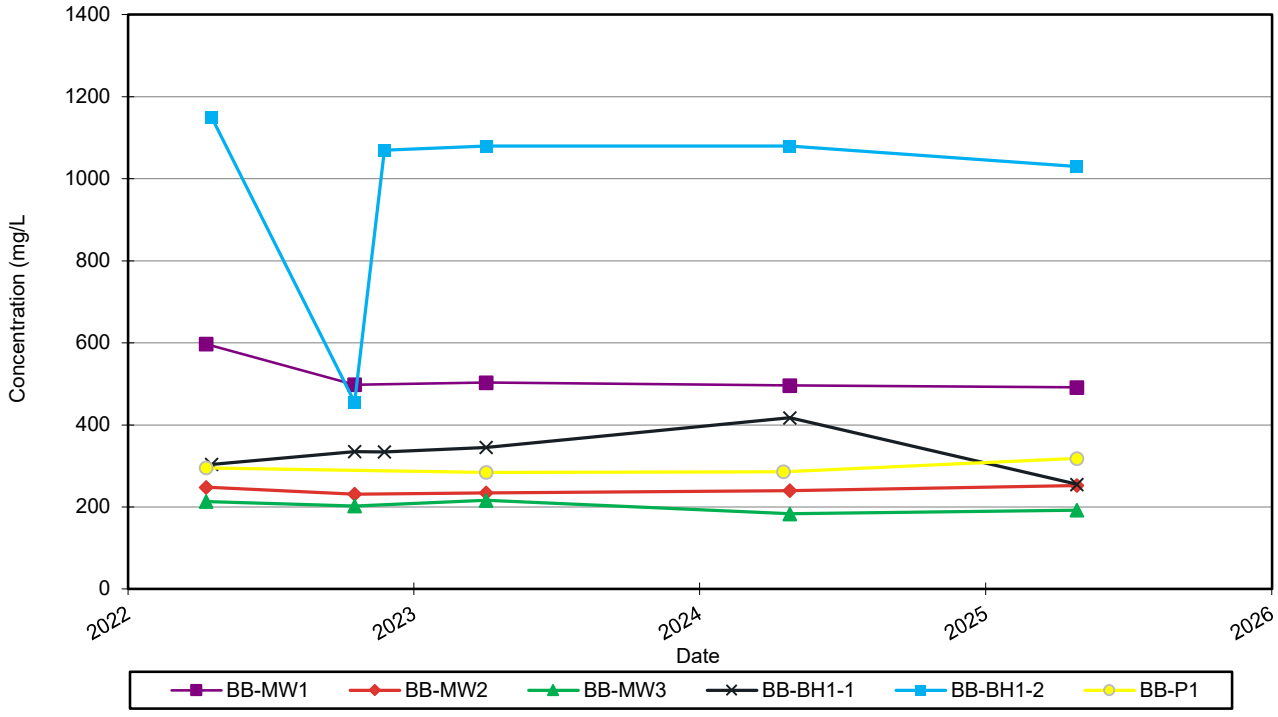


Figure C-1E
Time-Concentration Graph - Ammonia
Blandford-Blenheim Landfill Site

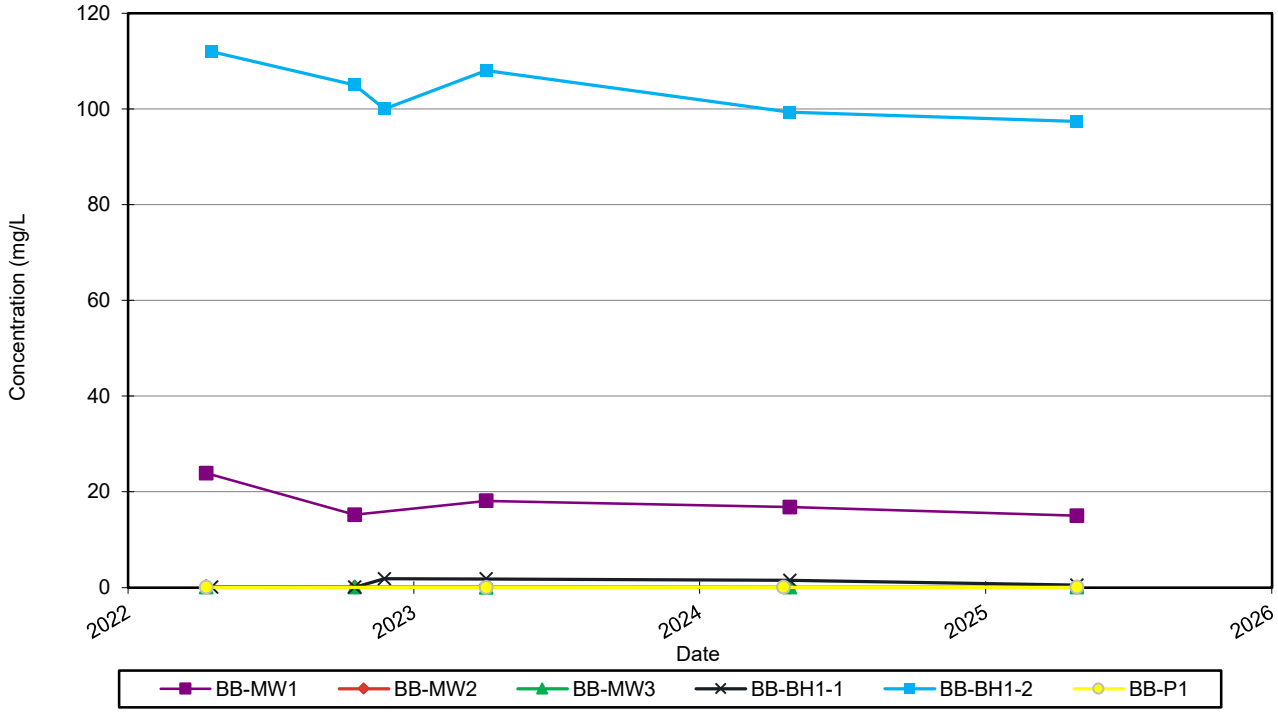


Figure C-1F
Time-Concentration Graph - TKN
Blandford-Blenheim Landfill Site

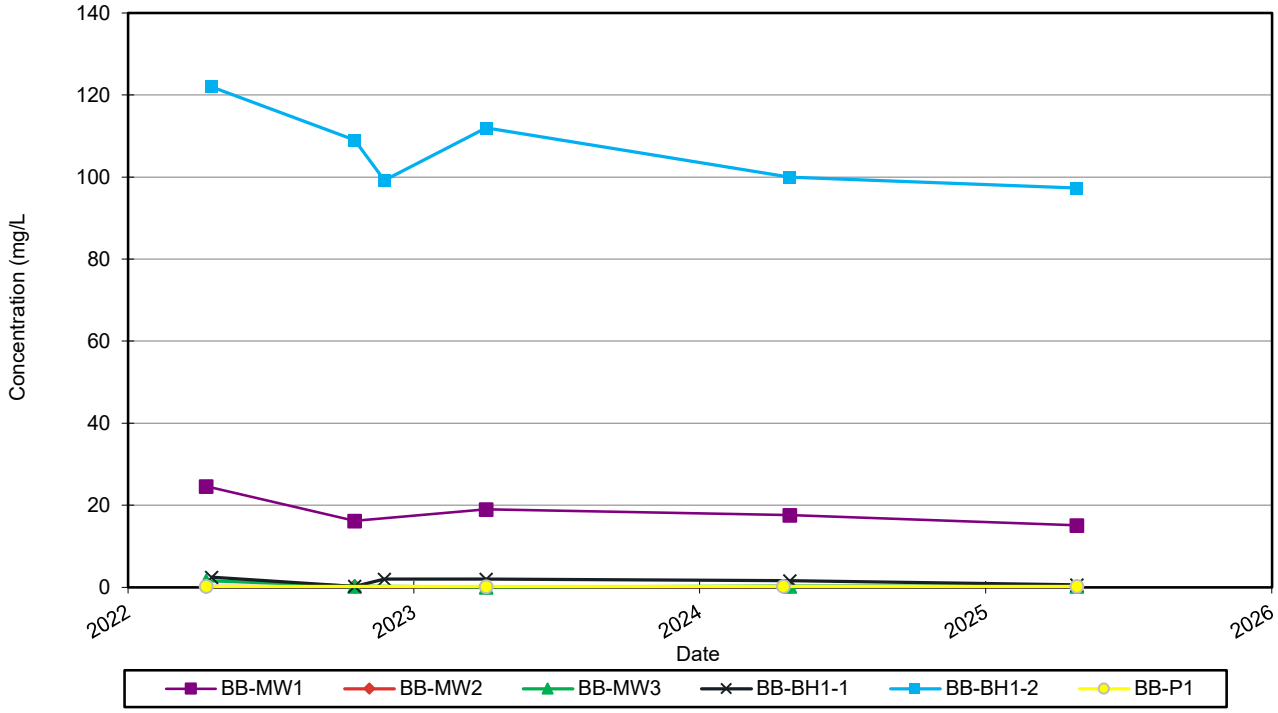


Figure C-1G
Time-Concentration Graph - Potassium
Blandford-Blenheim Landfill Site

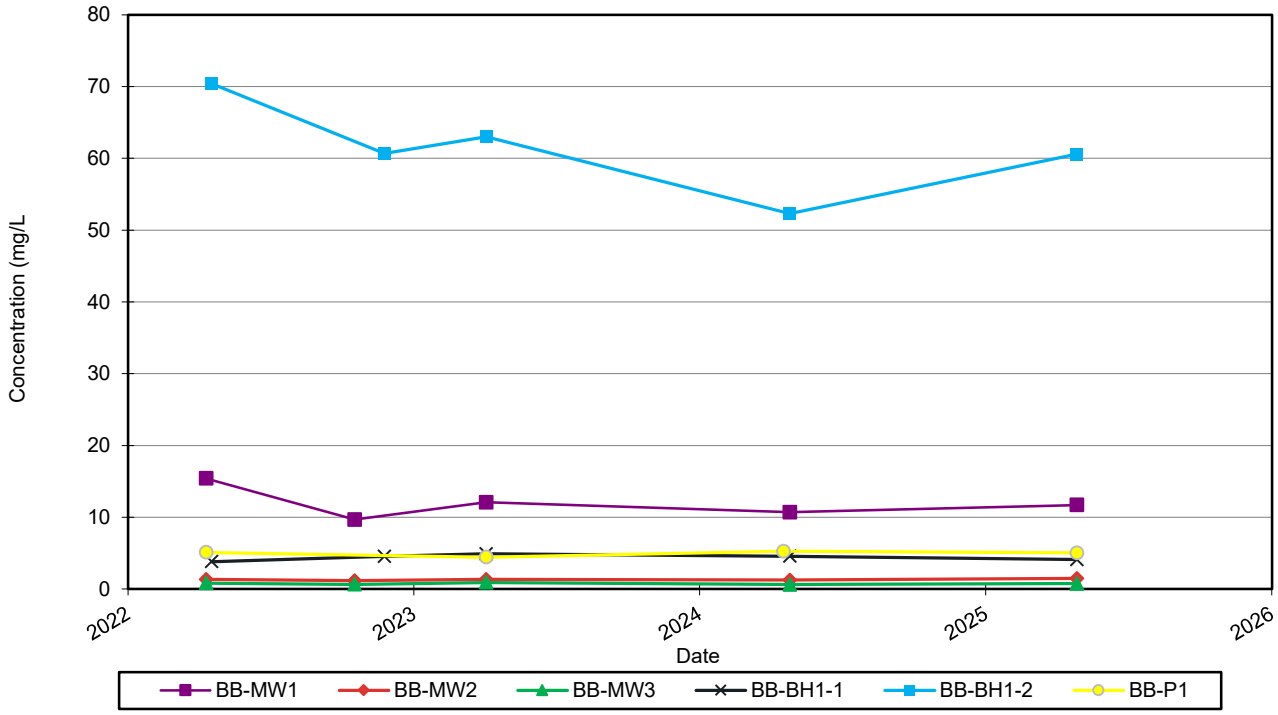


Figure C-2A
Time-Concentration Graph - Chloride
Otterville Landfill Site

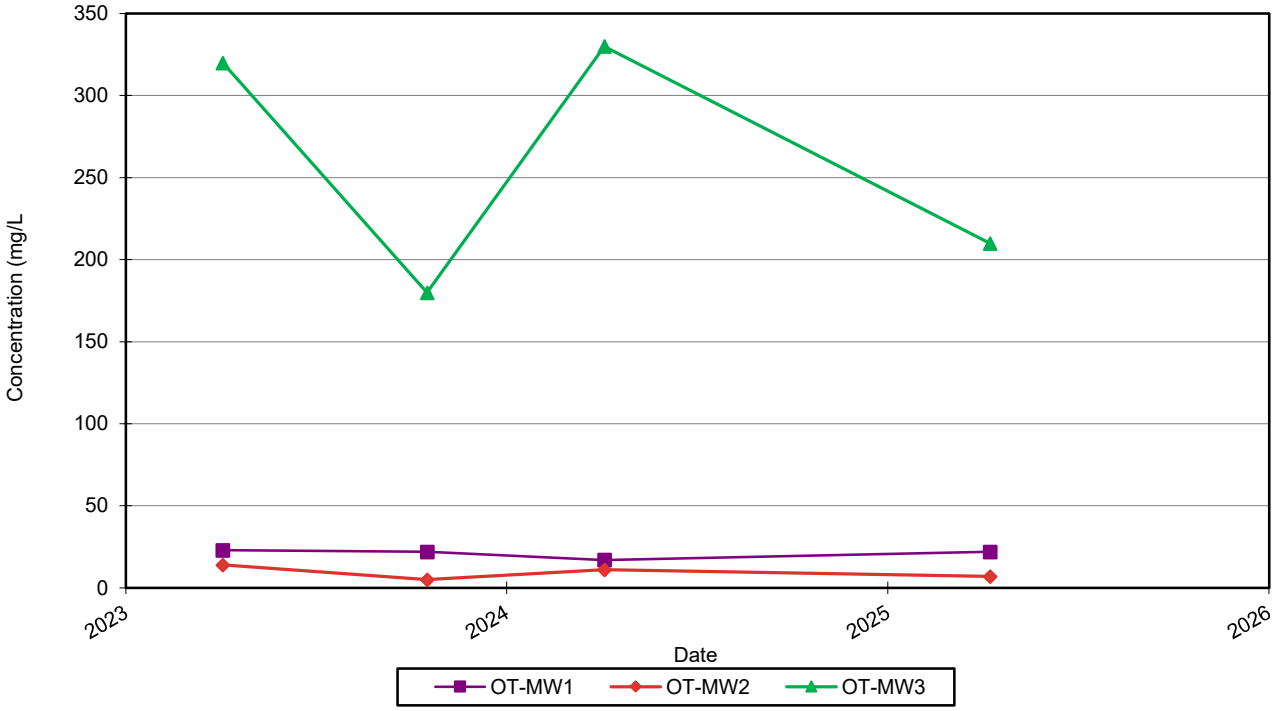


Figure C-2B
Time-Concentration Graph - Boron
Otterville Landfill Site

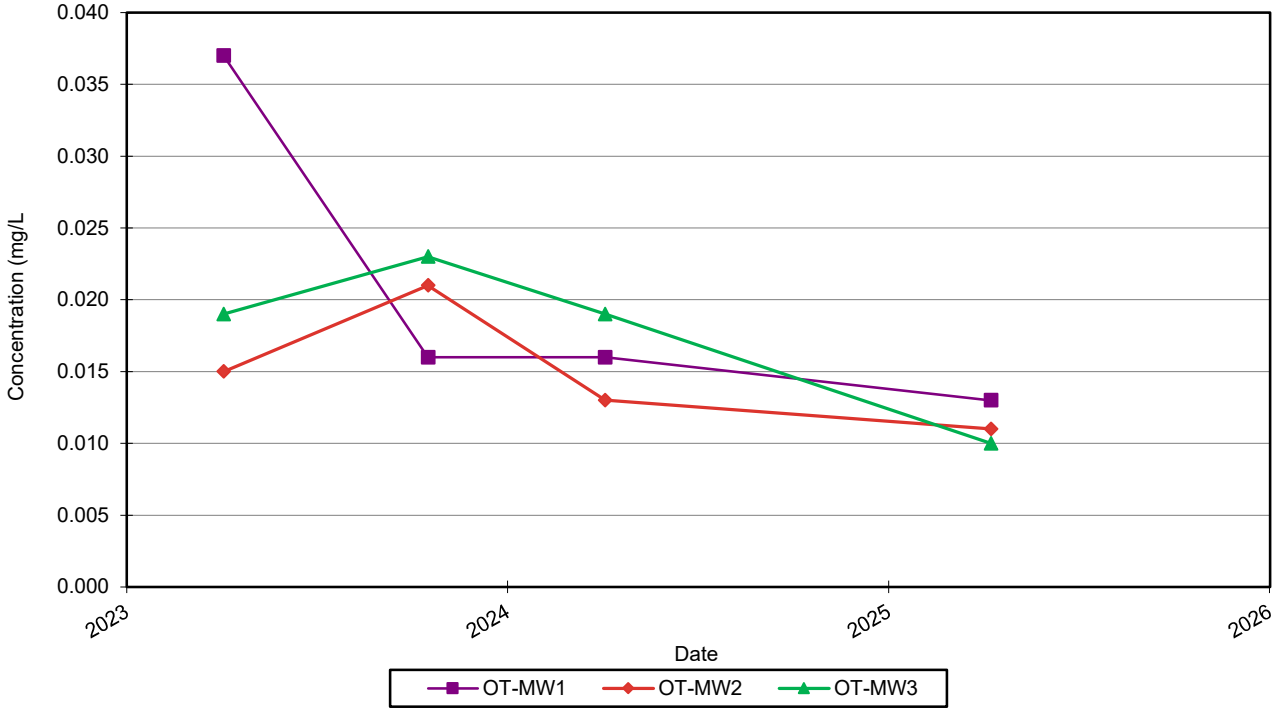


Figure C-2C
Time-Concentration Graph - Iron
Otterville Landfill Site

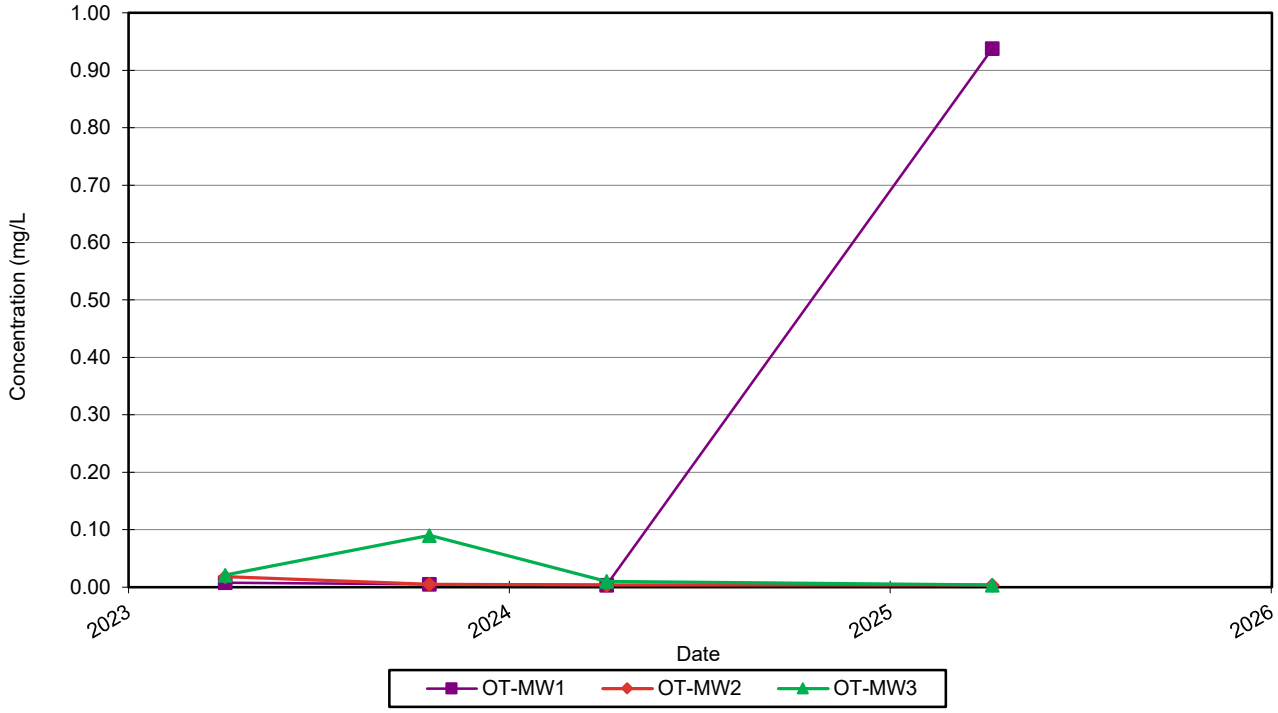


Figure C-2D
Time-Concentration Graph - Alkalinity
Otterville Landfill Site

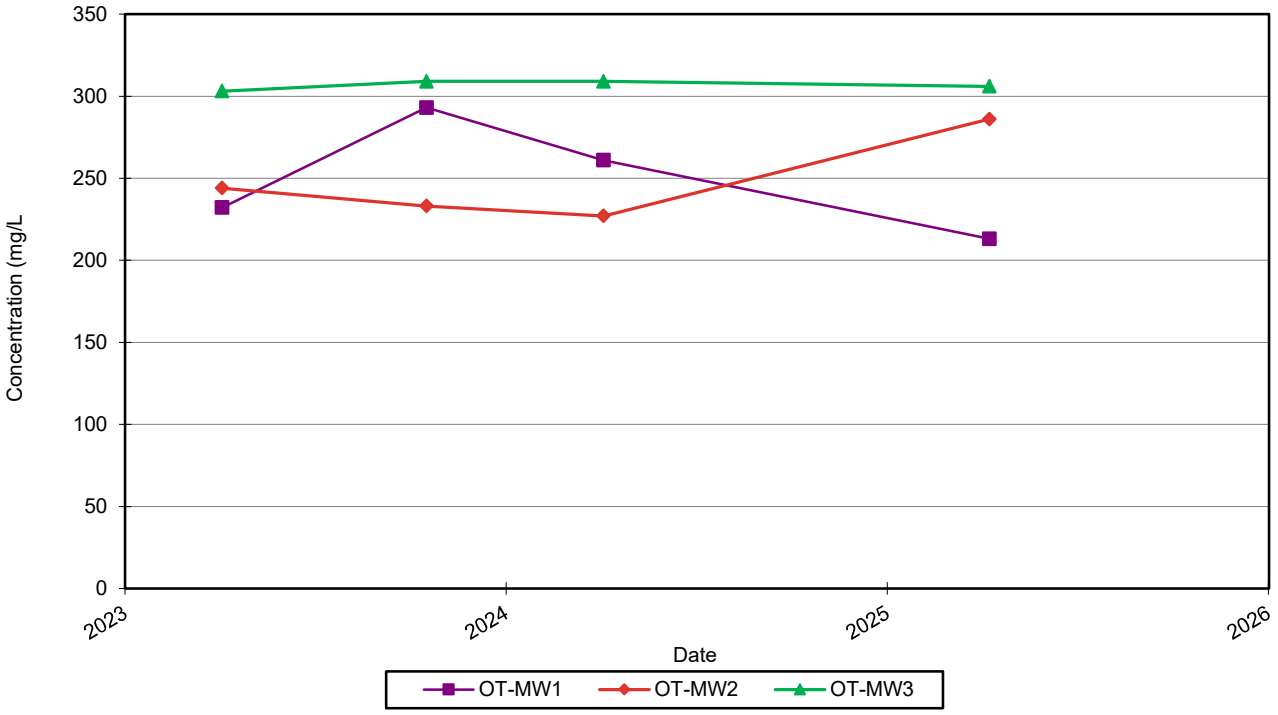


Figure C-2E
Time-Concentration Graph - Ammonia
Otterville Landfill Site

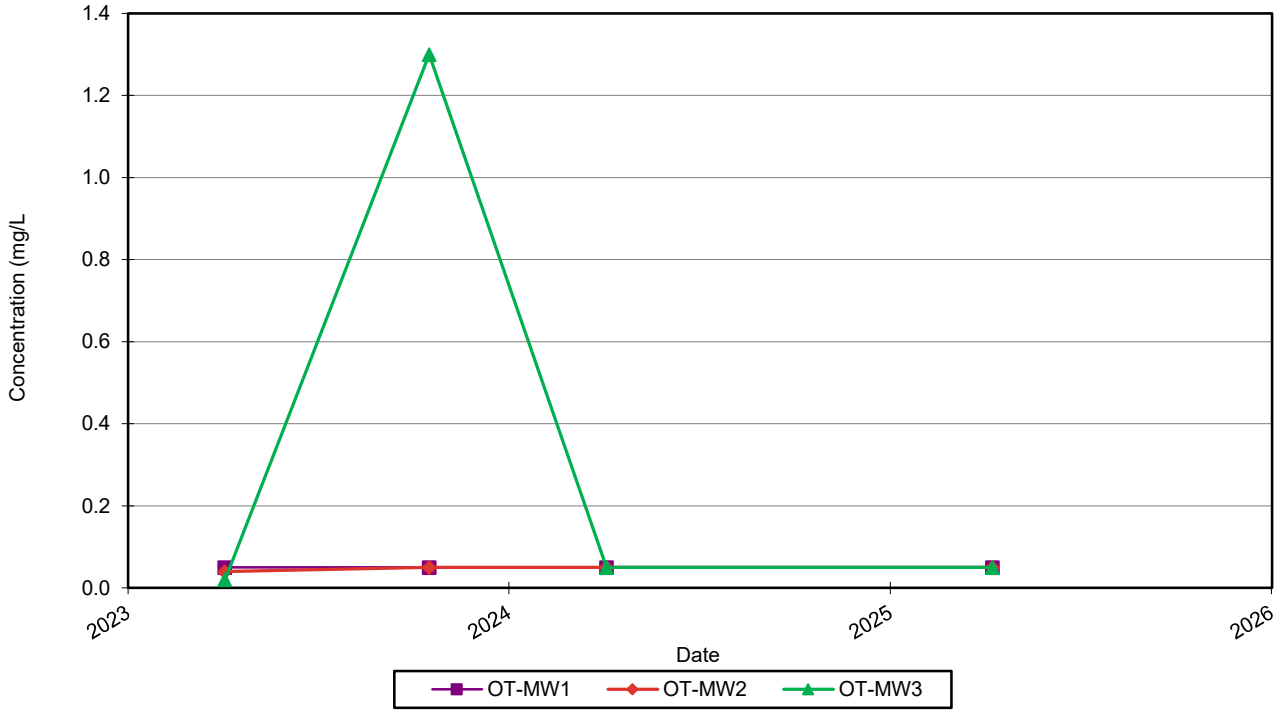


Figure C-2F
Time-Concentration Graph - TKN
Otterville Landfill Site

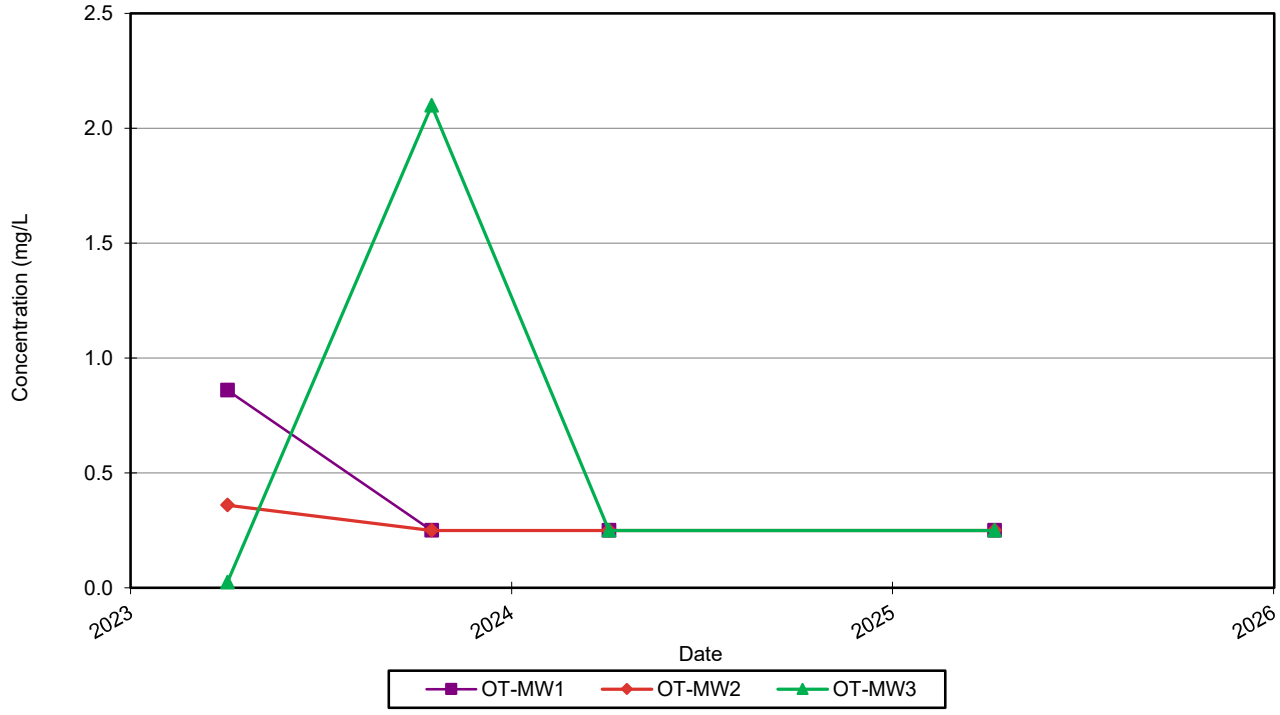
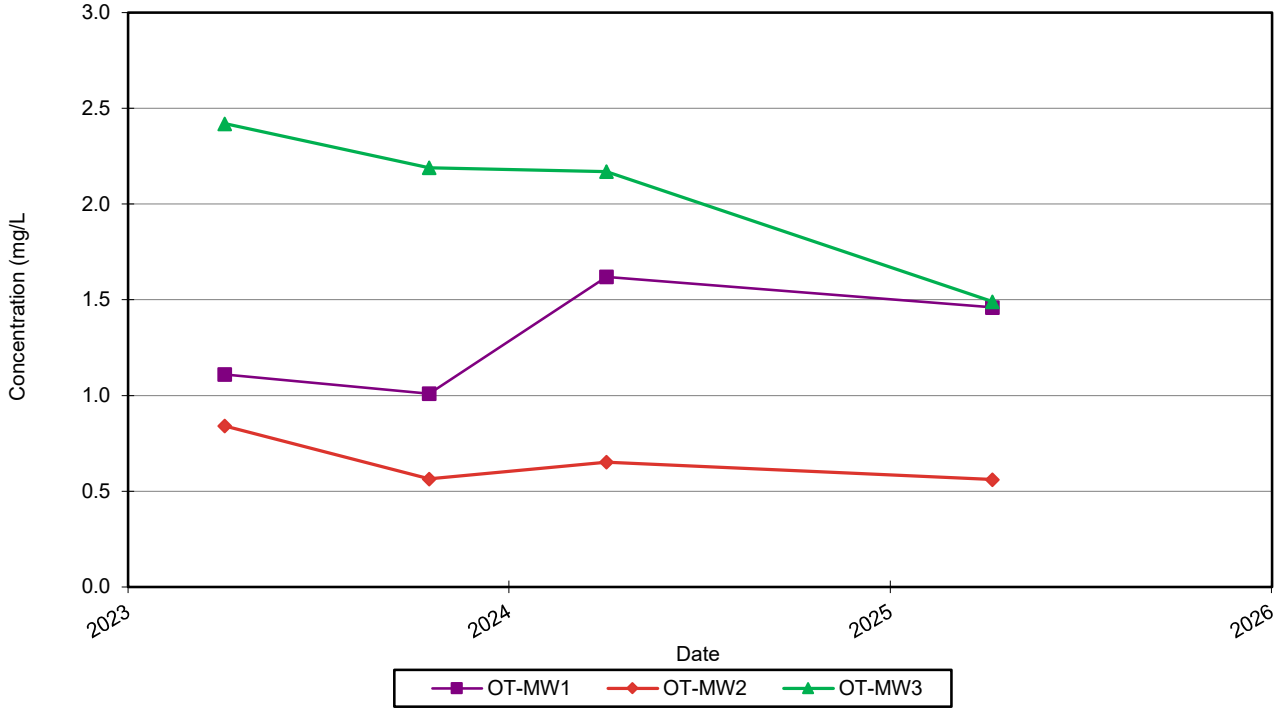


Figure C-2G
Time-Concentration Graph - Potassium
Otterville Landfill Site



APPENDIX D

Historical Surface Water Chemistry Results

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Blandford-Blenheim Landfill				
		BB-SW1				
		22-Mar-22	18-Oct-22	24-Mar-23	3-Apr-24	19-Mar-25
pH (field - pH units)		7.32		7.94	7.34	7.67
Conductivity (field - µS/cm)		174		353	559	583
Temperature (field - °C)		5.02	DRY	2.62	7.02	8.79
Dissolved Oxygen (field)	4-7 (temp dependent)	7.58		8.37	**4.98**	**0.67**
Flow Rate (L/s)		no flow		no flow	no flow	no flow
pH (lab - pH units)	6.5 - 8.5	7.83	-	7.79	7.64	7.72
Conductivity (lab - µS/cm)		182	-	352	578	462
Total Dissolved Solids		100	-	211	337	271
Chemical Oxygen Demand		<8	-	10	48	36
Biological Oxygen Demand		<4	-	<4	4	<4
Total Suspended Solids		4	-	27	9	3
Alkalinity	<75% background	76	-	99	295	222
Chloride		11	-	38	19	18
Sulphate		2.0	-	8	<2	<2
TKN		<0.5	-	0.19	1.4	0.7
Ammonia		<0.1	-	<0.04	0.2	0.2
Un-ionized Ammonia	0.02	<0.001	-	<0.001	0.001	0.002
Nitrate		<0.03	-	4.40	<0.06	<0.06
Nitrite		<0.06	-	<0.03	<0.03	<0.03
Total Phosphorus	0.03*	<0.03	-	**0.080**	**0.070**	**0.054**
Phenols	0.001	<0.002	-	<0.001	**0.002**	**0.004**
Arsenic	0.005*	0.0003	-	0.0006	<0.001	0.002
Barium		0.00911	-	0.0206	0.031	0.033
Boron	0.200*	0.006	-	0.009	0.009	0.012
Cadmium	0.0001*	0.000008	-	0.00002	<0.0001	<0.0001
Chromium	0.0089**	0.00026	-	0.00076	<0.003	<0.003
Copper	0.005	0.0021	-	0.0034	<0.001	0.001
Iron	0.3	0.088	-	0.171	**0.83**	**0.66**
Lead	0.003*	0.00009	-	0.00054	<0.001	<0.001
Mercury	0.0002	<0.00001	-	<0.00001	<0.0001	<0.0001
Zinc	0.02*	0.004	-	0.004	<0.005	0.006
Benzene (µg/L)	100*	<0.5	-	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	-	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	100*	<0.5	-	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	-	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	-	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: $f = 1/(10^{pKa-pH})+1)$
  $pKa=0.09018 + 2729.92/T$
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Blandford-Blenheim Landfill				
		BB-SW2				
		22-Mar-22	18-Oct-22	24-Mar-23	3-Apr-24	19-Mar-25
pH (field - pH units)		7.34	DRY	7.52	7.39	7.87
Conductivity (field - µS/cm)		278		513	913	355
Temperature (field - °C)		2.96		1.80	6.90	10.09
Dissolved Oxygen (field)	4-7 (temp dependent)	12.94		9.75	6.86	**3.75**
Flow Rate (L/s)		no flow		no flow	no flow	no flow
pH (lab - pH units)	6.5 - 8.5	7.91	-	7.83	7.84	7.86
Conductivity (lab - µS/cm)		310	-	528	970	446
Total Dissolved Solids		166	-	320	494	229
Chemical Oxygen Demand		28	-	14	44	23
Biological Oxygen Demand		4	-	<4	7	<4
Total Suspended Solids		7	-	4	4	4
Alkalinity	<75% background	153	-	191	497	219
Chloride		6.5	-	24	22	11
Sulphate		2.2	-	63	4	6
TKN		4.1	-	2.46	19.9	4.7
Ammonia		3.8	-	1.69	20.0	4.2
Un-ionized Ammonia	0.02	0.009	-	0.005	**0.071**	**0.057**
Nitrate		<0.03	-	2.41	0.19	0.22
Nitrite		0.76	-	0.10	<0.03	<0.03
Total Phosphorus	0.03*	<0.03	-	**0.032**	**0.061**	**0.052**
Phenols	0.001	**0.002**	-	<0.001	**0.003**	**0.004**
Arsenic	0.005*	0.0003	-	0.0004	<0.001	<0.001
Barium		0.0219	-	0.0345	0.058	0.038
Boron	0.200*	0.055	-	**0.237**	**0.236**	0.106
Cadmium	0.0001*	0.000030	-	0.00001	<0.0001	<0.0001
Chromium	0.0089**	0.00037	-	0.00028	<0.003	<0.003
Copper	0.005	0.0029	-	0.0034	<0.001	<0.001
Iron	0.3	**1.26**	-	0.063	0.06	**1.23**
Lead	0.003*	0.00125	-	0.00017	<0.001	<0.001
Mercury	0.0002	<0.00001	-	<0.00001	<0.0001	<0.0001
Zinc	0.02*	0.005	-	0.004	<0.005	<0.005
Benzene (µg/L)	100*	<0.5	-	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	-	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	100*	<0.5	-	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	-	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	-	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Blandford-Blenheim Landfill				
		BB-SW3				
		22-Mar-22	18-Oct-22	24-Mar-23	3-Apr-24	19-Mar-25
pH (field - pH units)		7.91	DRY	7.61	6.87	7.58
Conductivity (field - µS/cm)		501		415	901	700
Temperature (field - °C)		5.24		4.03	7.96	8.66
Dissolved Oxygen (field)	4-7 (temp dependent)	11.94		10.55	**4.12**	**2.68**
Flow Rate (L/s)		no flow		no flow	no flow	no flow
pH (lab - pH units)	6.5 - 8.5	7.66	-	7.71	7.46	7.62
Conductivity (lab - µS/cm)		437	-	447	869	734
Total Dissolved Solids		306	-	243	437	371
Chemical Oxygen Demand		25	-	22	41	26
Biological Oxygen Demand		<4	-	<4	6	<4
Total Suspended Solids		10	-	41	75	17
Alkalinity	<75% background	264	-	157	467	376
Chloride		13	-	43	24	16
Sulphate		5.0	-	36	<2	10
TKN		3.6	-	1.27	9.4	12.2
Ammonia		3.2	-	0.57	8.1	10.9
Un-ionized Ammonia	0.02	**0.033**	-	0.003	0.009	**0.069**
Nitrate		<0.03	-	0.12	<0.06	0.49
Nitrite		0.07	-	<0.03	<0.03	0.04
Total Phosphorus	0.03*	<0.03	-	**0.069**	**0.227**	**0.061**
Phenols	0.001	<0.002	-	<0.001	**0.003**	**0.004**
Arsenic	0.005*	0.0006	-	0.0010	0.004	0.001
Barium		0.0445	-	0.0351	0.116	0.075
Boron	0.200*	0.078	-	0.115	**0.230**	0.160
Cadmium	0.0001*	0.000009	-	0.00003	<0.0001	<0.0001
Chromium	0.0089**	0.00024	-	0.00026	<0.003	<0.003
Copper	0.005	0.0008	-	**0.0068**	<0.001	<0.001
Iron	0.3	**1.41**	-	**2.53**	**19.8**	**7.85**
Lead	0.003*	0.00015	-	0.00098	<0.001	<0.001
Mercury	0.0002	<0.00001	-	<0.00001	<0.0001	<0.0001
Zinc	0.02*	0.005	-	0.009	<0.005	0.013
Benzene (µg/L)	100*	<0.5	-	<0.5	<0.5	0.6
1,4 - Dichlorobenzene (µg/L)	4	<0.5	-	<0.5	<0.5	1.1
Dichloromethane (µg/L)	100*	<0.5	-	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	-	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	-	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Tillsonburg Landfill							
		TB-SW1				TB-SW2			
		20-Mar-23	17-Oct-23	4-Apr-24	12-Mar-25	20-Mar-23	17-Oct-23	4-Apr-24	12-Mar-25
pH (field - pH units)		8.00	7.82	7.83	7.78	8.18	7.67	7.55	7.93
Conductivity (field - µS/cm)		518	656	589	533	529	670	620	538
Temperature (field - °C)		2.91	11.18	7.69	3.50	3.02	11.26	6.24	3.48
Dissolved Oxygen (field)	4-7 (temp dependent)	10.20	12.30	6.14	15.23	7.98	11.54	6.43	7.48
Flow Rate (L/s)		>10,000	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000
pH (lab - pH units)	6.5 - 8.5	8.09	8.13	8.13	8.03	8.08	8.21	8.10	8.02
Conductivity (lab - µS/cm)		505	695	617	499	514	700	647	534
Total Dissolved Solids		377	429	371	269	369	394	380	291
Chemical Oxygen Demand		15	<8	12	14	12	9	13	9
Biological Oxygen Demand		<4	<4	6	<4	<4	<4	<4	<4
Total Suspended Solids		66	8	61	89	59	11	74	76
Alkalinity	<75% background	167	226	220	179	168	224	223	175
Chloride		40	53	35	32	38	55	36	32
Sulphate		33	48	33	30	36	48	33	29
TKN		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Ammonia		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Un-ionized Ammonia	0.02	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.001
Nitrate		10.6	4.89	5.64	8.44	10.0	4.96	5.48	8.47
Nitrite		0.06	<0.03	0.04	0.09	0.06	<0.03	0.04	0.10
Total Phosphorus	0.03*	**0.181**	**0.054**	**0.159**	**0.156**	**0.170**	**0.057**	**0.176**	**0.163**
Phenols	0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001	**0.002**
Arsenic	0.005*	0.001	<0.001	<0.001	<0.001	0.0009	<0.001	<0.001	<0.001
Barium		0.0443	0.045	0.057	0.040	0.0465	0.045	0.061	0.041
Boron	0.200*	0.027	0.037	0.027	0.019	0.028	0.038	0.031	0.017
Cadmium	0.0001*	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	0.0089**	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003
Copper	0.005	**0.010**	0.003	0.004	0.003	0.005	0.002	0.005	0.003
Iron	0.3	**2.01**	0.18	**2.24**	**0.67**	**1.93**	0.20	**2.99**	**1.04**
Lead	0.003*	0.001	<0.001	0.002	<0.001	0.001	<0.001	0.002	<0.001
Mercury	0.0002	<0.00001	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001
Zinc	0.02*	0.013	<0.005	0.013	0.005	0.012	<0.005	0.016	0.006
Benzene (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Tillsonburg Landfill							
		TB-SW3				TB-SW4			
		20-Mar-23	17-Oct-23	4-Apr-24	12-Mar-25	20-Mar-23	17-Oct-23	4-Apr-24	12-Mar-25
pH (field - pH units)		8.20	6.82	7.79	7.47	7.41	7.13	6.76	8.25
Conductivity (field - µS/cm)		338	784	584	763	1000	985	937	877
Temperature (field - °C)		9.00	11.00	7.12	2.21	3.93	11.75	6.17	3.61
Dissolved Oxygen (field)	4-7 (temp dependent)	5.31	**4.21**	**3.68**	13.94	6.75	10.32	**4.94**	14.10
Flow Rate (L/s)		2	1	1	<1	1	1	1	<1
pH (lab - pH units)	6.5 - 8.5	8.17	7.72	8.36	8.16	7.58	8.10	8.17	8.02
Conductivity (lab - µS/cm)		566	819	575	773	979	975	882	884
Total Dissolved Solids		391	537	354	426	666	620	269	466
Chemical Oxygen Demand		10	12	<8	13	25	21	22	18
Biological Oxygen Demand		<4	6	<4	<4	<4	<4	7	5
Total Suspended Solids		1670	6	34	54	74	42	16	88
Alkalinity	<75% background	296	399	285	392	554	506	456	465
Chloride		16	18	10	14	21	19	15	12
Sulphate		17	15	14	14	14	8	9	12
TKN		<0.5	<0.5	<0.5	1.2	3.0	2.4	2.0	2.5
Ammonia		<0.1	<0.1	<0.1	0.9	2.1	2.3	1.6	2.1
Un-ionized Ammonia	0.02	<0.003	<0.001	<0.001	0.003	0.006	0.007	0.001	**0.041**
Nitrate		2.41	6.94	3.06	2.49	1.42	3.55	4.84	1.18
Nitrite		<0.03	0.22	<0.03	<0.03	<0.03	0.04	<0.03	<0.03
Total Phosphorus	0.03*	**0.585**	0.015	0.022	0.018	**0.150**	0.007	0.008	**0.048**
Phenols	0.001	<0.001	**0.002**	<0.001	**0.002**	<0.001	<0.001	<0.001	**0.002**
Arsenic	0.005*	0.0037	<0.001	<0.001	<0.001	**0.0066**	0.002	0.002	0.002
Barium		0.084	0.032	0.027	0.075	0.111	0.099	0.090	0.082
Boron	0.200*	0.021	0.014	0.016	**0.217**	**0.341**	**0.370**	**0.309**	**0.220**
Cadmium	0.0001*	**0.0004**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	0.0089**	0.014	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Copper	0.005	**0.023**	0.002	<0.001	0.001	0.004	0.002	<0.001	0.001
Iron	0.3	**11.0**	0.13	0.24	**1.15**	**15.0**	**2.10**	**3.13**	**3.50**
Lead	0.003*	**0.014**	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Mercury	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001
Zinc	0.02*	**0.061**	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	<0.005
Benzene (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (µg/L)	100*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene (µg/L)	0.8*	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride (µg/L)	600*	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Table D-1: Historical Surface Water Chemistry Results
Oxford County Closed Landfill Sites

Parameter	PWQO	Tillsonburg Landfill							
		TB-SW5				TB-SW6			
		20-Mar-23	17-Oct-23	4-Apr-24	12-Mar-25	20-May-23	17-Oct-23	4-Apr-24	12-Mar-25
pH (field - pH units)		8.18	7.50	7.57	7.80				7.85
Conductivity (field - µS/cm)		738	749	759	784				787
Temperature (field - °C)		4.11	11.45	5.58	3.20	DRY	DRY	DRY	3.71
Dissolved Oxygen (field)	4-7 (temp dependent)	7.43	9.32	5.05	12.14				9.73
Flow Rate (L/s)		20	3	1	<1				<1
pH (lab - pH units)	6.5 - 8.5	8.17	8.07	8.27	8.12				8.11
Conductivity (lab - µS/cm)		743	785	771	784				766
Total Dissolved Solids		503	406	469	403				400
Chemical Oxygen Demand		9	<8	<8	22				15
Biological Oxygen Demand		<4	<4	7	<4				<4
Total Suspended Solids		11	27	30	16				16
Alkalinity	<75% background	322	305	312	275				279
Chloride		47	53	43	64				62
Sulphate		43	41	38	38				35
TKN		<0.5	0.5	0.5	0.7				0.8
Ammonia		<0.1	<0.1	<0.1	0.6				0.7
Un-ionized Ammonia	0.02	<0.002	<0.001	<0.001	0.004				0.006
Nitrate		0.17	0.11	0.33	0.88				0.89
Nitrite		<0.03	<0.03	<0.03	<0.03				<0.03
Total Phosphorus	0.03*	**0.042**	**0.037**	0.022	0.011				0.014
Phenols	0.001	<0.001	<0.001	<0.001	0.001				0.001
Arsenic	0.005*	0.0008	<0.001	<0.001	<0.001				<0.001
Barium		0.115	0.140	0.128	0.084				0.079
Boron	0.200*	**0.247**	0.177	**0.232**	0.172				0.174
Cadmium	0.0001*	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001
Chromium	0.0089**	<0.003	<0.003	<0.003	<0.003				<0.003
Copper	0.005	0.002	0.002	<0.001	<0.001				<0.001
Iron	0.3	**1.00**	**0.89**	**0.82**	**0.45**				**0.41**
Lead	0.003*	<0.001	<0.001	<0.001	<0.001				<0.001
Mercury	0.0002	<0.00001	<0.0001	<0.0001	<0.0001				<0.0001
Zinc	0.02*	0.005	<0.005	<0.005	<0.005				<0.005
Benzene (µg/L)	100*	<0.5	<0.5	<0.5	<0.5				<0.5
1,4 - Dichlorobenzene (µg/L)	4	<0.5	<0.5	<0.5	<0.5				<0.5
Dichloromethane (µg/L)	100*	<0.5	<0.5	<0.5	<0.5				<0.5
Toluene (µg/L)	0.8*	<0.5	<0.5	<0.5	<0.5				<0.5
Vinyl Chloride (µg/L)	600*	<0.2	<0.2	<0.2	<0.2				<0.2

Notes:
- All concentrations are mg/L, unless otherwise noted.
- Un-ionized ammonia concentration calculated based on the fraction of NH_3 (f) in the total ammonia.
  where: f = 1/(10^{pKa-pH})+1)
  pKa=0.09018 + 2729.92/T
  T = ambient water temperature in Kelvin (K = C + 273.16)
- Bold values exceed the PWQO.
- PWQO - Provincial Water Quality Objectives (July 1994 with updates)
- * indicates an interim PWQO.
- ** indicates PWQO for Chromium III
- <value - parameter not detected above associated laboratory reported detection limit
- dry - sampling location dry at the time of sampling
- - or blank - parameter not analysed during sampling event

Figure D-1A
Time-Concentration Graph - Surface Water - Chloride
Blandford-Blenheim Landfill Site

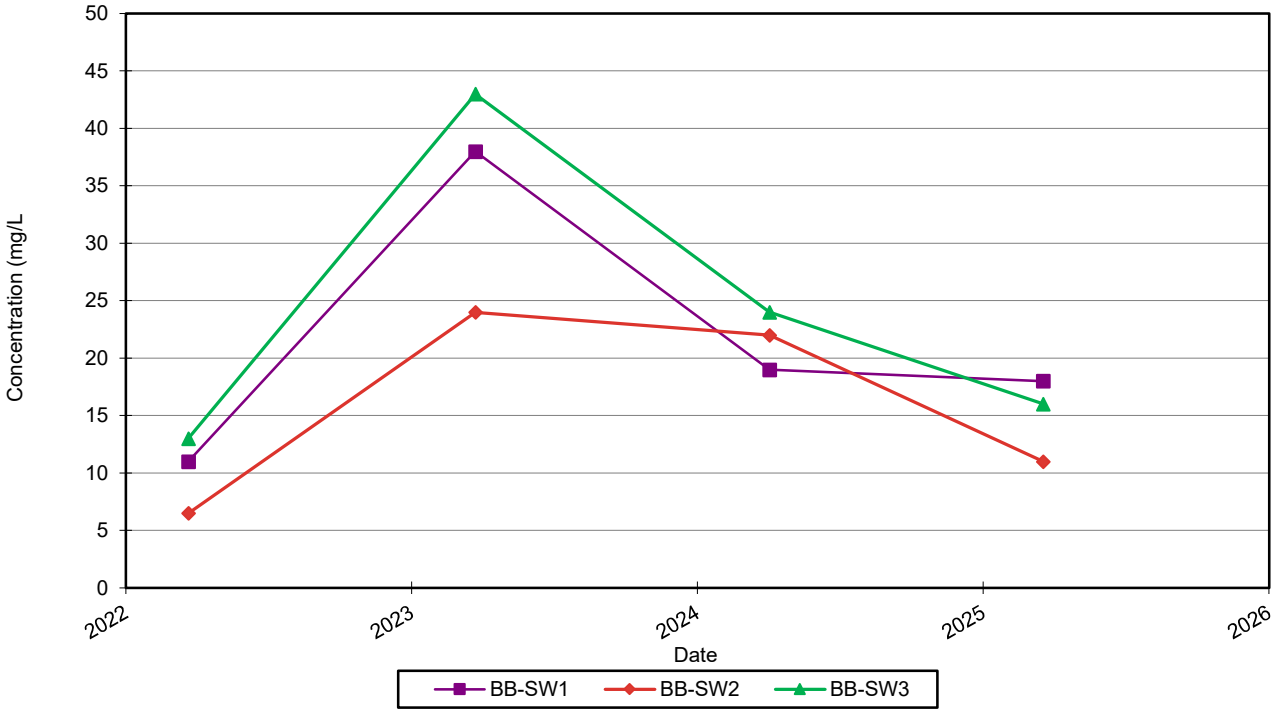


Figure D-1B
Time-Concentration Graph - Surface Water - Boron
Blandford-Blenheim Landfill Site

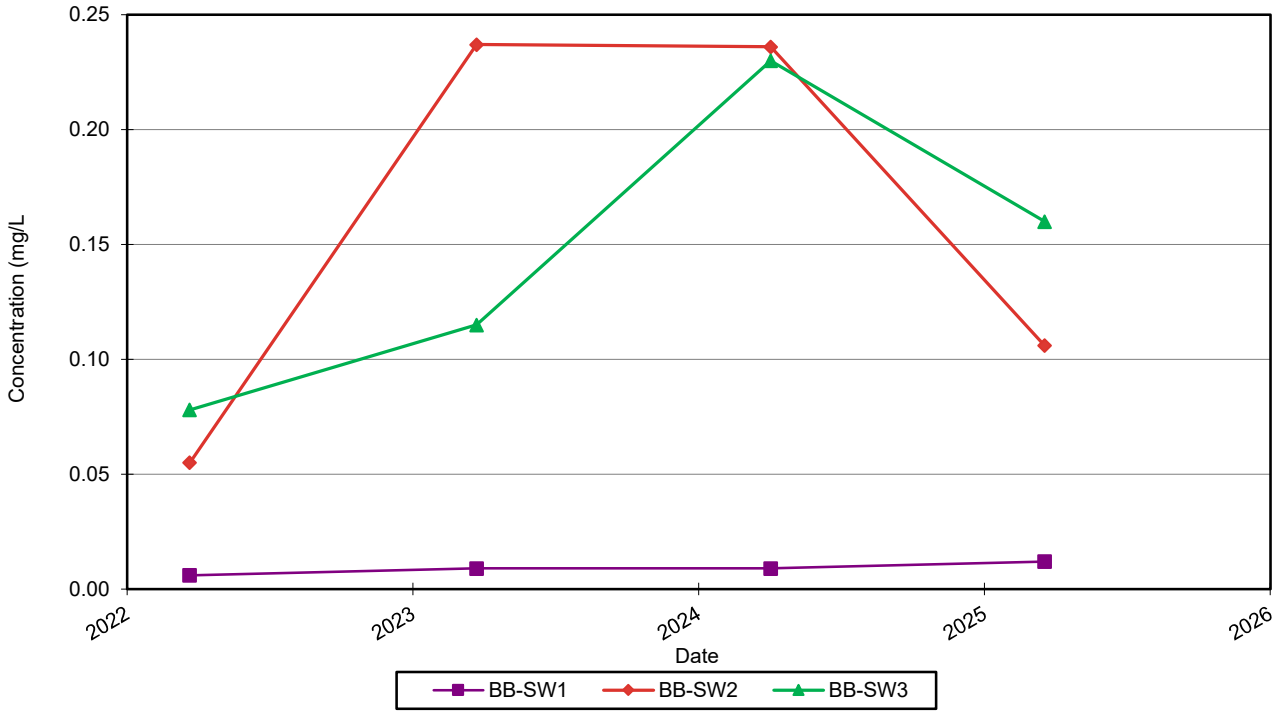


Figure D-1C
Time-Concentration Graph - Surface Water - Iron
Blandford-Blenheim Landfill Site

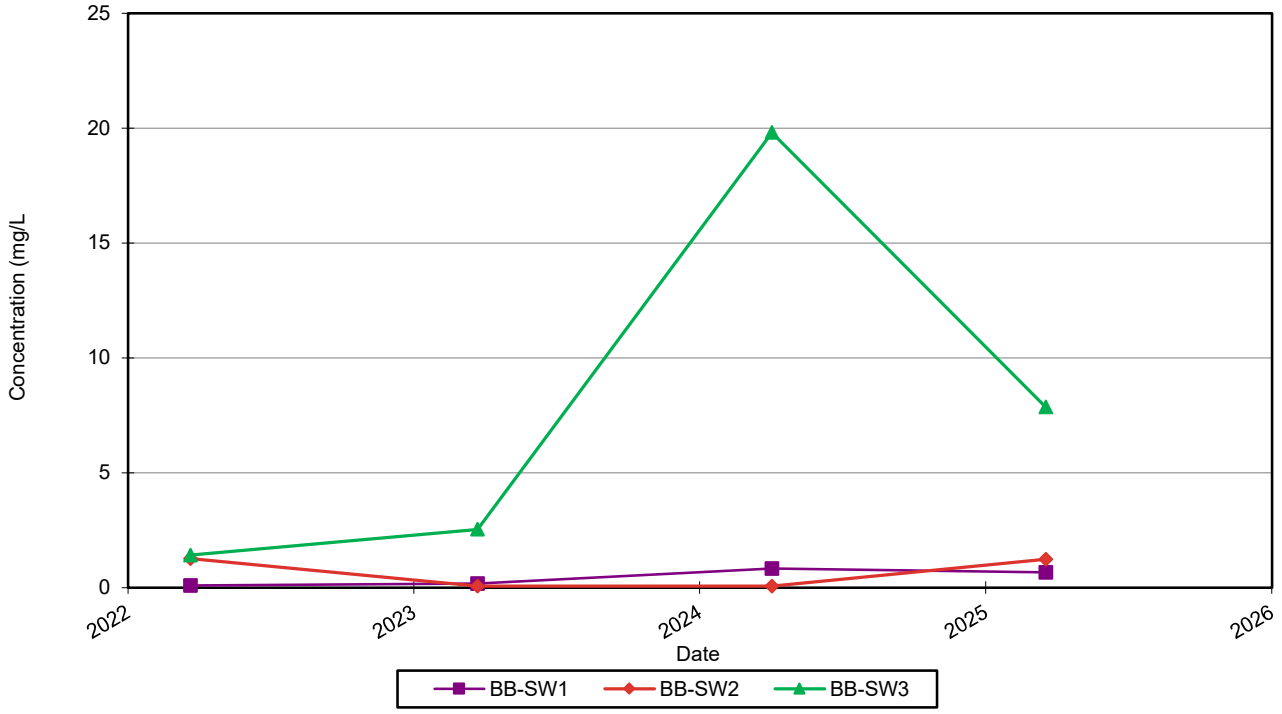


Figure D-1D
Time-Concentration Graph - Surface Water - Alkalinity
Blandford-Blenheim Landfill Site

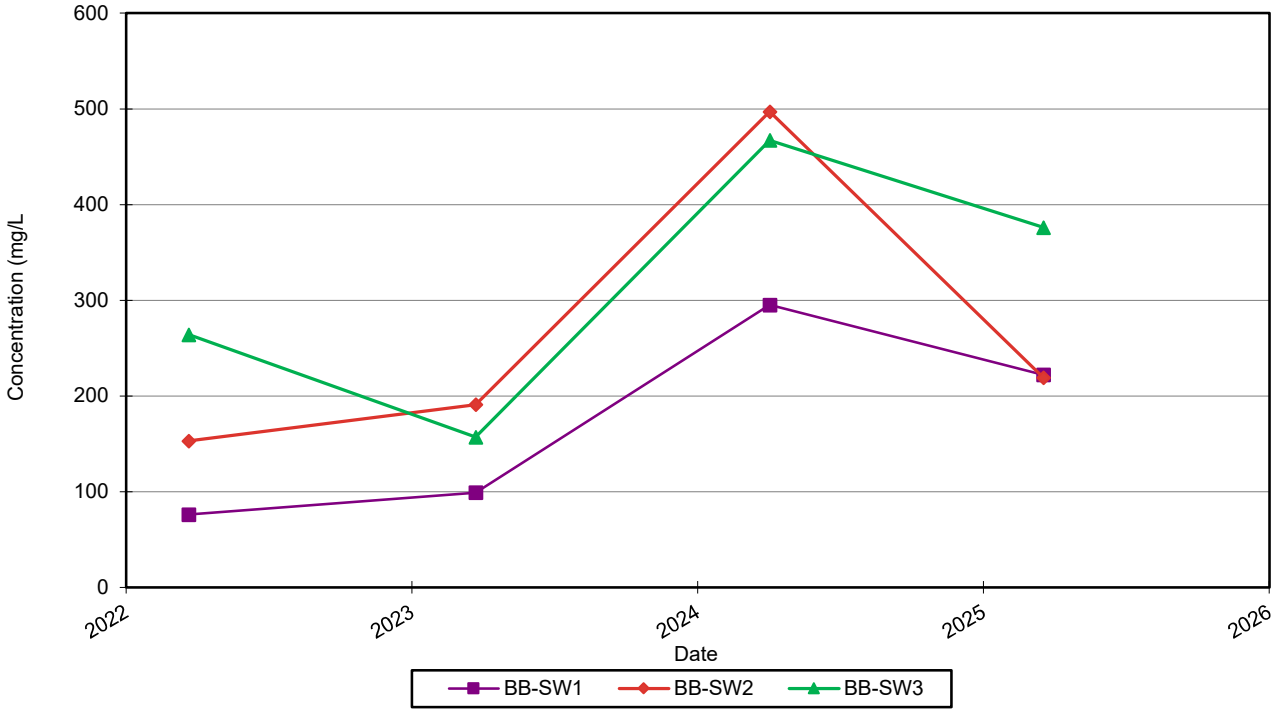


Figure D-1E
Time-Concentration Graph - Surface Water - Ammonia
Blandford-Blenheim Landfill Site

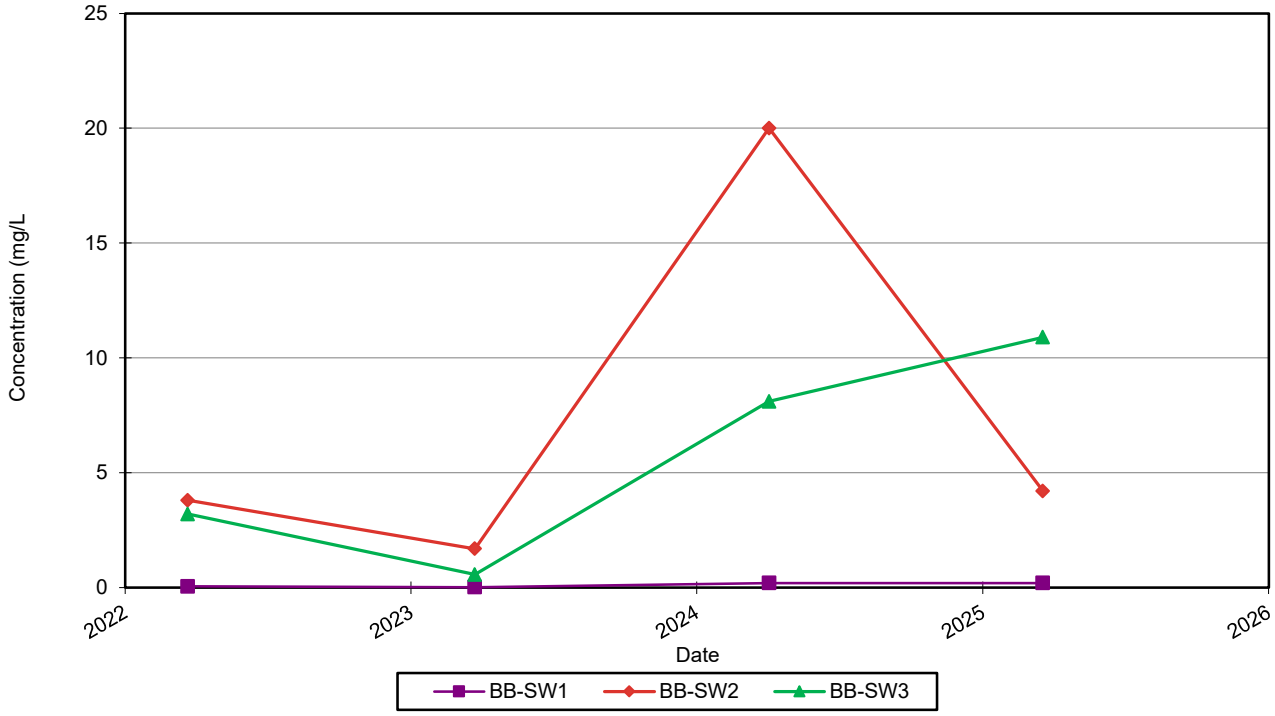


Figure D-1F
Time-Concentration Graph - Surface Water - TKN
Blandford-Blenheim Landfill Site

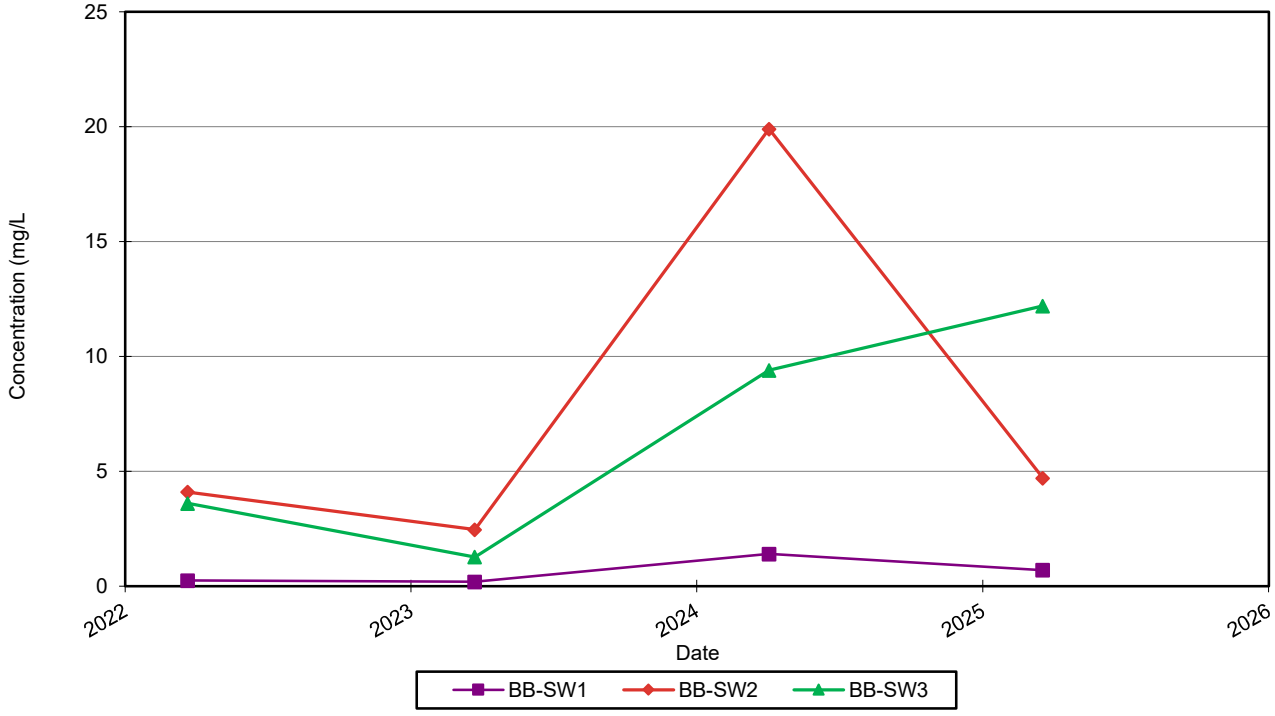


Figure D-2A
Time-Concentration Graph - Surface Water - Chloride
Tillsonburg Landfill Site

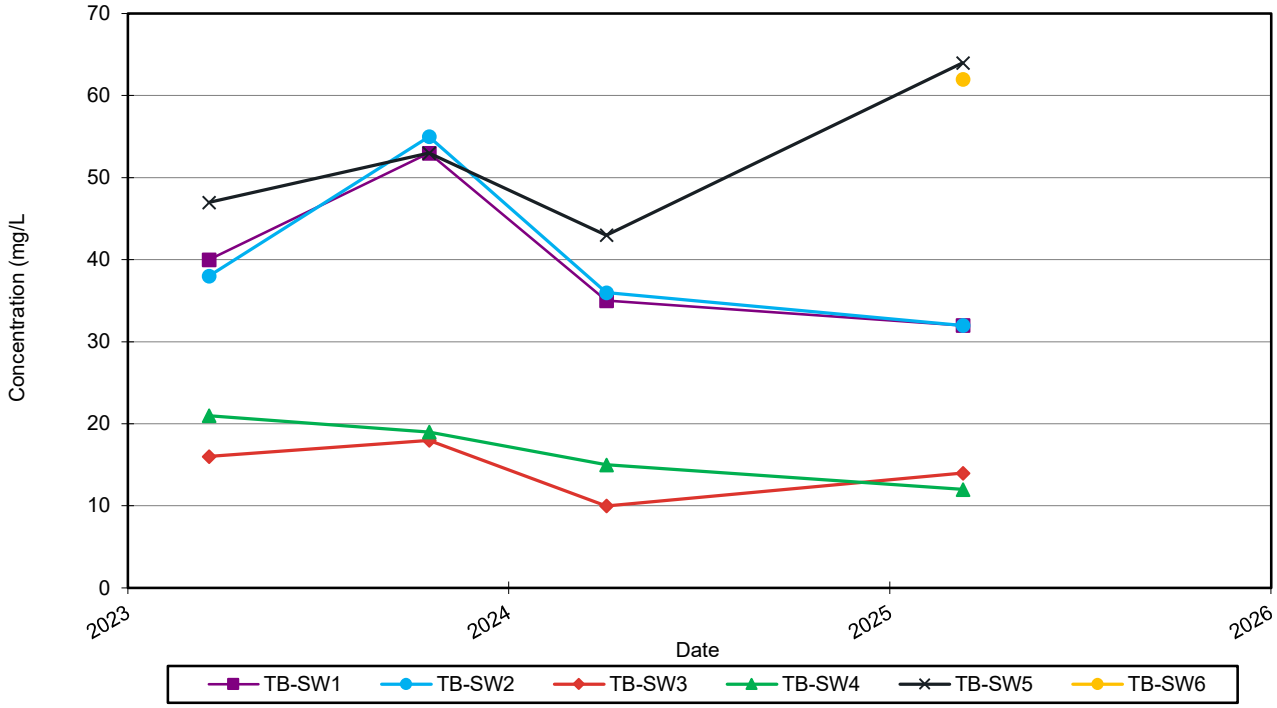


Figure D-2B
Time-Concentration Graph - Surface Water - Boron
Tillsonburg Landfill Site

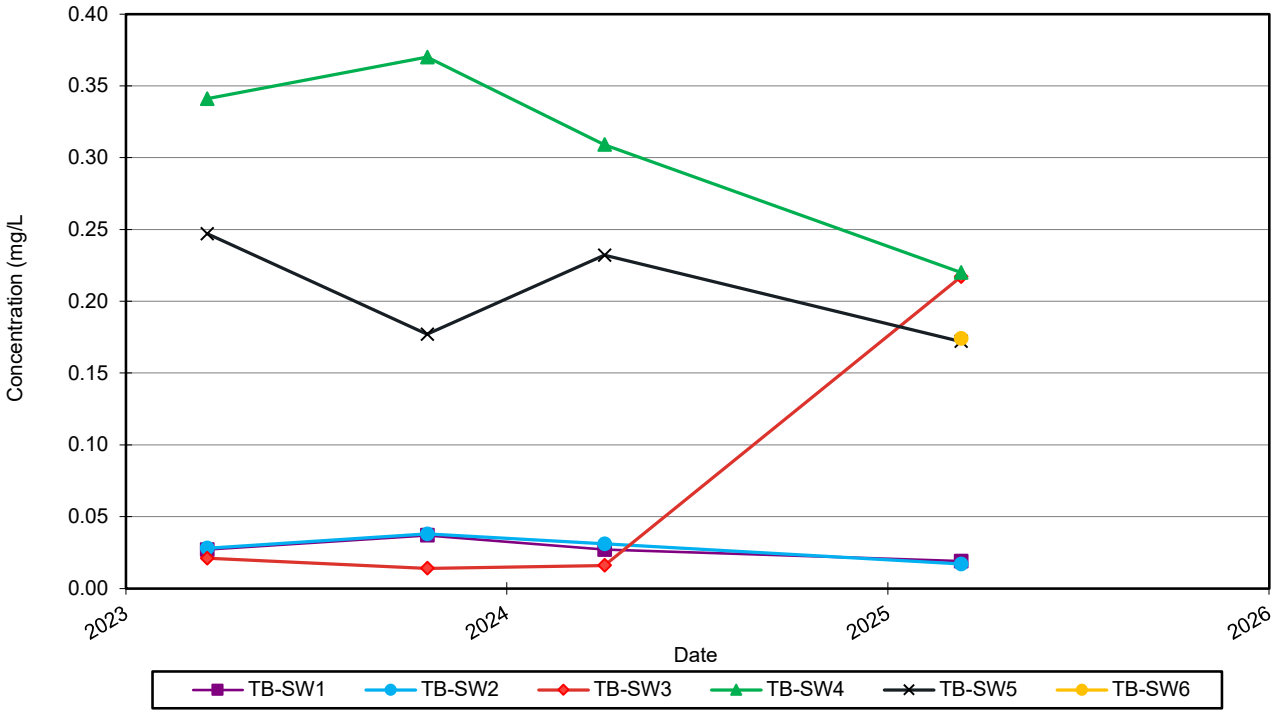


Figure D-2C
Time-Concentration Graph - Surface Water - Iron
Tillsonburg Landfill Site

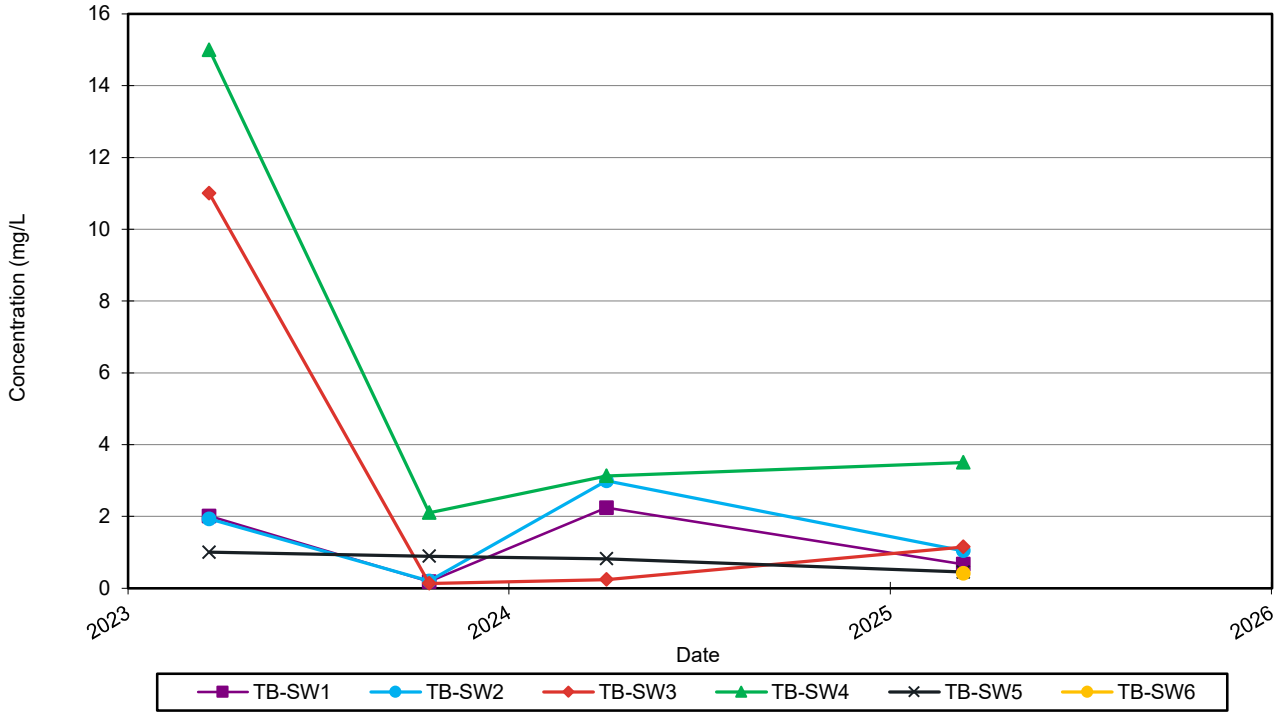


Figure D-2D
Time-Concentration Graph - Surface Water - Alkalinity
Tillsonburg Landfill Site

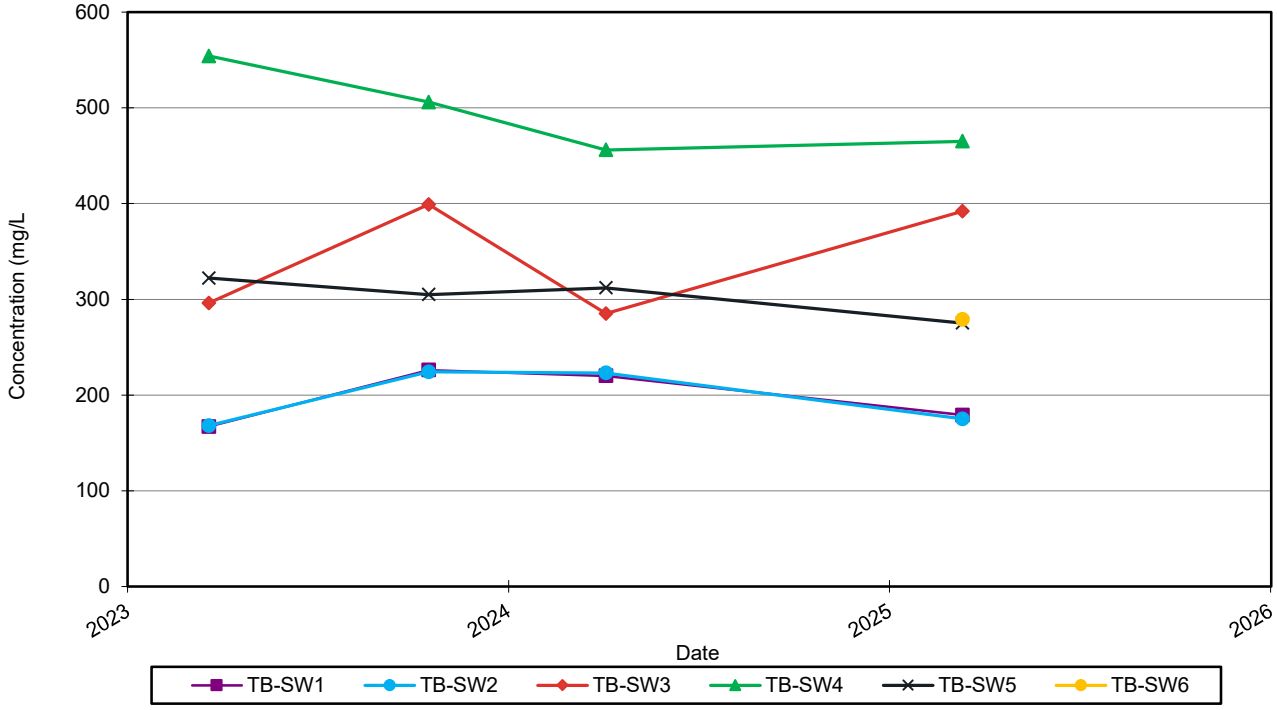


Figure D-2E
Time-Concentration Graph - Surface Water - Ammonia
Tillsonburg Landfill Site

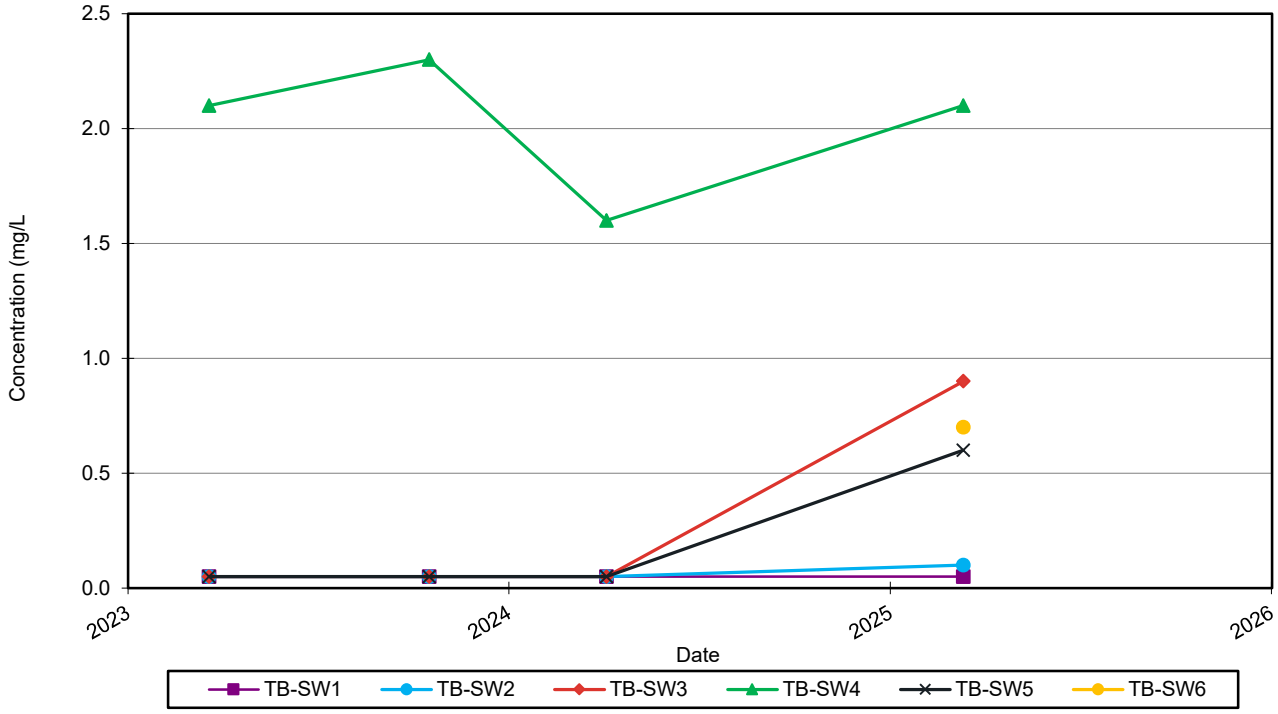
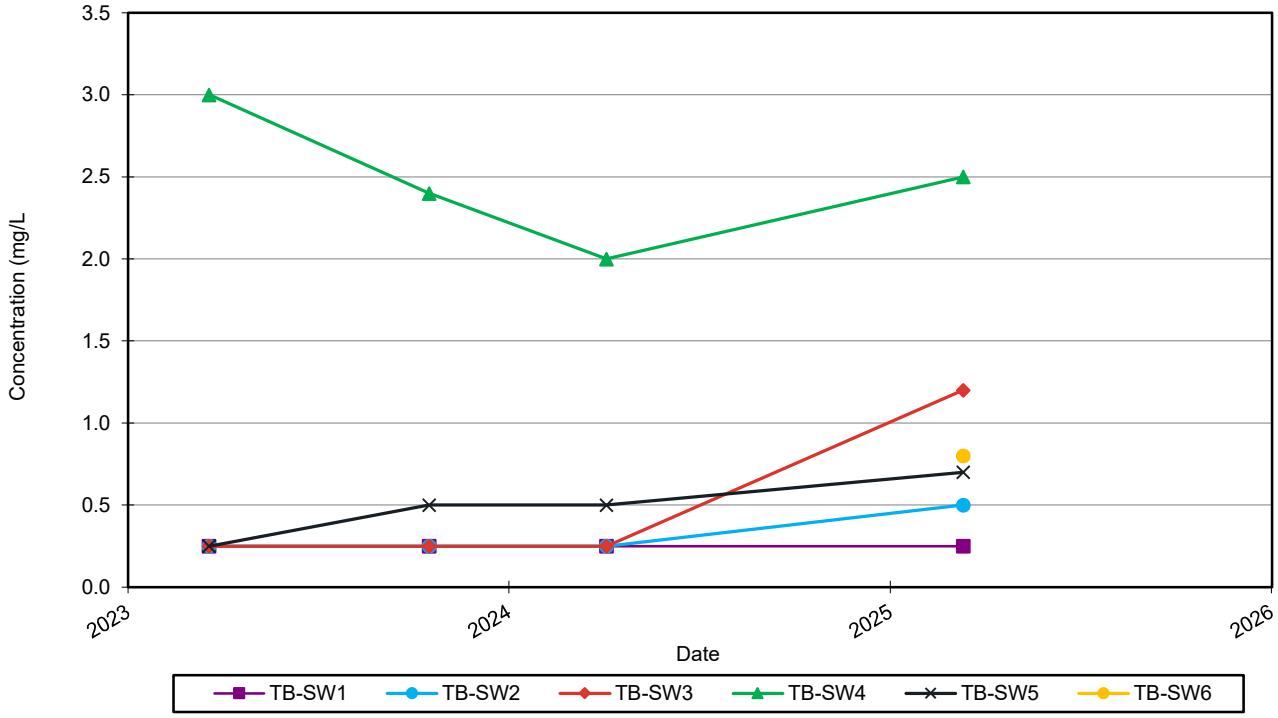


Figure D-2F
Time-Concentration Graph - Surface Water - TKN
Tillsonburg Landfill Site



APPENDIX E

Historical Landfill Gas Measurements and Water Level Elevations

Table E-1
Historic Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Blandford-Blenheim Landfill								
BB-GP1	15-Feb-22	0	0.00	304.95	4.24	300.71	302.68	No
	13-Jul-22	0	0.00	304.95	4.18	300.77	302.68	No
	18-Oct-22	0	0.00	304.95	4.84	300.11	302.68	No
	12-Dec-22	0	0.00	304.95	5.08	299.87	302.68	No
	8-Feb-23	0	0.00	304.95	4.99	299.96	302.68	No
	4-Apr-23	0	0.00	304.95	4.32	300.63	302.68	No
	4-Jul-23	0	0.00	304.95	4.90	300.05	302.68	No
	4-Dec-23	0	0.00	304.95	4.71	300.24	302.68	No
	26-Apr-24	0	0.00	304.95	3.90	301.05	302.68	No
	2-Jul-24	0	0.00	304.95	4.30	300.65	302.68	No
	18-Oct-24	0	0.00	304.95	4.45	300.50	302.68	No
	20-Dec-24	0	0.00	304.95	4.79	300.16	302.68	No
	19-Mar-25	0	0.00	304.95	4.43	300.52	302.68	No
	15-Jul-25	0	0.00	304.95	4.31	300.64	302.68	No
	8-Dec-25	0	0.00	304.95	4.85	300.10	302.68	No
BB-MW1	15-Feb-22	0	0.00	300.08	2.41	297.67	293.55	Yes
	11-Apr-22	-	-	300.08	2.36	297.72	293.55	Yes
	13-Jul-22	0	0.00	300.08	2.47	297.61	293.55	Yes
	18-Oct-22	0	0.00	300.08	2.93	297.15	293.55	Yes
	12-Dec-22	0	0.00	300.08	2.71	297.37	293.55	Yes
	8-Feb-23	0	0.00	300.08	2.56	297.52	293.55	Yes
	4-Apr-23	0	0.00	300.08	2.27	297.81	293.55	Yes
	4-Jul-23	0	0.00	300.08	2.48	297.60	293.55	Yes
	4-Dec-23	0	0.00	300.08	2.30	297.78	293.55	Yes
	26-Apr-24	0	0.00	300.08	2.38	297.70	293.55	Yes
	2-Jul-24	0	0.00	300.08	2.29	297.79	293.55	Yes
	18-Oct-24	0	0.00	300.08	2.67	297.41	293.55	Yes
	20-Dec-24	0	0.00	300.08	2.53	297.55	293.55	Yes
	19-Mar-25	0	0.00	300.08	2.33	297.75	293.55	Yes
	28-Apr-25	-	-	300.08	2.48	297.60	293.55	Yes
	15-Jul-25	0	0.00	300.08	2.36	297.72	293.55	Yes
	8-Dec-25	0	0.00	300.08	2.57	297.51	293.55	Yes

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Table E-1
Historic Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Blandford-Blenheim Landfill								
BB-MW2	15-Feb-22	0	0.00	303.88	4.40	299.48	296.52	Yes
	11-Apr-22	-	-	303.88	3.99	299.89	296.52	Yes
	13-Jul-22	0	0.00	303.88	4.43	299.45	296.52	Yes
	18-Oct-22	0	0.00	303.88	4.94	298.94	296.52	Yes
	12-Dec-22	0	0.00	303.88	5.03	298.85	296.52	Yes
	8-Feb-23	0	0.00	303.88	4.90	298.98	296.52	Yes
	4-Apr-23	0	0.00	303.88	4.26	299.62	296.52	Yes
	4-Jul-23	0	0.00	303.88	4.82	299.06	296.52	Yes
	4-Dec-23	0	0.00	303.88	4.69	299.19	296.52	Yes
	26-Apr-24	0	0.00	303.88	4.06	299.82	296.52	Yes
	2-Jul-24	0	0.00	303.88	3.83	300.05	296.52	Yes
	18-Oct-24	0	0.00	303.88	4.55	299.33	296.52	Yes
	20-Dec-24	0	0.00	303.88	4.65	299.23	296.52	Yes
	19-Mar-25	0	0.00	303.88	4.34	299.54	296.52	Yes
	28-Apr-25	-	-	303.88	4.10	299.78	296.52	Yes
	15-Jul-25	0	0.00	303.88	3.91	299.97	296.52	Yes
	8-Dec-25	0	0.00	303.88	4.68	299.20	296.52	Yes
BB-MW3	15-Feb-22	0	0.00	305.22	4.52	300.70	298.02	Yes
	11-Apr-22	-	-	305.22	4.07	301.15	298.02	Yes
	13-Jul-22	0	0.00	305.22	4.56	300.66	298.02	Yes
	18-Oct-22	0	0.00	305.22	5.20	300.02	298.02	Yes
	12-Dec-22	0	0.00	305.22	5.42	299.80	298.02	Yes
	8-Feb-23	0	0.00	305.22	5.34	299.88	298.02	Yes
	4-Apr-23	0	0.00	305.22	4.67	300.55	298.02	Yes
	4-Jul-23	0	0.00	305.22	5.20	300.02	298.02	Yes
	4-Dec-23	0	0.00	305.22	5.00	300.22	298.02	Yes
	26-Apr-24	0	0.00	305.22	4.26	300.96	298.02	Yes
	2-Jul-24	0	0.00	305.22	4.05	301.17	298.02	Yes
	18-Oct-24	0	0.00	305.22	4.79	300.43	298.02	Yes
	20-Dec-24	0	0.00	305.22	5.08	300.14	298.02	Yes
	19-Mar-25	0	0.00	305.22	4.76	300.46	298.02	Yes
	28-Apr-25	-	-	305.22	4.41	300.81	298.02	Yes
	15-Jul-25	0	0.00	305.22	4.10	301.12	298.02	Yes
	8-Dec-25	0	0.00	305.22	5.13	300.09	298.02	Yes

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Table E-1
Historic Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Blandford-Blenheim Landfill								
BB-BH1-1	15-Feb-22	0	0.00	303.52	4.75	298.77	N/A	N/A
	11-Apr-22	-	-	303.52	5.94	297.58	N/A	N/A
	13-Jul-22	0	0.00	303.52	4.47	299.05	N/A	N/A
	18-Oct-22	0	0.00	303.52	6.58	296.94	N/A	N/A
	12-Dec-22	0	0.00	303.52	4.90	298.62	N/A	N/A
	8-Feb-23	0	0.00	303.52	4.98	298.54	N/A	N/A
	4-Apr-23	0	0.00	303.52	4.99	298.53	N/A	N/A
	4-Jul-23	0	0.00	303.52	4.98	298.54	N/A	N/A
	4-Dec-23	0	0.00	303.52	4.98	298.54	N/A	N/A
	26-Apr-24	0	0.00	303.52	4.60	298.92	N/A	N/A
	2-Jul-24	0	0.00	303.52	4.58	298.94	N/A	N/A
	18-Oct-24	0	0.00	303.52	4.66	298.86	N/A	N/A
	20-Dec-24	0	0.00	303.52	4.84	298.68	N/A	N/A
	19-Mar-25	0	0.00	303.52	4.89	298.63	N/A	N/A
	28-Apr-25	-	-	303.52	4.09	299.43	N/A	N/A
	15-Jul-25	0	0.00	303.52	4.02	299.50	N/A	N/A
	8-Dec-25	0	0.00	303.52	4.99	298.53	N/A	N/A
BB-BH1-2	15-Feb-22	0	0.00	303.50	4.36	299.14	N/A	N/A
	11-Apr-22	-	-	303.50	4.10	299.40	N/A	N/A
	13-Jul-22	0	0.00	303.50	4.16	299.34	N/A	N/A
	18-Oct-22	0	0.00	303.50	4.51	298.99	N/A	N/A
	12-Dec-22	0	0.00	303.50	4.41	299.09	N/A	N/A
	8-Feb-23	0	0.00	303.50	4.67	298.83	N/A	N/A
	4-Apr-23	0	0.00	303.50	3.95	299.55	N/A	N/A
	4-Jul-23	0	0.00	303.50	4.56	298.94	N/A	N/A
	4-Dec-23	0	0.00	303.50	4.35	299.15	N/A	N/A
	26-Apr-24	0	0.00	303.50	3.73	299.77	N/A	N/A
	2-Jul-24	0	0.00	303.50	3.70	299.80	N/A	N/A
	18-Oct-24	0	0.00	303.50	3.82	299.68	N/A	N/A
	20-Dec-24	0	0.00	303.50	-	-	N/A	N/A
	19-Mar-25	0	0.00	303.50	4.26	299.24	N/A	N/A
	28-Apr-25	-	-	303.50	3.93	299.57	N/A	N/A
	15-Jul-25	0	0.00	303.50	3.88	299.62	N/A	N/A
	8-Dec-25	0	0.00	303.50	4.36	299.14	N/A	N/A

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Table E-1
Historic Landfill Gas Measurements and Water Level Elevations
Oxford County Closed Landfills

Well ID	Date	% LEL	Relative Pressure (in H20)	Measuring Point (masl)	Water Level (mbMP)	Groundwater Elevation (masl)	Top of Screen Elevation (masl)	Well Screen Submerged
Otterville Landfill								
OT-MW1	21-Feb-23	-	-	251.54	7.75	243.79	243.44	Yes
	5-Apr-23	0	0.00	251.54	7.20	244.34	243.44	Yes
	17-Oct-23	0	0.00	251.54	7.44	244.10	243.44	Yes
	4-Apr-24	0	0.00	251.54	7.06	244.48	243.44	Yes
	18-Oct-24	0	0.00	251.54	7.54	244.00	243.44	Yes
	20-Dec-24	0	0.00	251.54	7.55	243.99	243.44	Yes
	9-Apr-25	0	0.00	251.54	7.49	244.05	243.44	Yes
	15-Jul-25	0	0.00	251.54	7.58	243.96	243.44	Yes
	8-Dec-25	0	0.00	251.54	7.65	243.89	243.44	Yes
OT-MW2	21-Feb-23	-	-	251.74	7.08	244.66	243.85	Yes
	5-Apr-23	0	0.00	251.74	6.62	245.12	243.85	Yes
	17-Oct-23	0	0.00	251.74	6.79	244.95	243.85	Yes
	4-Apr-24	0	0.00	251.74	6.20	245.54	243.85	Yes
	18-Oct-24	0	0.00	251.74	6.75	244.99	243.85	Yes
	20-Dec-24	0	0.00	251.74	7.02	244.72	243.85	Yes
	9-Apr-25	0	0.00	251.74	6.89	244.85	243.85	Yes
	15-Jul-25	0	0.00	251.74	6.99	244.75	243.85	Yes
	8-Dec-25	0	0.00	251.74	7.09	244.65	243.85	Yes
OT-MW3	22-Feb-23	-	-	255.64	10.18	245.46	245.81	No
	5-Apr-23	0	0.00	255.64	9.62	246.02	245.81	Yes
	17-Oct-23	0	0.00	255.64	9.99	245.65	245.81	No
	4-Apr-24	0	0.00	255.64	9.45	246.19	245.81	Yes
	18-Oct-24	0	0.00	255.64	9.92	245.72	245.81	No
	20-Dec-24	0	0.00	255.64	10.20	245.44	245.81	No
	9-Apr-25	0	0.00	255.64	10.07	245.57	245.81	No
	15-Jul-25	0	0.00	255.64	10.26	245.38	245.81	No
	8-Dec-25	0	0.00	255.64	10.30	245.34	245.81	No

Notes:
LEL - Lower Explosive Limit for methane in air
in H20 - inches of water
masl - metres above sea level
mbMP - metres below measuring point (top of pipe)
NA - not applicable

Figure E-1
Groundwater Hydrograph
Blandford-Blenheim Landfill Site

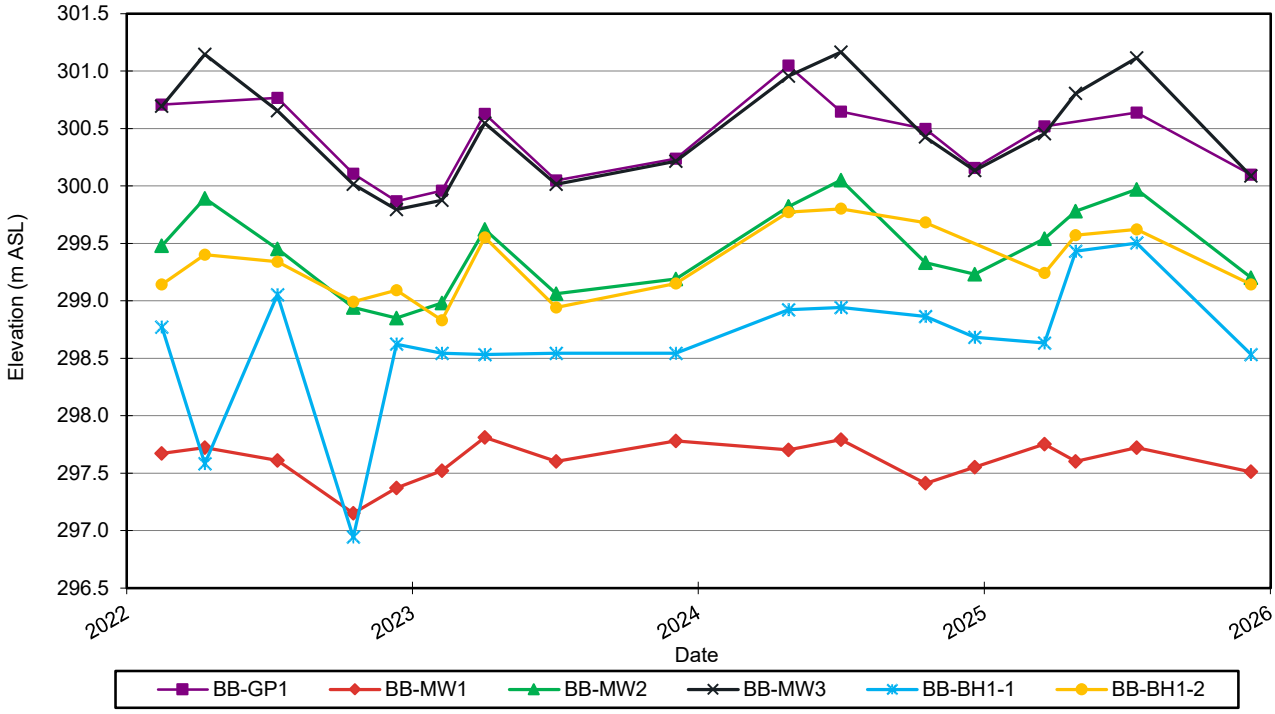
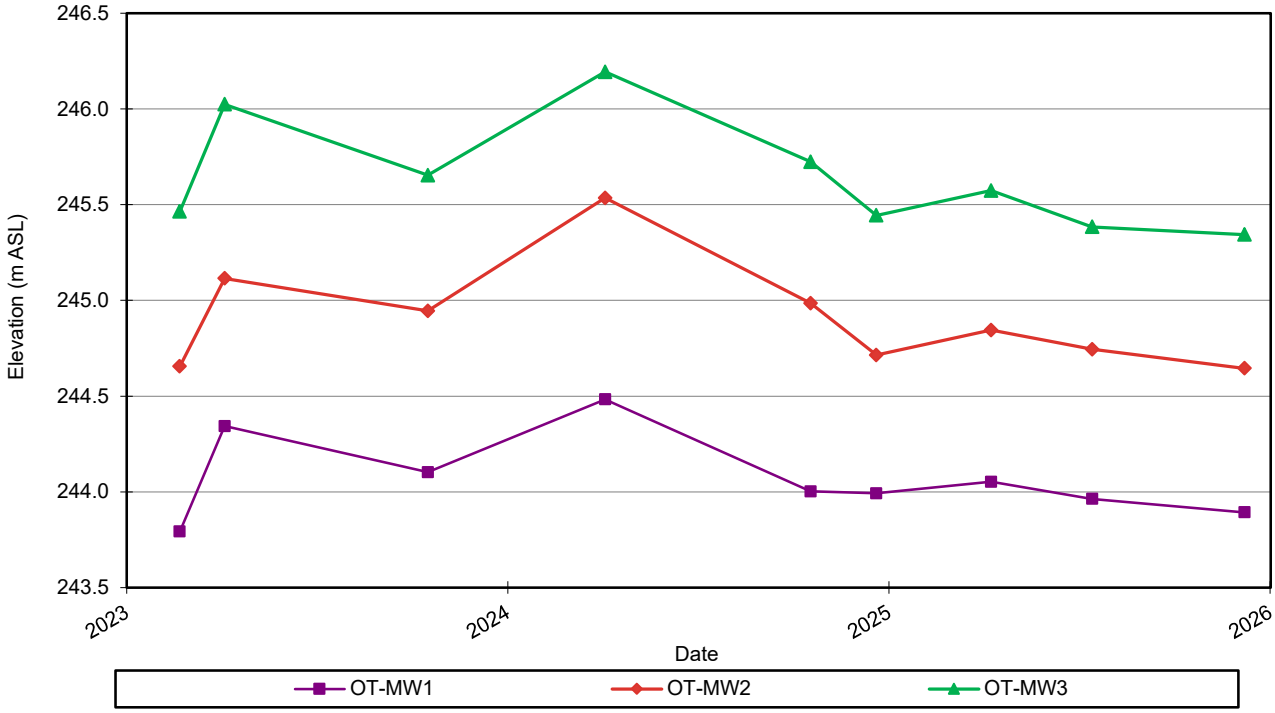


Figure E-2
Groundwater Hydrograph
Otterville Landfill Site



APPENDIX F

Laboratory Certificates of Analysis

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

WSP Canada Inc.
Attn : Albert Siertsema

1821 Provincial Road, Unit 10, Windsor
Canada, N8W 5V7
Phone: 905-687-1771 x 240, Fax:

Project : C A0024089.4861-03, Tillsonburg Landfill Site SW

20-March-2025

Date Rec. : 13 March 2025
LR Report: **CA40089-MAR25**
Reference: CA0024089.4861-03, Albert Siertsema

Copy: 1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: TB-SW1	8: TB-SW2	9: TB-SW3	10: TB-SW4	11: TB-SW5
Sample Date & Time							12-Mar-25 13:45	12-Mar-25 13:00	12-Mar-25 11:00	12-Mar-25 10:50	12-Mar-25 11:45
Temp Upon Receipt [°C]	***	***	***	***	***	***	***	***	***	***	***
BOD5 [mg/L]	14-Mar-25	17:34	19-Mar-25	13:33	2	---	< 4	< 4	< 4	5	< 4
pH [No unit]	14-Mar-25	08:20	14-Mar-25	14:16	0.05	---	8.03	8.02	8.16	8.02	8.12
Conductivity [uS/cm]	14-Mar-25	08:20	14-Mar-25	14:16	2	---	499	534	773	884	784
TDS [mg/L]	14-Mar-25	15:46	17-Mar-25	13:58	30	---	269	291	426	466	403
TSS [mg/L]	14-Mar-25	07:48	14-Mar-25	15:14	2	---	89	76	54	88	16
Hardness [mg/L as CaCO3]	17-Mar-25	10:16	20-Mar-25	08:10	0.05	---	244	241	397	449	317
Alkalinity [mg/L as CaCO3]	14-Mar-25	08:20	14-Mar-25	14:16	2	---	179	175	392	465	275
Cl [mg/L]	14-Mar-25	09:02	14-Mar-25	13:18	1	---	32	32	14	12	64
SO4 [mg/L]	14-Mar-25	09:00	14-Mar-25	13:18	2	---	30	29	14	12	38
NO2 [as N mg/L]	14-Mar-25	22:54	18-Mar-25	15:14	0.03	---	0.09	0.10	< 0.03	< 0.03	< 0.03
NO3 [as N mg/L]	14-Mar-25	22:54	18-Mar-25	15:14	0.06	---	8.44	8.47	2.49	1.18	0.88
NO2+NO3 [as N mg/L]	14-Mar-25	22:54	18-Mar-25	15:14	0.06	---	8.53	8.57	2.49	1.18	0.88
NH3+NH4 [as N mg/L]	14-Mar-25	21:09	17-Mar-25	10:58	0.1	---	< 0.1	0.1	0.9	2.1	0.6
TKN [as N mg/L]	17-Mar-25	20:37	18-Mar-25	15:11	0.5	---	< 0.5	0.5	1.2	2.5	0.7
4AAP-Phenolics [mg/L]	14-Mar-25	10:52	17-Mar-25	09:55	0.001	---	0.001	0.002	0.002	0.002	0.001
Hg (diss) [mg/L]	18-Mar-25	15:11	18-Mar-25	15:14	0.0000	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
P (tot) [mg/L]	17-Mar-25	10:16	20-Mar-25	08:10	0.003	---	0.156	0.163	0.018	0.048	0.011
COD [mg/L]	14-Mar-25	08:45	19-Mar-25	13:33	8	---	14	9	13	18	22

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.4861-03, Tillsonburg Landfill Site SW
LR Report : CA10089-MAR25

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: TB-SW1	8: TB-SW2	9: TB-SW3	10: TB-SW4	11: TB-SW5
As (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.002	0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001
Ba (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.002	0.002	0.040	0.041	0.075	0.082	0.084
B (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.002	---	0.019	0.017	0.217	0.220	0.172
Cd (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cr (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.003	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Cu (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.001	0.001	0.003	0.003	0.001	0.001	< 0.001
Fe (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.01	0.01	0.67	1.04	1.15	3.50	0.45
Zn (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.005	0.005	0.005	0.006	< 0.005	< 0.005	< 0.005
Pb (tot) [mg/L]	17-Mar-25	10:16	18-Mar-25	23:18	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzene [ug/L]	14-Mar-25	13:18	17-Mar-25	10:02	0.5	---	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene [µg/L]	14-Mar-25	13:18	17-Mar-25	10:02	0.5	---	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichloromethane [µg/L]	14-Mar-25	13:18	17-Mar-25	10:02	0.5	---	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene [ug/L]	14-Mar-25	13:18	17-Mar-25	10:02	0.5	---	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl Chloride [µg/L]	14-Mar-25	13:18	17-Mar-25	10:02	0.2	---	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Analysis	12: TB-SW6	13: TB-SW DUP	14: Trip Blank
Sample Date & Time	12-Mar-25 12:30	12-Mar-25	12-Mar-25
Temp Upon Receipt [°C]	***	***	***
BOD5 [mg/L]	< 4	< 4	---
pH [No unit]	8.11	8.16	---
Conductivity [uS/cm]	766	777	---
TDS [mg/L]	400	417	---
TSS [mg/L]	16	16	---
Hardness [mg/L as CaCO3]	313	305	---
Alkalinity [mg/L as CaCO3]	279	272	---
Cl [mg/L]	62	64	---
SO4 [mg/L]	35	38	---
NO2 [as N mg/L]	< 0.03	< 0.03	---
NO3 [as N mg/L]	0.89	0.88	---
NO2+NO3 [as N mg/L]	0.89	0.88	---
NH3+NH4 [as N mg/L]	0.7	0.6	---
TKN [as N mg/L]	0.8	0.8	---
4AAP-Phenolics [mg/L]	0.001	0.001	---
Hg (diss) [mg/L]	< 0.0001	< 0.0001	---
P (tot) [mg/L]	0.014	0.020	---

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Analysis	12: TB-SW6	13: TB-SW DUP	14: Trip Blank
COD [mg/L]	15	10	---
As (tot) [mg/L]	< 0.001	< 0.001	---
Ba (tot) [mg/L]	0.079	0.077	---
B (tot) [mg/L]	0.174	0.166	---
Cd (tot) [mg/L]	< 0.0001	< 0.0001	---
Cr (tot) [mg/L]	< 0.003	< 0.003	---
Cu (tot) [mg/L]	< 0.001	< 0.001	---
Fe (tot) [mg/L]	0.41	0.43	---
Zn (tot) [mg/L]	< 0.005	< 0.005	---
Pb (tot) [mg/L]	< 0.001	< 0.001	---
Benzene [ug/L]	< 0.5	---	< 0.5
1,4-Dichlorobenzene [µg/L]	< 0.5	---	< 0.5
Dichloromethane [µg/L]	< 0.5	---	< 0.5
Toluene [ug/L]	< 0.5	---	< 0.5
Vinyl Chloride [µg/L]	< 0.2	---	< 0.2

Temperature of Sample upon Receipt: 3 degrees C

Method Descriptions

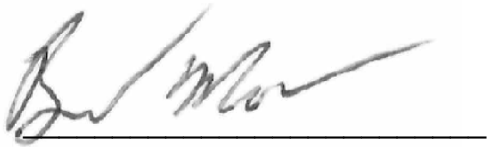
Parameter	Description	SGS Method Code	PALA
1,4-Dichlorobenzene	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
4AAP-Phenolics	phenol by Skalar - surface waters	ME-CA-[ENV]SFA-LAK-AN-006	N
Alkalinity	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006	N
Ammonia+Ammonium (N)	NH3+NH4 by Skalar - solution	ME-CA-[ENV]SFA-LAK-AN-007	N
Arsenic (total)	Asby ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Barium (total)	Ba by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Benzene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Biochemical Oxygen Demand (BOD5)	Biochemical Oxygen Demand (BOD5)	ME-CA-[ENV]EWL-LAK-AN-007	N
Boron (total)	B by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Cadmium (total)	Cd by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Chemical Oxygen Demand	Chemical Oxygen Demand	ME-CA-[ENV]EWL-LAK-AN-009	N
Chloride	Chloride by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Chromium (total)	Cr by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Conductivity	Conductivity by Conductivity Meter	ME-CA-[ENV]EWL-LAK-AN-006	Y

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Parameter	Description	SGS Method Code	PALA
Copper (total)	Cu by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Dichloromethane	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Hardness	Hardness (CaCO3) by ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	N
Iron (total)	Fe by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Lead (total)	Pb by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Mercury (dissolved)	Hg solutions by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	N
Nitrate (as N)	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	Y
Nitrite (as N)	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
pH	pH - solution	ME-CA-[ENV]EWL-LAK-AN-006	Y
Phosphorus (total)	P by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	N
Sulphate	Sulphate by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Toluene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Total Dissolved Solids	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005	N
Total Kjeldahl Nitrogen	Tot. kjeldahl Nitrogen by Skalar	ME-CA-[ENV]SFA-LAK-AN-002	N
Total Suspended Solids	Total Suspended Solids	ME-CA-[ENV]EWL-LAK-AN-004	N
Vinyl Chloride	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Zinc (total)	Zn by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y

Accreditation Descriptions

PALA:
SGS Canada Industries & Environment conforms to the requirements of ISO/IEC 17025:2005 for specific tests as listed on their scope of accreditation found at https://www.ceaeq.gouv.qc.ca/documents/publications/listes.htm#labo_accr. Analytes and SGS Method Codes marked with a “Y” in the “PALA” column in the table denote ISO/IEC17025:2005 accreditation



Brad Moore Hon. B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00004052626

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.4861-03, Tillsonburg Landfill Site SW
LR Report : CA10089-MAR25

Quality Control Report

Organic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Volatile Organics - QCBatchID: GCM0192-MAR25														
1,4-Dichlorobenzene	0.5	ug/L	<0.5			ND	30	97	60	130	95	50	140	
Benzene	0.5	ug/L	<0.5			ND	30	100	60	130	95	50	140	
Dichloromethane	0.5	ug/L	<0.5			ND	30	97	60	130	92	50	140	
Toluene	0.5	ug/L	<0.5			ND	30	99	60	130	93	50	140	
Vinyl Chloride	0.2	ug/L	<0.2			ND	30	105	50	140	98	50	140	

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Alkalinity - QCBatchID: EWL0258-MAR25														
Alkalinity	2	mg/L as Ca	< 2			0	20	109	80	120	NA			
Ammonia by SFA - QCBatchID: SKA0122-MAR25														
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			ND	10	100	90	110	96	75	125	
Anions by discrete analyzer - QCBatchID: DIO8013-MAR25														
Chloride	1	mg/L	<1			ND	20	98	80	120	100	75	125	
Sulphate	2	mg/L	<2			1	20	101	80	120	99	75	125	
Anions by IC - QCBatchID: DIO0294-MAR25														
Nitrate (as N)	0.06	mg/L	<0.06			0	20	101	90	110	83	75	125	
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA			
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	99	90	110	100	75	125	
Anions by IC - QCBatchID: DIO0296-MAR25														
Nitrate (as N)	0.06	mg/L	<0.06			ND	20	101	90	110	102	75	125	
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA			
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	99	90	110	106	75	125	
Biochemical Oxygen Demand - QCBatchID: BOD0026-MAR25														
Biochemical Oxygen Demand (BOD5)	2	mg/L	< 2			2	30	107	70	130	119	70	130	
Chemical Oxygen Demand - QCBatchID: EWL0261-MAR25														
Chemical Oxygen Demand	8	mg/L	<8			4	20	102	80	120	89	75	125	
Conductivity - QCBatchID: EWL0258-MAR25														
Conductivity	2	uS/cm	< 2			0	20	99	90	110	NA			
Mercury by CVAAS - QCBatchID: EHG0025-MAR25														
Mercury (dissolved)	0.0001	mg/L	< 0.00001			ND	20	87	80	120	123	70	130	
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0122-MAR25														
Arsenic (total)	0.001	mg/L	<0.0002			11	20	95	90	110	100	70	130	

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.4861-03, Tillsonburg Landfill Site SW
LR Report : CA10089-MAR25

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Barium (total)	0.002	mg/L	<0.00008			1	20	95	90	110	102	70	130
Boron (total)	0.002	mg/L	<0.002			0	20	96	90	110	97	70	130
Cadmium (total)	0.0001	mg/L	<0.000003			2	20	96	90	110	101	70	130
Chromium (total)	0.003	mg/L	<0.00008			ND	20	97	90	110	95	70	130
Copper (total)	0.001	mg/L	<0.001			1	20	95	90	110	83	70	130
Iron (total)	0.01	mg/L	<0.007			6	20	102	90	110	125	70	130
Lead (total)	0.001	mg/L	<0.00009			1	20	96	90	110	93	70	130
Phosphorus (total)	0.003	mg/L	<0.003			0	20	102	90	110	NV	70	130
Zinc (total)	0.005	mg/L	<0.002			3	20	97	90	110	93	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0150-MAR25													
Phosphorus (total)	0.003	mg/L	<0.003			ND	20	102	90	110	NV	70	130
pH - QCBatchID: EWL0258-MAR25													
pH	0.05	No unit	NA			0		100			NA		
Phenols by SFA - QCBatchID: SKA0118-MAR25													
4AAP-Phenolics	0.001	mg/L	<0.001			ND	10	101	80	120	88	75	125
Solids Analysis - QCBatchID: EWL0280-MAR25													
Total Dissolved Solids	30	mg/L	<30			2	20	99	80	120	NA		
Suspended Solids - QCBatchID: EWL0232-MAR25													
Total Suspended Solids	2	mg/L	< 2			1	10	100	90	110	NA		
Total Nitrogen - QCBatchID: SKA0136-MAR25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			1	10	101	90	110	88	75	125

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW

26-March-2025

WSP Canada Inc.
Attn : Albert Siertsema

1821 Provincial Road, Unit 10, Windsor
Canada, N8W 5V7
Phone: 905-687-1771 x 240, Fax:

Date Rec. : 20 March 2025
LR Report: **CA40150-MAR25**
Reference: CA0024089.4861-03, Albert Siertsema

Copy: 1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL
Sample Date & Time					
Temp Upon Receipt [°C]	***	***	***	***	***
BOD5 [mg/L]	21-Mar-25	17:55	26-Mar-25	12:09	2
pH [No unit]	22-Mar-25	07:41	24-Mar-25	13:46	0.05
Conductivity [uS/cm]	22-Mar-25	07:41	24-Mar-25	13:46	2
TDS [mg/L]	21-Mar-25	14:23	24-Mar-25	15:32	30
TSS [mg/L]	21-Mar-25	14:49	24-Mar-25	14:40	2
Hardness [mg/L as CaCO3]	24-Mar-25	16:25	25-Mar-25	10:18	0.05
Alkalinity [mg/L as CaCO3]	22-Mar-25	07:41	24-Mar-25	13:46	2
Cl [mg/L]	25-Mar-25	12:57	25-Mar-25	15:26	1
SO4 [mg/L]	25-Mar-25	12:55	25-Mar-25	15:26	2
NO2 [as N mg/L]	22-Mar-25	16:42	24-Mar-25	13:52	0.03
NO3 [as N mg/L]	22-Mar-25	16:42	24-Mar-25	13:52	0.06
NO2+NO3 [as N mg/L]	22-Mar-25	16:42	24-Mar-25	13:52	0.06
NH3+NH4 [as N mg/L]	21-Mar-25	21:37	25-Mar-25	12:34	0.1
TKN [as N mg/L]	21-Mar-25	17:06	25-Mar-25	14:00	0.5
4AAP-Phenolics [mg/L]	21-Mar-25	11:15	24-Mar-25	10:26	0.001
Hg (diss) [mg/L]	25-Mar-25	09:47	25-Mar-25	10:18	0.00001
P (tot) [mg/L]	25-Mar-25	15:27	26-Mar-25	11:12	0.003
COD [mg/L]	21-Mar-25	10:00	26-Mar-25	12:10	8
As (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.002
Ba (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.002
B (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.002
Cd (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.0001
Cr (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.003
Cu (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.001
Fe (tot) [mg/L]	24-Mar-25	16:25	26-Mar-25	11:13	0.01

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA40150-MAR25

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL
Zn (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.005
Pb (tot) [mg/L]	24-Mar-25	16:25	25-Mar-25	13:33	0.00001
Benzene [ug/L]	21-Mar-25	12:04	24-Mar-25	11:14	0.5
1,4-Dichlorobenzene [µg/L]	21-Mar-25	12:04	24-Mar-25	11:14	0.5
Dichloromethane [µg/L]	21-Mar-25	12:04	24-Mar-25	11:14	0.5
Toluene [ug/L]	21-Mar-25	12:04	24-Mar-25	11:14	0.5
Vinyl Chloride [µg/L]	21-Mar-25	12:04	24-Mar-25	11:14	0.2

Analysis	6: Client Limits	7: PWQO	8: BB-SW1	9: BB-SW2
Sample Date & Time			19-Mar-25 13:00	19-Mar-25 10:30
Temp Upon Receipt [°C]	***	***	***	***
BOD5 [mg/L]	---	---	< 4	< 4
pH [No unit]	---	8.5	7.72	7.86
Conductivity [uS/cm]	---	---	462	446
TDS [mg/L]	---	---	271	229
TSS [mg/L]	---	---	3	4
Hardness [mg/L as CaCO3]	---	---	282	231
Alkalinity [mg/L as CaCO3]	---	---	222	219
Cl [mg/L]	---	---	18	11
SO4 [mg/L]	---	---	< 2	6
NO2 [as N mg/L]	---	---	< 0.03	< 0.03
NO3 [as N mg/L]	---	---	< 0.06	0.22
NO2+NO3 [as N mg/L]	---	---	< 0.06	0.22
NH3+NH4 [as N mg/L]	---	---	0.2	4.2
TKN [as N mg/L]	---	---	0.7	4.7
4AAP-Phenolics [mg/L]	---	0.001	0.004*	0.004*
Hg (diss) [mg/L]	0.0001	---	< 0.0001	< 0.0001
P (tot) [mg/L]	---	0.01	0.054*	0.052*
COD [mg/L]	---	---	36	23
As (tot) [mg/L]	0.001	0.005	0.002	< 0.001
Ba (tot) [mg/L]	0.002	---	0.033	0.038
B (tot) [mg/L]	---	0.2	0.012	0.106
Cd (tot) [mg/L]	0.0001	0.0001	< 0.0001	< 0.0001
Cr (tot) [mg/L]	0.003	0.001	< 0.003	< 0.003
Cu (tot) [mg/L]	0.001	0.001	0.001	< 0.001
Fe (tot) [mg/L]	0.01	0.3	0.66*	1.23*
Zn (tot) [mg/L]	0.005	0.02	0.006	< 0.005
Pb (tot) [mg/L]	0.001	0.001	< 0.001	< 0.001
Benzene [ug/L]	---	100	< 0.5	< 0.5

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA40150-MAR25

Analysis	6: Client Limits	7: PWQO	8: BB-SW1	9: BB-SW2
1,4-Dichlorobenzene [µg/L]	---	4	< 0.5	< 0.5
Dichloromethane [µg/L]	---	---	< 0.5	< 0.5
Toluene [ug/L]	---	0.8	< 0.5	< 0.5
Vinyl Chloride [µg/L]	---	600	< 0.2	< 0.2

Analysis	10: BB-SW3	11: SW-Dup	12: Trip Blank
Sample Date & Time	19-Mar-25 11:00	19-Mar-25	
Temp Upon Receipt [°C]	***	***	***
BOD5 [mg/L]	< 4	5	---
pH [No unit]	7.62	7.62	---
Conductivity [uS/cm]	734	742	---
TDS [mg/L]	371	369	---
TSS [mg/L]	17	16	---
Hardness [mg/L as CaCO3]	361	366	---
Alkalinity [mg/L as CaCO3]	376	374	---
Cl [mg/L]	16	15	---
SO4 [mg/L]	10	10	---
NO2 [as N mg/L]	0.04	0.04	---
NO3 [as N mg/L]	0.49	0.49	---
NO2+NO3 [as N mg/L]	0.53	0.53	---
NH3+NH4 [as N mg/L]	10.9	10.9	---
TKN [as N mg/L]	12.2	12.2	---
4AAP-Phenolics [mg/L]	0.004*	0.005*	---
Hg (diss) [mg/L]	< 0.0001	< 0.0001	---
P (tot) [mg/L]	0.061*	0.040*	---
COD [mg/L]	26	21	---
As (tot) [mg/L]	0.001	0.001	---
Ba (tot) [mg/L]	0.075	0.072	---
B (tot) [mg/L]	0.160	0.167	---
Cd (tot) [mg/L]	< 0.0001	< 0.0001	---
Cr (tot) [mg/L]	< 0.003	< 0.003	---
Cu (tot) [mg/L]	< 0.001	0.001	---
Fe (tot) [mg/L]	7.85*	4.35*	---
Zn (tot) [mg/L]	0.013	0.011	---
Pb (tot) [mg/L]	< 0.001	< 0.001	---
Benzene [ug/L]	0.6	---	< 0.5
1,4-Dichlorobenzene [µg/L]	1.1	---	< 0.5
Dichloromethane [µg/L]	< 0.5	---	< 0.5
Toluene [ug/L]	< 0.5	---	< 0.5

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA40150-MAR25

Analysis	10: BB-SW3	11: SW-Dup	12: Trip Blank
Vinyl Chloride [µg/L]	< 0.2	---	< 0.2

Temperature of Sample upon Receipt: 10 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Method Descriptions

Parameter	Description	SGS Method Code	PALA
1,4-Dichlorobenzene	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
4AAP-Phenolics	phenol by Skalar - surface waters	ME-CA-[ENV]SFA-LAK-AN-006	N
Alkalinity	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006	N
Ammonia+Ammonium (N)	NH3+NH4 by Skalar - solution	ME-CA-[ENV]SFA-LAK-AN-007	N
Arsenic (total)	Asby ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Barium (total)	Ba by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Benzene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Biochemical Oxygen Demand (BOD5)	Biochemical Oxygen Demand (BOD5)	ME-CA-[ENV]EWL-LAK-AN-007	N
Boron (total)	B by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Cadmium (total)	Cd by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Chemical Oxygen Demand	Chemical Oxygen Demand	ME-CA-[ENV]EWL-LAK-AN-009	N
Chloride	Chloride by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Chromium (total)	Cr by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Conductivity	Conductivity by Conductivity Meter	ME-CA-[ENV]EWL-LAK-AN-006	Y
Copper (total)	Cu by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Dichloromethane	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Hardness	Hardness (CaCO3) by ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	N
Iron (total)	Fe by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Lead (total)	Pb by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y
Mercury (dissolved)	Hg solutions by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	N
Nitrate (as N)	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	Y
Nitrite (as N)	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
pH	pH - solution	ME-CA-[ENV]EWL-LAK-AN-006	Y
Phosphorus (total)	P by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	N
Sulphate	Sulphate by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Toluene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Total Dissolved Solids	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005	N
Total Kjeldahl Nitrogen	Tot. kjeldahl Nitrogen by Skalar	ME-CA-[ENV]SFA-LAK-AN-002	N
Total Suspended Solids	Total Suspended Solids	ME-CA-[ENV]EWL-LAK-AN-004	N
Vinyl Chloride	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Zinc (total)	Zn by ICP-MS solution	ME-CA-[ENV]SPE-LAK-AN-006	Y

Accreditation Descriptions

PALA:
SGS Canada Industries & Environment conforms to the requirements of ISO/IEC 17025:2005 for specific tests as listed on their scope of accreditation found at https://www.ceaeq.gouv.qc.ca/documents/publications/listes.htm#labo_accr. Analytes and SGS Method Codes marked with a “Y” in the “PALA” column in the table denote ISO/IEC17025:2005 accreditation

OnLine LIMS

0004057947

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA40150-MAR25

Maarit Wolfe, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0004057947

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA48150-MAR25

Quality Control Report

Organic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Volatile Organics - QCBatchID: GCM0294-MAR25														
1,4-Dichlorobenzene	0.5	ug/L	<0.5			ND	30	105	60	130	100	50	140	
Benzene	0.5	ug/L	<0.5			ND	30	101	60	130	100	50	140	
Dichloromethane	0.5	ug/L	<0.5			ND	30	100	60	130	97	50	140	
Toluene	0.5	ug/L	<0.5			ND	30	101	60	130	98	50	140	
Vinyl Chloride	0.2	ug/L	<0.2			ND	30	106	50	140	102	50	140	

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Alkalinity - QCBatchID: EWL0428-MAR25														
Alkalinity	2	mg/L as Ca	< 2			0	20	100	80	120	NA			
Ammonia by SFA - QCBatchID: SKA0202-MAR25														
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			0	10	99	90	110	93	75	125	
Anions by discrete analyzer - QCBatchID: DIO8027-MAR25														
Chloride	1	mg/L	<1			2	20	91	80	120	84	75	125	
Sulphate	2	mg/L	<2			0	20	100	80	120	110	75	125	
Anions by IC - QCBatchID: DIO0483-MAR25														
Nitrate (as N)	0.06	mg/L	<0.06			0	20	98	90	110	100	75	125	
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA			
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	98	90	110	101	75	125	
Biochemical Oxygen Demand - QCBatchID: BOD0040-MAR25														
Biochemical Oxygen Demand (BOD5)	2	mg/L	< 2			17	30	103	70	130	122	70	130	
Chemical Oxygen Demand - QCBatchID: EWL0408-MAR25														
Chemical Oxygen Demand	8	mg/L	<8			20	20	80	80	120	96	75	125	
Conductivity - QCBatchID: EWL0428-MAR25														
Conductivity	2	uS/cm	< 2			0	20	99	90	110	NA			
Mercury by CVAAS - QCBatchID: EHG0046-MAR25														
Mercury (dissolved)	0.0001	mg/L	< 0.00001			ND	20	117	80	120	102	70	130	
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0199-MAR25														
Arsenic (total)	0.001	mg/L	<0.0002			ND	20	102	90	110	102	70	130	
Barium (total)	0.002	mg/L	<0.00008			2	20	104	90	110	100	70	130	
Boron (total)	0.002	mg/L	<0.002			ND	20	99	90	110	97	70	130	
Cadmium (total)	0.0001	mg/L	<0.000003			16	20	101	90	110	99	70	130	
Chromium (total)	0.003	mg/L	<0.00008			14	20	103	90	110	100	70	130	

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.4861-03, Blandford-Blenheim landfill SW
LR Report : CA40150-MAR25

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Copper (total)	0.001	mg/L	<0.001			5	20	100	90	110	103	70	130
Iron (total)	0.01	mg/L	<0.007			ND	20	103	90	110	125	70	130
Lead (total)	0.001	mg/L	<0.00009			ND	20	104	90	110	100	70	130
Phosphorus (total)	0.003	mg/L	<0.003			0	20	99	90	110	NV	70	130
Zinc (total)	0.005	mg/L	<0.002			0	20	102	90	110	92	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0212-MAR25													
Iron (total)	0.01	mg/L	<0.007			ND	20	99	90	110	75	70	130
Phosphorus (total)	0.003	mg/L	<0.003			ND	20	99	90	110	NV	70	130
pH - QCBatchID: EWL0428-MAR25													
pH	0.05	No unit	NA			0		100			NA		
Phenols by SFA - QCBatchID: SKA0188-MAR25													
4AAP-Phenolics	0.001	mg/L	<0.001			ND	10	107	80	120	93	75	125
Solids Analysis - QCBatchID: EWL0419-MAR25													
Total Dissolved Solids	30	mg/L	<30			0	20	100	80	120	NA		
Suspended Solids - QCBatchID: EWL0422-MAR25													
Total Suspended Solids	2	mg/L	< 2			0	10	97	90	110	NA		
Total Nitrogen - QCBatchID: SKA0183-MAR25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			3	10	102	90	110	101	75	125
Total Nitrogen - QCBatchID: SKA0203-MAR25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			ND	10	101	90	110	101	75	125

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW

17-April-2025

WSP Canada Inc.
Attn : Albert Siertsema

1821 Provincial Road, Unit 10, Windsor
Canada, N8W 5V7
Phone: 905-687-1771 x 240, Fax:

Date Rec. : 10 April 2025
LR Report: **CA15073-APR25**
Reference: C A0024089.5055-03, Albert Siertsema

Copy: 1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: OT-GW1
Sample Date & Time							09-Apr-25 10:00
Temp Upon Receipt [°C]	***	***	***	***	***	***	***
BOD5 [mg/L]	11-Apr-25	13:03	16-Apr-25	11:48	2	---	6
pH [No unit]	11-Apr-25	16:12	14-Apr-25	12:57	0.05	---	8.12
Conductivity [uS/cm]	11-Apr-25	16:12	14-Apr-25	12:57	2	---	603
Alkalinity [mg/L as CaCO3]	11-Apr-25	16:12	14-Apr-25	12:57	2	---	213
TDS [mg/L]	11-Apr-25	14:50	14-Apr-25	12:19	30	---	403
COD [mg/L]	14-Apr-25	09:34	16-Apr-25	11:48	8	---	8
DOC [mg/L]	11-Apr-25	14:29	14-Apr-25	14:57	1.0	---	2.3
Cl [mg/L]	14-Apr-25	12:01	14-Apr-25	15:23	1	---	22
SO4 [mg/L]	14-Apr-25	11:53	14-Apr-25	15:23	2	---	42
NO2 [as N mg/L]	14-Apr-25	11:55	16-Apr-25	09:55	0.03	---	< 0.03
NO3 [as N mg/L]	14-Apr-25	11:55	16-Apr-25	09:55	0.06	---	8.25
NO2+NO3 [as N mg/L]	14-Apr-25	11:55	16-Apr-25	09:55	0.06	---	8.25
NH3+NH4 [as N mg/L]	14-Apr-25	21:47	16-Apr-25	13:41	0.1	---	< 0.1
TKN [as N mg/L]	14-Apr-25	16:35	16-Apr-25	12:38	0.5	---	< 0.5
TSS [mg/L]	15-Apr-25	07:56	16-Apr-25	14:50	2	---	246000
4AAP-Phenolics [mg/L]	14-Apr-25	14:37	16-Apr-25	08:23	0.002	---	< 0.002
Total P [mg/L]	14-Apr-25	15:29	16-Apr-25	11:23	0.03	---	< 0.03
Hg (diss) [mg/L]	14-Apr-25	15:08	14-Apr-25	13:42	0.00001	0.0001	< 0.00001
Ca (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.01	---	101
Mg (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.001	---	20.8
Na (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.01	---	3.72
K (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.009	---	1.46
As (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.0002	0.001	0.0015
Ba (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	2e-05	0.002	0.0556
B (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	---	---	0.013
Cd (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.0001	0.0001	0.000040
Cr (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.003	0.003	0.00140

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW
LR Report : CA15073-APR25

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: OT-GW1
Cu (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.001	0.001	0.006
Fe (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	---	0.01	0.938
Pb (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	1e-05	0.001	0.00263
Mn (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	---	0.002	0.132
Zn (diss) [mg/L]	14-Apr-25	13:37	15-Apr-25	09:05	0.002	0.005	0.009
Benzene [mg/L]	14-Apr-25	09:01	15-Apr-25	14:11	0.5	---	< 0.0005
1,4-Dichlorobenzene [mg/L]	14-Apr-25	09:01	15-Apr-25	14:11	0.5	---	< 0.0005
Dichloromethane [mg/L]	14-Apr-25	09:01	15-Apr-25	14:11	0.5	---	< 0.0005
Toluene [mg/L]	14-Apr-25	09:01	15-Apr-25	14:11	0.5	---	0.0006
Vinyl Chloride [mg/L]	14-Apr-25	09:01	15-Apr-25	14:11	0.2	---	< 0.0002

Analysis	8: OT-GW2	9: OT-GW3	10: OT-Dup	11: Trip Blank
Sample Date & Time	09-Apr-25 11:00	09-Apr-25 11:45	09-Apr-25	09-Apr-25
Temp Upon Receipt [°C]	***	***	***	***
BOD5 [mg/L]	< 4	< 4	< 4	---
pH [No unit]	8.03	8.10	8.05	---
Conductivity [uS/cm]	458	1150	1270	---
Alkalinity [mg/L as CaCO3]	286	306	332	---
TDS [mg/L]	386	740	677	---
COD [mg/L]	< 8	< 8	< 8	---
DOC [mg/L]	1.5	1.1	< 1.0	---
Cl [mg/L]	7	210	220	---
SO4 [mg/L]	7	48	49	---
NO2 [as N mg/L]	< 0.03	< 0.03	< 0.03	---
NO3 [as N mg/L]	1.66	1.31	1.31	---
NO2+NO3 [as N mg/L]	1.66	1.31	1.31	---
NH3+NH4 [as N mg/L]	< 0.1	< 0.1	< 0.1	---
TKN [as N mg/L]	< 0.5	< 0.5	< 0.5	---
TSS [mg/L]	294000	19600	26300	---
4AAP-Phenolics [mg/L]	< 0.002	< 0.002	< 0.002	---
Total P [mg/L]	< 0.03	1.81	1.54	---
Hg (diss) [mg/L]	< 0.00001	< 0.00001	< 0.00001	---
Ca (diss) [mg/L]	75.1	95.9	94.3	---
Mg (diss) [mg/L]	10.5	31.2	31.4	---
Na (diss) [mg/L]	3.42	82.3	86.3	---
K (diss) [mg/L]	0.561	1.49	1.51	---
As (diss) [mg/L]	0.0002	0.0005	0.0005	---
Ba (diss) [mg/L]	0.0224	0.237	0.247	---
B (diss) [mg/L]	0.011	0.010	0.010	---
Cd (diss) [mg/L]	0.000004	0.000003	0.000004	---
Cr (diss) [mg/L]	0.00052	0.00031	0.00028	---
Cu (diss) [mg/L]	< 0.001	< 0.001	< 0.001	---

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW
LR Report : CA15073-APR25

Analysis	8: OT-GW2	9: OT-GW3	10: OT-Dup	11: Trip Blank
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	---
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	---
Mn (diss) [mg/L]	0.00107	0.0129	0.0152	---
Zn (diss) [mg/L]	< 0.002	< 0.002	< 0.002	---
Benzene [mg/L]	< 0.0005	< 0.0005	---	< 0.0005
1,4-Dichlorobenzene [mg/L]	< 0.0005	< 0.0005	---	< 0.0005
Dichloromethane [mg/L]	< 0.0005	< 0.0005	---	< 0.0005
Toluene [mg/L]	0.0006	< 0.0005	---	< 0.0005
Vinyl Chloride [mg/L]	< 0.0002	< 0.0002	---	< 0.0002

Temperature of Sample upon Receipt: 8 degrees C

Method Descriptions

Parameter	Description	SGS Method Code	PALA
1,4-Dichlorobenzene	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
4AAP-Phenolics	phenol by Skalar -solution	ME-CA-[ENV]SFA-LAK-AN-006	N
Alkalinity	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006	N
Ammonia+Ammonium (N)	NH3+NH4 by Skalar - solution	ME-CA-[ENV]SFA-LAK-AN-007	N
Arsenic (dissolved)	As by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Barium (dissolved)	Ba by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Benzene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Biochemical Oxygen Demand (BOD5)	Biochemical Oxygen Demand (BOD5)	ME-CA-[ENV]EWL-LAK-AN-007	N
Boron (dissolved)	B by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Cadmium (dissolved)	Cd by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Calcium (dissolved)	Ca by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Chemical Oxygen Demand	Chemical Oxygen Demand	ME-CA-[ENV]EWL-LAK-AN-009	N
Chloride	Chloride by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Chromium (dissolved)	Cr by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Conductivity	Conductivity by Conductivity Meter	ME-CA-[ENV]EWL-LAK-AN-006	Y
Copper (dissolved)	Cu by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Dichloromethane	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Dissolved Organic Carbon	DOC by Combustion/Oxidation	ME-CA-[ENV]EWL-LAK-AN-023	N
Iron (dissolved)	Fe by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Lead (dissolved)	Pb by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Magnesium (dissolved)	Mg by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Manganese (dissolved)	Mn by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Mercury (dissolved)	Hg solutions by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	N
Nitrate (as N)	Nitrate by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	Y
Nitrite (as N)	Nitrite by Ion Chromatography	ME-CA-[ENV]IC-LAK-AN-001	N
pH	pH - solution	ME-CA-[ENV]EWL-LAK-AN-006	Y
Phosphorus (total)	Total Phos. By Skalar - complete digestion	ME-CA-[ENV]SFA-LAK-AN-003	N
Potassium (dissolved)	K by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	N
Sodium (dissolved)	Na by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Sulphate	Sulphate by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW
LR Report : CA15073-APR25

Parameter	Description	SGS Method Code	PALA
Toluene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Total Dissolved Solids	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005	N
Total Kjeldahl Nitrogen	Tot. kjeldahl Nitrogen by Skalar	ME-CA-[ENV]SFA-LAK-AN-002	N
Total Suspended Solids	Total Suspended Solids	ME-CA-[ENV]EWL-LAK-AN-004	N
Vinyl Chloride	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Zinc (dissolved)	Zn by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y

Accreditation Descriptions

PALA:
SGS Canada Industries & Environment conforms to the requirements of ISO/IEC 17025:2005 for specific tests as listed on their scope of accreditation found at https://www.ceaeq.gouv.qc.ca/documents/publications/listes.htm#labo_accr. Analytes and SGS Method Codes marked with a “Y” in the “PALA” column in the table denote ISO/IEC17025:2005 accreditation

Brad Moore Hon. B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0004083462

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW
LR Report : **CA15073-APR25**

Quality Control Report

Organic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Volatile Organics - QCBatchID: GCM0215-APR25														
1,4-Dichlorobenzene	0.0005	mg/L	<0.0005			ND	30	104	60	130	96	50	140	
Benzene	0.0005	mg/L	<0.0005			ND	30	107	60	130	98	50	140	
Dichloromethane	0.0005	mg/L	<0.0005			ND	30	114	60	130	101	50	140	
Toluene	0.0005	mg/L	<0.0005			ND	30	105	60	130	100	50	140	
Vinyl Chloride	0.0002	mg/L	<0.0002			ND	30	115	50	140	100	50	140	

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
							%		Low	High		Low	High	
Alkalinity - QCBatchID: EWL0284-APR25														
Alkalinity	2	mg/L as Ca	< 2			3	20	98	80	120	NA			
Ammonia by SFA - QCBatchID: SKA0142-APR25														
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			0	10	98	90	110	102	75	125	
Ammonia by SFA - QCBatchID: SKA0156-APR25														
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			2	10	104	90	110	89	75	125	
Anions by discrete analyzer - QCBatchID: DIO8020-APR25														
Chloride	1	mg/L	<1			ND	20	100	80	120	101	75	125	
Sulphate	2	mg/L	<2			0	20	101	80	120	87	75	125	
Anions by IC - QCBatchID: DIO0312-APR25														
Nitrate (as N)	0.06	mg/L	<0.06			0	20	100	90	110	100	75	125	
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA			
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	99	90	110	102	75	125	
Anions by IC - QCBatchID: DIO0356-APR25														
Nitrate (as N)	0.06	mg/L	<0.06			0	20	101	90	110	91	75	125	
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA			
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	99	90	110	97	75	125	
Biochemical Oxygen Demand - QCBatchID: BOD0023-APR25														
Biochemical Oxygen Demand (BOD5)	2	mg/L	< 2			6	30	106	70	130	105	70	130	
Carbon by Combustion/Oxidation - QCBatchID: EWL0279-APR25														
Dissolved Organic Carbon	1.0	mg/L	<1.0			ND	20	98	90	110	96	75	125	
Chemical Oxygen Demand - QCBatchID: EWL0304-APR25														
Chemical Oxygen Demand	8	mg/L	<8			0	20	94	80	120	115	75	125	
Conductivity - QCBatchID: EWL0284-APR25														
Conductivity	2	uS/cm	3			5	20	100	90	110	NA			

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C A0024089.5055-03, Otterville landfill GW

LR Report : **CA15073-APR25**

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Mercury by CVAAS - QCBatchID: EHG0025-APR25													
Mercury (dissolved)	0.00001	mg/L	< 0.00001			ND	20	114	80	120	112	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0143-APR25													
Arsenic (dissolved)	0.0002	mg/L	<0.0002			ND	20	99	90	110	113	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			0	20	98	90	110	92	70	130
Boron (dissolved)	0.002	mg/L	<0.002			ND	20	110	90	110	99	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			ND	20	99	90	110	95	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			1	20	97	90	110	95	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			ND	20	103	90	110	105	70	130
Copper (dissolved)	0.001	mg/L	<0.001			1	20	98	90	110	97	70	130
Iron (dissolved)	0.007	mg/L	<0.007			0	20	97	90	110	100	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	97	90	110	94	70	130
Magnesium (dissolved)	0.001	mg/L	<0.001			2	20	101	90	110	94	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			2	20	100	90	110	92	70	130
Potassium (dissolved)	0.009	mg/L	<0.009			1	20	97	90	110	90	70	130
Sodium (dissolved)	0.01	mg/L	<0.01			2	20	99	90	110	96	70	130
Zinc (dissolved)	0.002	mg/L	<0.002			ND	20	99	90	110	114	70	130
pH - QCBatchID: EWL0284-APR25													
pH	0.05	No unit	NA			0		100			NA		
Phenols by SFA - QCBatchID: SKA0139-APR25													
4AAP-Phenolics	0.002	mg/L	<0.002			ND	10	100	80	120	98	75	125
Phenols by SFA - QCBatchID: SKA0151-APR25													
4AAP-Phenolics	0.002	mg/L	<0.002			ND	10	101	80	120	96	75	125
Phosphorus by SFA - QCBatchID: SKA0143-APR25													
Phosphorus (total)	0.03	mg/L	<0.03			7	10	104	90	110	92	75	125
Phosphorus by SFA - QCBatchID: SKA0153-APR25													
Phosphorus (total)	0.03	mg/L	<0.03			ND	10	104	90	110	87	75	125
Solids Analysis - QCBatchID: EWL0260-APR25													
Total Dissolved Solids	30	mg/L	<30			1	20	101	80	120	NA		
Suspended Solids - QCBatchID: EWL0328-APR25													
Total Suspended Solids	2	mg/L	< 2			1	10	97	90	110	NA		
Suspended Solids - QCBatchID: EWL0351-APR25													
Total Suspended Solids	2	mg/L	< 2			3	10	94	90	110	NA		
Total Nitrogen - QCBatchID: SKA0140-APR25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			0	10	96	90	110	104	75	125
Total Nitrogen - QCBatchID: SKA0155-APR25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			2	10	98	90	110	94	75	125

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim GW

06-May-2025

WSP Canada Inc.
Attn : Albert Siertsema

1821 Provincial Road, Unit 10, Windsor
Canada, N8W 5V7
Phone: 905-687-1771 x 240, Fax:

Date Rec. : 29 April 2025
LR Report: **CA40294-APR25**
Reference: CA0024089.5055-03, Albert Siertsema

Copy: 1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: BB-MW1
Sample Date & Time							28-Apr-25 10:30
Temp Upon Receipt [°C]	***	***	***	***	***	***	***
BOD5 [mg/L]	30-Apr-25	17:06	05-May-25	14:50	2	---	< 4
pH [No unit]	01-May-25	15:13	02-May-25	10:59	0.05	---	7.99
Conductivity [uS/cm]	01-May-25	15:13	02-May-25	10:59	2	---	1040
Alkalinity [mg/L as CaCO3]	01-May-25	15:13	02-May-25	10:59	2	---	491
TDS [mg/L]	30-Apr-25	08:54	02-May-25	08:51	30	---	517*
COD [mg/L]	30-Apr-25	10:55	05-May-25	14:50	8	---	33
DOC [mg/L]	30-Apr-25	14:53	01-May-25	13:31	1.0	---	8.9*
Cl [mg/L]	01-May-25	17:44	02-May-25	16:14	1	---	39
SO4 [mg/L]	01-May-25	17:44	06-May-25	12:22	2	---	30
NO2 [as N mg/L]	01-May-25	10:27	02-May-25	16:14	0.03	---	< 0.03
NO3 [as N mg/L]	01-May-25	15:01	02-May-25	16:14	0.06	---	< 0.06
Nitrates [as N mg/L]	01-May-25	15:01	02-May-25	16:14	0.06	---	< 0.06
NH3+NH4 [as N mg/L]	30-Apr-25	19:14	05-May-25	11:00	0.1	---	15.0
TKN [as N mg/L]	30-Apr-25	15:39	02-May-25	11:52	0.5	---	15.1
TSS [mg/L]	01-May-25	15:03	02-May-25	15:36	2	---	289
4AAP-Phenolics [mg/L]	01-May-25	07:46	02-May-25	08:30	0.002	---	< 0.002
Total P [mg/L]	30-Apr-25	15:18	01-May-25	09:53	0.03	---	0.35
Hg (diss) [mg/L]	01-May-25	13:51	02-May-25	10:21	1e-05	0.0001	< 0.00001
Ca (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.01	---	114
Mg (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.001	---	43.5
Na (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.01	---	29.7*
K (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.009	---	11.7
As (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.0002	0.001	0.0002
Ba (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	2e-05	0.002	0.544
B (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	---	---	0.130
Cd (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.0001	0.0001	< 0.000003
Cr (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.003	0.003	0.00050

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim GW
LR Report : CA40294-APR25

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: RL	6: Client Limits	7: BB-MW1
Cu (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.001	0.001	< 0.001
Fe (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	---	0.01	3.91*
Pb (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	1e-05	0.001	< 0.00009
Mn (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	---	0.002	0.0822*
Zn (diss) [mg/L]	01-May-25	00:12	05-May-25	10:15	0.002	0.005	< 0.002
Benzene [mg/L]	01-May-25	13:10	05-May-25	11:48	0.5	---	< 0.0005
1,4-Dichlorobenzene [mg/L]	01-May-25	13:10	05-May-25	11:48	0.5	---	< 0.0005
Dichloromethane [mg/L]	01-May-25	13:10	05-May-25	11:48	0.5	---	< 0.0005
Toluene [mg/L]	01-May-25	13:10	05-May-25	11:48	0.5	---	< 0.0005
Vinyl Chloride [mg/L]	01-May-25	13:10	05-May-25	11:48	0.2	---	< 0.0002

Analysis	8: BB-MW2	9: BB-MW3	10: BH1-1	11: BH1-2	12: BB-P1
Sample Date & Time	28-Apr-25 11:30	28-Apr-25 12:30	28-Apr-25 13:30	28-Apr-25 14:00	28-Apr-25 12:45
Temp Upon Receipt [°C]	***	***	***	***	***
BOD5 [mg/L]	< 4	< 4	< 4	22	< 4
pH [No unit]	7.93	7.95	7.96	7.32	8.03
Conductivity [uS/cm]	645	354	521	2010	596
Alkalinity [mg/L as CaCO3]	252	192	255	1030*	318
TDS [mg/L]	377	183	257	820*	340
COD [mg/L]	< 8	8	13	147	9
DOC [mg/L]	1.2	1.5	2.2	25.0*	1.7
Cl [mg/L]	22	< 1	16	31	7
SO4 [mg/L]	69	< 2	< 2	< 20	5
NO2 [as N mg/L]	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
NO3 [as N mg/L]	0.87	0.26	0.31	< 0.06	5.64
Nitrates [as N mg/L]	0.87	0.26	0.31	< 0.06	5.64
NH3+NH4 [as N mg/L]	< 0.1	< 0.1	0.5	97.4	< 0.1
TKN [as N mg/L]	< 0.5	< 0.5	0.6	97.3	< 0.5
TSS [mg/L]	54600	22000	133	648	3
4AAP-Phenolics [mg/L]	< 0.002	< 0.002	< 0.002	0.010	< 0.002
Total P [mg/L]	< 0.03	0.03	0.07	0.60	< 0.03
Hg (diss) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (diss) [mg/L]	92.4	62.7	131	224	91.5
Mg (diss) [mg/L]	31.4	11.4	26.5	44.6	23.1
Na (diss) [mg/L]	5.03	2.40	5.74	35.5*	3.46
K (diss) [mg/L]	1.49	0.778	4.12	60.6	5.04
As (diss) [mg/L]	0.0005	< 0.0002	< 0.0002	0.0011	< 0.0002
Ba (diss) [mg/L]	0.0789	0.00813	0.06614	0.274	0.0330
B (diss) [mg/L]	0.013	0.006	0.061	0.772	0.049
Cd (diss) [mg/L]	< 0.000003	< 0.000003	0.000011	0.000013	0.000005
Cr (diss) [mg/L]	0.00018	0.00049	0.00017	0.00381	0.00077
Cu (diss) [mg/L]	0.005	0.001	0.001	0.001	0.009

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim GW
LR Report : CA40294-APR25

Analysis	8: BB-MW2	9: BB-MW3	10: BH1-1	11: BH1-2	12: BB-P1
Fe (diss) [mg/L]	0.030	0.032	0.187	76.5*	< 0.007
Pb (diss) [mg/L]	< 0.00009	< 0.00009	0.00011	0.00024	< 0.00009
Mn (diss) [mg/L]	0.0220	0.00211	0.996*	0.557*	0.00029
Zn (diss) [mg/L]	0.006	< 0.002	0.021	0.007	0.244
Benzene [mg/L]	< 0.0005	< 0.0005	< 0.0005	0.0049	< 0.0005
1,4-Dichlorobenzene [mg/L]	< 0.0005	< 0.0005	< 0.0005	0.0035	< 0.0005
Dichloromethane [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Toluene [mg/L]	0.0005	< 0.0005	< 0.0005	0.0005	< 0.0005
Vinyl Chloride [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002

Analysis	13: GW Dup	14: Trip Blank
Sample Date & Time	28-Apr-25	
Temp Upon Receipt [°C]	***	***
BOD5 [mg/L]	5	---
pH [No unit]	7.91	---
Conductivity [uS/cm]	1060	---
Alkalinity [mg/L as CaCO3]	496	---
TDS [mg/L]	517*	---
COD [mg/L]	44	---
DOC [mg/L]	11.3*	---
Cl [mg/L]	38	---
SO4 [mg/L]	31	---
NO2 [as N mg/L]	< 0.03	---
NO3 [as N mg/L]	< 0.06	---
Nitrates [as N mg/L]	< 0.06	---
NH3+NH4 [as N mg/L]	15.0	---
TKN [as N mg/L]	14.9	---
TSS [mg/L]	783	---
4AAP-Phenolics [mg/L]	< 0.002	---
Total P [mg/L]	0.34	---
Hg (diss) [mg/L]	< 0.00001	---
Ca (diss) [mg/L]	118	---
Mg (diss) [mg/L]	43.0	---
Na (diss) [mg/L]	29.8*	---
K (diss) [mg/L]	11.9	---
As (diss) [mg/L]	0.0002	---
Ba (diss) [mg/L]	0.543	---
B (diss) [mg/L]	0.132	---
Cd (diss) [mg/L]	< 0.000003	---
Cr (diss) [mg/L]	0.00046	---
Cu (diss) [mg/L]	0.001	---
Fe (diss) [mg/L]	3.88*	---

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Analysis	13: GW Dup	14: Trip Blank
Pb (diss) [mg/L]	0.00018	---
Mn (diss) [mg/L]	0.0843*	---
Zn (diss) [mg/L]	0.002	---
Benzene [mg/L]	---	< 0.0005
1,4-Dichlorobenzene [mg/L]	---	< 0.0005
Dichloromethane [mg/L]	---	< 0.0005
Toluene [mg/L]	---	< 0.0005
Vinyl Chloride [mg/L]	---	< 0.0002

Temperature of Sample upon Receipt: 5 degrees C

COD dup RPD % high, results within RL

Method Descriptions

Parameter	Description	SGS Method Code	PALA
1,4-Dichlorobenzene	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
4AAP-Phenolics	phenol by Skalar -solution	ME-CA-[ENV]SFA-LAK-AN-006	N
Alkalinity	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006	N
Ammonia+Ammonium (N)	NH3+NH4 by Skalar - solution	ME-CA-[ENV]SFA-LAK-AN-007	N
Arsenic (dissolved)	As by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Barium (dissolved)	Ba by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Benzene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Biochemical Oxygen Demand (BOD5)	Biochemical Oxygen Demand (BOD5)	ME-CA-[ENV]EWL-LAK-AN-007	N
Boron (dissolved)	B by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Cadmium (dissolved)	Cd by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Calcium (dissolved)	Ca by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Chemical Oxygen Demand	Chemical Oxygen Demand	ME-CA-[ENV]EWL-LAK-AN-009	N
Chloride	Chloride by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Chromium (dissolved)	Cr by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Conductivity	Conductivity by Conductivity Meter	ME-CA-[ENV]EWL-LAK-AN-006	Y
Copper (dissolved)	Cu by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Dichloromethane	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Dissolved Organic Carbon	DOC by Combustion/Oxidation	ME-CA-[ENV]EWL-LAK-AN-023	N
Iron (dissolved)	Fe by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Lead (dissolved)	Pb by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Magnesium (dissolved)	Mg by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Manganese (dissolved)	Mn by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Mercury (dissolved)	Hg solutions by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	N
Nitrate (as N)	Nitrate by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Nitrate + Nitrite (as N)	Total Nitrate/Nitrite by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
Nitrite (as N)	Nitrite by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N
pH	pH - solution	ME-CA-[ENV]EWL-LAK-AN-006	Y
Phosphorus (total)	Total Phos. By Skalar - complete digestion	ME-CA-[ENV]SFA-LAK-AN-003	N
Potassium (dissolved)	K by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	N
Sodium (dissolved)	Na by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y
Sulphate	Sulphate by discrete colourmetric analysis	ME-CA-[ENV]EWL-LAK-AN-026	N

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim GW
LR Report : CA40294-APR25

Parameter	Description	SGS Method Code	PALA
Toluene	VOC wtr - BTEX	ME-CA-[ENV]GC-LAK-AN-004	N
Total Dissolved Solids	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005	N
Total Kjeldahl Nitrogen	Tot. kjeldahl Nitrogen by Skalar	ME-CA-[ENV]SFA-LAK-AN-002	N
Total Suspended Solids	Total Suspended Solids	ME-CA-[ENV]EWL-LAK-AN-004	N
Vinyl Chloride	VOC wtr	ME-CA-[ENV]GC-LAK-AN-004	N
Zinc (dissolved)	Zn by ICP-MS solution (dissolved)	ME-CA-[ENV]SPE-LAK-AN-006	Y

Accreditation Descriptions

PALA:
SGS Canada Industries & Environment conforms to the requirements of ISO/IEC 17025:2005 for specific tests as listed on their scope of accreditation found at https://www.ceaeq.gouv.qc.ca/documents/publications/listes.htm#labo_accr. Analytes and SGS Method Codes marked with a “Y” in the “PALA” column in the table denote ISO/IEC17025:2005 accreditation

Maarit Wolfe, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0004102346

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim
LR Report : GW**CA40294-APR25**

Quality Control Report

Organic Analysis

Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Volatile Organics - QCBatchID: GCM0008-MAY25													
1,4-Dichlorobenzene	0.0005	mg/L	<0.0005			ND	30	115	60	130	116	50	140
Benzene	0.0005	mg/L	<0.0005			ND	30	113	60	130	115	50	140
Dichloromethane	0.0005	mg/L	<0.0005			ND	30	116	60	130	114	50	140
Toluene	0.0005	mg/L	<0.0005			ND	30	115	60	130	116	50	140
Vinyl Chloride	0.0002	mg/L	<0.0002			ND	30	127	50	140	125	50	140
Volatile Organics - QCBatchID: GCM0017-MAY25													
1,4-Dichlorobenzene	0.0005	mg/L	<0.0005			ND	30	101	60	130	94	50	140
Benzene	0.0005	mg/L	<0.0005			ND	30	98	60	130	94	50	140
Dichloromethane	0.0005	mg/L	<0.0005			ND	30	97	60	130	92	50	140
Toluene	0.0005	mg/L	<0.0005			ND	30	99	60	130	94	50	140
Vinyl Chloride	0.0002	mg/L	<0.0002			ND	30	101	50	140	96	50	140

Inorganic Analysis

Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Alkalinity - QCBatchID: EWL0022-MAY25													
Alkalinity	2	mg/L as Ca	< 2			0	20	100	80	120	NA		
Ammonia by SFA - QCBatchID: SKA0009-MAY25													
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			3	10	101	90	110	100	75	125
Ammonia by SFA - QCBatchID: SKA0023-MAY25													
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			1	10	97	90	110	97	75	125
Ammonia by SFA - QCBatchID: SKA0036-MAY25													
Ammonia+Ammonium (N)	0.1	as N mg/L	<0.1			ND	10	100	90	110	99	75	125
Anions by discrete analyzer - QCBatchID: DIO5005-MAY25													
Sulphate	2	mg/L	<2			1	20	95	80	120	93	75	125
Anions by discrete analyzer - QCBatchID: DIO8002-MAY25													
Chloride	1	mg/L	<1			1	20	97	80	120	79	75	125
Nitrate + Nitrite (as N)	0.06	mg/L	< 0.06			10	20	105	80	120	94	75	125
Nitrite (as N)	0.03	mg/L	< 0.03			ND	20	105	80	120	107	75	125
Sulphate	2	mg/L	<2			2	20	106	80	120	86	75	125
Biochemical Oxygen Demand - QCBatchID: BOD0064-APR25													
Biochemical Oxygen Demand (BOD5)	2	mg/L	< 2			6	30	104	70	130	NV	70	130
Carbon by Combustion/Oxidation - QCBatchID: EWL0678-APR25													
Dissolved Organic Carbon	1.0	mg/L	<1.0			ND	20	101	90	110	100	75	125

OnLine LIMS

0004102346

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim
LR Report : GW**CA40294-APR25**

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Chemical Oxygen Demand - QCBatchID: EWL0012-MAY25													
Chemical Oxygen Demand	8	mg/L	<8			3	20	100	80	120	95	75	125
Chemical Oxygen Demand - QCBatchID: EWL0013-MAY25													
Chemical Oxygen Demand	8	mg/L	<8			15	20	104	80	120	84	75	125
Chemical Oxygen Demand - QCBatchID: EWL0667-APR25													
Chemical Oxygen Demand	8	mg/L	<8			15	20	100	80	120	83	75	125
Conductivity - QCBatchID: EWL0022-MAY25													
Conductivity	2	uS/cm	< 2			0	20	100	90	110	NA		
Mercury by CVAAS - QCBatchID: EHG0045-APR25													
Mercury (dissolved)	0.00001	mg/L	< 0.00001			ND	20	113	80	120	101	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0012-MAY25													
Boron (dissolved)	0.002	mg/L	<0.002			9	20	98	90	110	98	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0325-APR25													
Arsenic (dissolved)	0.0002	mg/L	<0.0002			7	20	98	90	110	105	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			4	20	101	90	110	111	70	130
Boron (dissolved)	0.002	mg/L	<0.002			4	20	96	90	110	96	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			18	20	99	90	110	102	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			4	20	97	90	110	87	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			20	20	97	90	110	102	70	130
Copper (dissolved)	0.001	mg/L	<0.001			3	20	97	90	110	88	70	130
Iron (dissolved)	0.007	mg/L	<0.007			0	20	96	90	110	100	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	97	90	110	94	70	130
Magnesium (dissolved)	0.001	mg/L	<0.001			4	20	94	90	110	98	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			2	20	98	90	110	122	70	130
Potassium (dissolved)	0.009	mg/L	<0.009			6	20	95	90	110	110	70	130
Sodium (dissolved)	0.01	mg/L	<0.01			1	20	92	90	110	95	70	130
Zinc (dissolved)	0.002	mg/L	<0.002			ND	20	98	90	110	101	70	130
pH - QCBatchID: EWL0022-MAY25													
pH	0.05	No unit	NA			0		100			NA		
Phenols by SFA - QCBatchID: SKA0016-MAY25													
4AAP-Phenolics	0.002	mg/L	<0.002			ND	10	102	80	120	103	75	125
Phosphorus by SFA - QCBatchID: SKA0005-MAY25													
Phosphorus (total)	0.03	mg/L	<0.03			0	10	102	90	110	96	75	125
Solids Analysis - QCBatchID: EWL0662-APR25													
Total Dissolved Solids	30	mg/L	<30			4	20	102	80	120	NA		
Suspended Solids - QCBatchID: EWL0020-MAY25													
Total Suspended Solids	2	mg/L	< 2			1	10	101	90	110	NA		
Suspended Solids - QCBatchID: EWL0033-MAY25													
Total Suspended Solids	2	mg/L	< 2			0	10	99	90	110	NA		

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Project : C.A0024089.5055-03, Blandford-Blenheim
LR Report : GW**CA40294-APR25**

Inorganic Analysis														
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material			
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Total Nitrogen - QCBatchID: SKA0006-MAY25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			ND	10	102	90	110	98	75	125
Total Nitrogen - QCBatchID: SKA0019-MAY25													
Total Kjeldahl Nitrogen	0.5	as N mg/L	<0.5			1	10	100	90	110	104	75	125

OnLine LIMS

0004102346

wsp.com