May 14, 2025

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Ministry of the Environment, Conservation and Parks
Peterborough District Office
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300 Water Street, Peterborough, Ontario
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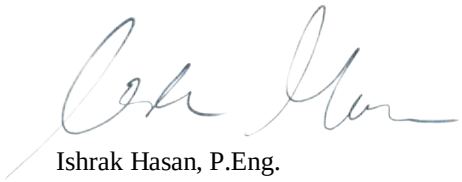
Subject: 2024 Annual Monitoring Report
Peterborough County/City Waste Management Facility

This annual report was prepared pursuant to Conditions 10(18) and 10(19) of Amended Environmental Compliance Approval No. A341508 governing operation of the Peterborough County/City Waste Management Facility for the reporting period of January 1, 2024 to December 31, 2024.

If you have any questions please contact me at 289-678-0344 or by e-mail at Ishrak.Hasan@wsp.com.

Yours sincerely,



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2024 Annual Monitoring Report

Peterborough County / City Waste Management Facility

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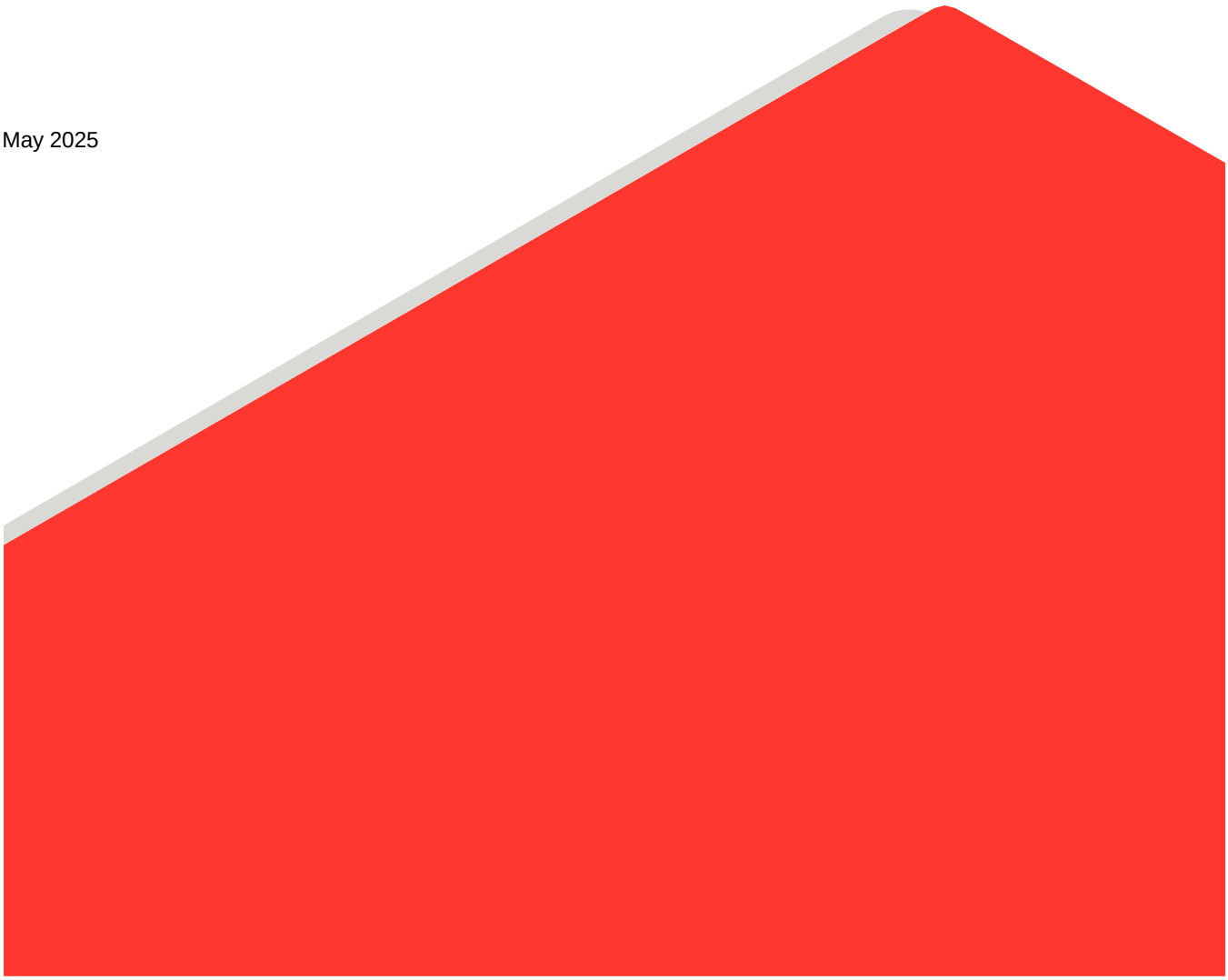
May 2025



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References to Conditions of Environmental Compliance Approval No. A341508

CONDITION NO.	CONDITION DESCRIPTION	LOCATION IN REPORT
10(19) a. i)	An updated Landfill site plan showing the areas of fill, buffer zones, present contours, monitoring locations and surface water control systems;	Figures 2.1.1, 2.1.2 and 2.1.3
10(19) a. ii)	A calculation of the remaining capacity of the Landfill, an estimate of the remaining Landfill life and a comparison of actual capacity used to approved Landfill capacity;	Table 2.4
10(19) a. iii)	The optimization of remaining Landfill capacity with respect to refining final contours, having regard to minimizing the potential for off-site impacts;	Section 2 and Figure 2.2
10(19) a. iv)	Approved changes to the operation of the Landfill;	Section 3
10(19) a. v)	Procedures at the Landfill;	Section 3
10(19) a. vi)	Areas of landfilling operation during the reporting period;	Section 3 and Figure 2.1
10(19) a. vii)	Areas of intended operation during the next reporting period;	Section 3
10(19) a. viii)	Areas of excavation during the reporting period;	Section 3
10(19) a. ix)	The progress of final cover, vegetative cover, and any intermediate cover application;	Section 3 and Figure 2.1
10(19) a. x)	Calculations of the volume of waste, daily and intermediate cover, and final cover deposited or placed at the Landfill during the reporting period and a calculation of the total volume of Landfill capacity used during the reporting period;	Section 2 and Table 2.4
10(19) a. xi)	Calculations of the amount of contaminated soil used as alternative cover at the Landfill;	Section 2
10(19) a. xii)	The amount of contaminated soil stored at the Landfill at the end of the previous year;	Section 2
10(19) a. xiii)	Summary of the weekly, maximum daily and total annual quantity (tonnes) of waste received at the Landfill;	Section 2

CONDITION NO.	CONDITION DESCRIPTION	LOCATION IN REPORT
10(19) a. xiv)	A summary of recycling efforts undertaken at the Public Drop-Off and Reuse Centre including the amount of recyclable received;	Section 3
10(19) a. xv)	A summary of the requirements outlined in Condition 6(22) of the Approval regarding the use of contaminated soil for daily/intermediate landfill cover;	Section 2
10(19) b. i)	Annual amount of the Organic Waste received and processed at the Composting Facility, including the waste type, quantity and sources.	Section 8
10(19) b. ii)	Annual amount and quality of Compost transferred from the Site and its final destination.	Section 8
10(19) b. iii)	A summary describing any Rejected Waste including quantity, waste type, reasons for rejection and origin of the Rejected Waste.	Section 8
10(19) b. iv)	Annual amount of the Residual Waste transferred from the Site for final disposal and its destination.	Section 8
10(19) b. v)	Number of Composting and curing windrows and the status of processing at the end of the operating year.	Section 8
10(19) b. vi)	Amount of unprocessed Organic Waste temporarily stored at the Composting Facility at the end of the operating year.	Section 8
10(19) b. vii)	Amount of Compost temporarily stored at the Composting Facility at the end of the operating year.	Section 8
10(19) b. viii)	A summary of the Composting monitoring and sampling results required by this Approval.	Section 8
10(19) c. i)	Results in tabular format and an interpretive analysis of the results of all leachate, groundwater, surface water and landfill gas monitoring and flaring, including an assessment of the need to amend the monitoring programs;	Sections 4, 5, 6 and 7 and Appendices C, D, E, F, G, H, and I
10(19) c. ii)	The interpretive analysis referred to in Sub-condition i. above shall include a discussion of groundwater parameters and compliance with the Reasonable Use Policy at the property boundary as well as recommendations for future action (contingency measures) that may be necessary should the monitoring program detect failure of the design;	Section 5

CONDITION NO.	CONDITION DESCRIPTION	LOCATION IN REPORT
10(19) c. iii)	Groundwater flow and contaminant migration analyses for the Site;	Section 5
10(19) c. iv)	Surface water quality with respect to Provincial Drinking Water Objectives;	Section 6
10(19) c. v)	Site plans showing all surface and ground water monitoring locations and the existing contours of the Site;	Figures 2.1 and 5.1
10(19) c. vi)	A report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903;	Section 5
10(19) c. vii)	An assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the Site, and the adequacy of and need to implement the contingency plans/environmental emergency plan;	Section 3 and Section 8
10(19) c. viii)	An assessment of potential and actual impacts, if any, of the leachate on the Peterborough Water Pollution Control Plant;	Section 4.1.4 and Appendix D
10(19) c. ix)	Leachate characterization results and a discussion of the potential impacts on the Water Pollution Control Plant;	Section 4 and Appendix D
10(19) c. x)	Total leachate volumes collected weekly, monthly and annually and the disposition of the collected leachate;	Section 4, Tables 4.1 and 4.2
10(19) c. xi)	A summary of any equipment changes;	Section 3
10(19) c. xii)	Facilities installed during the reporting period;	Section 2
10(19) c. xiii)	Site preparations and facilities planned for installation during the next reporting period;	Section 2
10(19) c. xiv)	Summary of any complaints received and the responses made;	Section 3 and Table 3.2
10(19) c. xv)	Any environmental and operational problems, that could negatively impact the environment, encountered during the operation of the Site or identified during the facility inspections and any mitigative actions taken;	Section 3
10(19) c. xvi)	Any changes to the Emergency Response and Contingency Plan, the Operations Manual or the Closure Plan that have been approved by the Director or the District Manager since the last Annual Report;	Section 3 and 8

CONDITION NO.	CONDITION DESCRIPTION	LOCATION IN REPORT
10(19) c. xvii)	A descriptive summary of any spills, incidents or other emergency situations which have occurred at this Site, any remedial measures taken, and the measures taken to prevent future occurrences;	Section 10
10(19) c. xviii)	Any other information with respect to the Site which the District Manager may require from time to time;	Section 10
10(19) c. xix)	Summary of inspections undertaken at the Site;	Table 3.1
10(19) c. xx)	Any changes in operations, equipment or procedures employed at the Site;	Section 3
10(19) c. xxi)	Any recommendations to minimize environmental impacts from the operation of the Site and to improve Site operations and monitoring programs in this regard;	Section 12
10(19) c. xxii)	An annual summary of any deficiencies, items of non-compliance or process aberrations that occurred at this Site and any remedial/mitigative action taken to correct them to ensure that future non-compliance does not occur; and	Section 10
10(19) c. xxiii)	A statement regarding compliance with all conditions of this Approval and other relevant Ministry requirements, guidelines and regulations.	Sections 5 and 11

1.0 INTRODUCTION

This annual report was prepared pursuant to Conditions 10(18) & 10(19) of Amended Environmental Compliance Approval (ECA) No. A341508 governing operation of the Peterborough County/City Waste Management Facility (PCCWMF) for the year ending December 31, 2024. The ECA was recently amended in June 2023 to include construction and operation of the Peterborough Organics Facility (POF) at the PCCWMF. A copy of ECA No. A341508 is provided in Appendix A. The preceding table provides details of ECA Conditions outlining requirements of the annual report and indicates sections of the report in which Conditions are addressed.

The PCCWMF encompasses 197 hectares (ha) and is located at 1260 Bensfort Road in the Township of Otonabee-South Monaghan, in the County of Peterborough. The PCCWMF is legally described as Part Lots 14 & 15, Concession 13 and Part Lots 13, 14, & 15, southern Part Lot 16, Concession 14, Township of Otonabee-South Monaghan, County of Peterborough. The PCCWMF is located 6.4 kilometers south of the City of Peterborough as shown on Figure 1.1. Property ownership around the PCCWMF is presented in Figure 1.2.

In 2024, waste disposal took place in Cells 2, 3 and 4 of the 9.5 ha North Fill Area (NFA). Cell 2, the first cell of the NFA, was constructed in 2010. Cell 4 was the last landfill cell to be constructed and approved to receive waste in December 2022. Site development and operations are discussed in Sections 2 and 3 of this report.

The scope of the 2024 monitoring program for groundwater, surface water, leachate, and landfill gas is summarized in Table 1.1. The results of the monitoring program are discussed and assessed in Sections 4, 5, 6 and 7 of this report. Section 9 provides an update on contingency plans and Section 10 outlines the 2025 monitoring program.

1.1 Site Approvals Status and Background

In June 2002, the PCCWMF became the joint property of the County and City of Peterborough (County/City). The South Fill Area (SFA) was in operation from 1981 to 2012. The NFA began receiving waste in 2010 and is currently in operation.

Most recently, an amended ECA No. A341508 was issued on June 23, 2023, to include the construction and operation of the 13.45 ha POF north of the existing landfill. A copy of the current ECA is included in Appendix A. Construction of the POF was substantially completed on June 28, 2024. However, components of the facility were completed earlier to allow processing of material starting February 6, 2024.

The stormwater management systems for the NFA and SFA are approved and operated under amended ECA No. 2231-8YCPHG, issued on September 28, 2012, under the Ontario Water Resources Act (OWRA). The stormwater and sewage works for the POF are approved and operated under ECA No. 4156-CRM7RY, issued on June 30, 2023. Copies of both ECAs are also provided in Appendix A.

The landfill is currently being operated under contract to the City by R.W. Tomlinson Limited (Tomlinson) of Ottawa, Ontario. Tomlinson began operating the site on September 1, 2012. The POF is currently being operated under contract to the City by Tri-Land Excavating & Haulage (Tri-Land) of Otonabee, Ontario. Tri-Land began operating the POF on February 6, 2024.

1.2 Waste Disposal By-Law and Tipping Fees

The City of Peterborough By-law Number 07-027 was enacted in 2007 to regulate the disposal of waste, including establishing tipping fees for the PCCWMF. The landfill tipping fees were increased on April 1, 2024. By-law

Number 07-027 has been amended by By-law Numbers 09-108, 14-095, and 15-132. By-law Number 07-027 and associated amendments are included in Appendix B.

2.0 SITE DEVELOPMENT

Pursuant to ECA Condition 10(19) a. i), Figures 2.1.1 – Existing Conditions SFA (2024), 2.1.2 – Existing Conditions NFA (2024), and 2.1.3 – Peterborough Organics Facility (2024), were prepared to provide a record of current SFA and NFA contours, monitoring locations, stockpiles, active fill areas in 2024, site infrastructure, and current development of the site. Figure 2.2 shows the approved final contours for the SFA and NFA. Current and historical cell designations are shown on Figure 2.3.

Waste received in 2024 was placed in Cells 2, 3 and 4.

The POF, initially expected to be completed in 2023, began accepting material on February 6, 2024, and was substantially completed on June 28, 2024.

In February 2024, groundwater monitoring nests 114 and 115 were installed adjacent to Cell 4, as recommended in the Design and Operations (D&O) Report for the site. As part of this work, gas probe GP1, which had been damaged during winter maintenance operations in 2023, was replaced.

Construction of Phase 4 of the landfill gas collection system in the NFA started in March 2024 and was substantially complete on July 31, 2024. Phase 4 included the installation of nine vertical landfill gas extraction wells (NGW-6, NGW-7, NGW-8, NGW-10, NGW-15 NGW-16 NGW-17, NGW-20 and NGW-26) in Cells 2 and 3. The extraction wells were connected to the existing NFA perimeter header pipes and sub-header pipes installed between 2018 and 2020. The locations of these wells are shown in Figure 7.1.

2.1 Cell Development

Cell 4 (completed in December 2022) was the last approved landfill cell to be constructed on site as per the approved ECA.

2.2 Landfill Volumes and Site Life

In 2024, approximately 35,774 tonnes of waste was disposed at the PCCWMF. Waste was placed in Cells 2, 3 and 4 of the NFA. Table 2.1 provides a monthly breakdown of waste quantities, diverted materials, and contaminated soil received in 2024. Table 2.2 provides a weekly breakdown of incoming material to the PCCWMF.

Historical annual waste quantities disposed at the site since 1981 are presented in Table 2.3. Approximately 2,394,294 tonnes of waste have been disposed at the PCCWMF to December 31, 2024. This total excludes contaminated soil.

As per ECA Condition 10(19) a. xiii), a summary of the maximum daily quantity (tonnes) of waste received at the site is to be included in the Annual Report. The highest daily quantity of material received on site in 2024 was 1,336.40 tonnes, received on February 2, 2024, as reported by the City via email dated March 24, 2025. This amount consisted of the following:

Construction & Demolition	7.40 tonnes
Contaminated Soil – Cover	1149.03 tonnes
Corrugated Cardboard	0.09 tonnes

Drywall	1.88 tonnes
Electronics	0.03 tonnes
Freon Items	0.64 tonnes
Green Waste	0.14 tonnes
Mattress	0.32 tonnes
Mixed Recyclables	0.05 tonnes
Mixed Solid Waste	141.61 tonnes
Organics – Landfill only	31.81 tonnes
Tires	0.29 tonnes
Woodchips	3.11 tonnes

The SFA reached capacity in 2012 and was under final cover in 2013. The SFA is closed and no longer receiving waste.

A topographic survey of Cells 2, 3 and 4 of the NFA was completed on December 19, 2024, to satisfy the requirements of Condition 10(19) a. i) of the ECA. Table 2.4 shows information on Cells 2, 3 and 4 of the NFA including volume used to December 2024 and the remaining site life estimates for the entire NFA.

The total approved airspace of the NFA is 1,527,000 m^3. The approved airspace is expected to provide capacity for approximately 1,023,0390 tonnes of waste assuming an apparent waste density of 0.67 tonnes/m^3.

In 2024, 35,774 tonnes of waste was disposed in the NFA. This is an 18% decrease from the 43,653 tonnes of waste disposed in 2023. The reduction in waste disposed was primarily a result of the weekly curbside organic waste collection and composting program within the City of Peterborough that began on October 31, 2023. The combined apparent density of all waste disposed to date in the NFA is 0.67 tonnes/m^3. This is similar to the 0.67 tonnes/m^3 assumed apparent waste density used in remaining site life calculations.

The remaining waste disposal capacity of the PCCWMF is calculated annually based on the average incoming waste quantity over the past five years and an apparent waste density of 0.67 tonnes/m^3. The average incoming waste quantity over the past five years (i.e., 2020 to 2024) was 44,073 tonnes, which was a decrease from the 46,350 tonnes used in 2023.

It is estimated that the NFA will provide waste disposal capacity for approximately 10.2 years from December 19, 2024, assuming an annual waste disposal rate of 44,073 tonnes and an apparent waste density of 0.67 tonnes/m^3. If waste quantities received or apparent waste densities differ significantly from those assumed, the calculation of remaining site life will be adjusted accordingly.

2.2.1 Soil Balance – Including Alternative Daily Cover

In 2024, approximately 10,394.08 tonnes of material was received at the site for use as alternative daily cover. The material was comprised of the following:

Clean wood/wood chips	470.55 tonnes
Contaminated soil	9923.53 tonnes

Cover soil for 2025 will be obtained from on-site stockpiles and imported material. Topsoil for final cover placement will be obtained from on-site stockpiles.

Soil stockpiles north and south of Cell 4 were surveyed during the December 2024 topographic survey for the site. Stockpile locations are shown on Figure 2.1.3 for reference. Soil currently available on-site within the stockpile locations is approximately 156,695 m^3. Stockpile volumes decreased from the 174,390 m^3 of material stockpiled in 2023 as soil was used for daily and intermediate cover.

In 2024, soil was not hauled off site and is not anticipated being hauled off site in the foreseeable future. The soil will remain on site and used for daily cover or other on-site uses.

The estimated remaining quantity of daily, interim and final cover required for the NFA (Cells 2, 3 and 4) is approximately 206,370 m^3. Contaminated soil will continue to be received at the site for use as alternative daily cover. Clean fill may be required in the future depending on annual quantities of incoming contaminated soil received on site for daily cover. Quantities will continue to be reviewed to determine future needs.

2.2.2 Diverted Materials

County/City residents have access to curbside blue box collection services, public drop-off depots, or local Township transfer stations and/or landfill sites for diverted materials. Material drop-off is available at the PCCWMF. Approximately 5,998 tonnes of recyclable material, not including materials received for use as alternate daily cover, were diverted from disposal at the on-site Public Drop-off Depot at the PCCWMF in 2024. This includes 1,644 tonnes of source separated organics (SSO) received at the landfill between January 1, 2024 and March, 31, 2024, but does not include SSO received at the landfill after April 1, 2024 as SSO began being tracked separately.

Blue Box recyclables are also accepted, at no charge, at the City-owned Materials Recycling Facility (MRF) at 390 Pido Road. The recycling depot at the MRF is open 24 hours per day, 7 days a week.

The City operates a permanent Household Hazardous Waste (HHW) facility, at 400 Pido Road, which is open to County and City residents every Wednesday to Saturday. In addition, the County owns and operates four seasonal HHW facilities and funds one facility for the Township of Otonabee-South Monaghan. The County offers Waste Electrical and Electronic Equipment (WEEE) drop-off at all HHW facilities, and some Townships accept WEEE at local transfer stations.

Scrap metal is accepted at the City-owned MRF and the PCCWMF, and is diverted to a scrap metal recycling facility.

The City provides weekly "green waste" curbside collection from April to November. Green waste, also known as yard waste, includes grass clippings, yard plants, trimmings and brush. The POF began operating on February 14, 2024, and as of April 1, 2024, all green waste accepted at the PCCWMF was processed at the POF.

Most County residents have access to green waste collection at local Township transfer stations and/or landfill sites. The County initiated a curbside leaf and yard material collection program in Lakefield, Bridgenorth, Norwood and Havelock in the fall of 2013. This program has been extended to other locations in the County in subsequent years.

The City has implemented a weekly curbside organic waste collection and composting program within the City of Peterborough that began on October 31, 2023. Organic waste includes items such as food waste, paper waste, house plants, household pet waste, etc. Organic waste was anticipated to be hauled and processed at the newly constructed POF at the PCCWMF in 2023 but completion of the POF was delayed until 2024. SSO received at the PCCWMF were initially transferred to the Harper Road composting site, but as a result of operational issues at

the Harper Road composting site, SSO received at the PCCWMF were transferred to the POF starting February 6, 2024. Additionally on February 14, 2024, the city transferred 226 tonnes of partially composed material to the POF from the Harper Road composting site. This created a bottleneck in the processing of compost at the POF. To prevent SSO from being landfilled, 231.5 tonnes of SSO was transferred to private processing facilities between March 15, 2024 and March 28, 2024. An additional windrow cover was purchased which allowed increased on-site processing capacity, and as of April 1, 2024, all organics received at the PCCWMF was processed at the POF. A total of 6,527 tonnes of SSO were received at the POF in 2024.

A full-scale mattress diversion program began on September 2014. Customers pay a fee of $20.00 per unit fewer than ten (10) and $25 per unit for bulk loads of 10 or more to partially cover the cost of recycling mattresses. In 2024 a total of 268 tonnes of mattresses were received on site and diverted from disposal.

2.2.3 Non-Hazardous Contaminated Soil

The PCCWMF accepts non-hazardous contaminated soil for use as daily and intermediate cover as approved by Condition 6(22) of the ECA. The City completes Soil Acceptance Forms for contaminated soil received at the PCCWMF to ensure the requirements of ECA Condition 6(22) are adhered to. Copies of all soil acceptance forms and associated analytical test results are kept on site and/or at City offices.

ECA Condition 6(23) limits the amount of contaminated soil stored on site to three months of the annual daily/interim cover material volume required. Based on landfill volume utilized in 2024 shown in Table 2.4, the quantity of daily/interim cover soil required over a three-month period was calculated to be 2,655 m3. This value was calculated assuming a waste to cover ratio of 4:1. In 2024 there were no violations of Condition 6(23) of the ECA where contaminated soil stockpiled onsite exceeded this amount.

2.3 Summary of Site Works

The following list is a summary of key works that were undertaken at the PCCWMF in 2024. Please refer to Table 3.1 for a detailed list of the works conducted on site during this period.

1. The flowmeter on the NFA pump was reset to zero on January 2.
2. The landfill gas utilization plant (LGUP) was offline for two (2) hours on January 2 for maintenance. The flare was operational during the maintenance work.
3. The LGUP broke down on January 7 and was not repaired in 2024. The flare was operational all through 2024 with the exception of the times noted in Table 3.1.
4. Level sensor was adjusted for forcemain pumps 1 and 2 in the NFA on January 15.
5. Pump control failure resulted in a minor leak of leachate from SFA pump station on February 13. Leachate was contained within the area and affected material was promptly cleaned up and placed in the landfill. Spill was reported to Spills Action Centre (Ref#1-UNHS9V). The pump control was repaired on February 14.
6. Strata Drilling Group was onsite from February 9 to 21 to install new monitoring wells and gas probe as well as complete repair work on existing wells.
7. NFA condensate pump failed on March 1. The pump was replaced by Barry Electric on the same day.
8. Road salt was applied on access roads on March 20.

9. Propane ignition system on the flare failed on March 25. Repair was completed on the same day by City staff and an electrical contractor. The flare was down for 1.25 hours.
10. Nexicom was on onsite May 24 to fix internet issues.
11. Surplus materials from POF construction were moved to the stockpile area north of Cell 4 on May 27.
12. Bensfort Road and ditches were cleaned up by Tomlinson on May 29.
13. New traffic control signage installed around the public drop off area for better traffic flow and direction on June 12.
14. Flare was offline for 1 hour on June 24 for maintenance.
15. Repairs to Cell 2 litter fence was completed between July 29 to 31.
16. Baseline Road and Bensfort Road dry hydrant was repaired and returned to service in July.
17. Flare was shut down for a small electrical repair on August 31. Repair was completed on September 1.
18. Final cover was placed on the south side of Cell 3 on September 18.
19. Electrical services were installed at the POF office trailer on September 18.
20. Topsoil for final cover was placed in Cells 2 and 3 on October 16.
21. There were issues with internet connection on November 6. The issue was repaired on the same day.
22. The leachate forcemain was pressure tested on November 6.
23. PTS was onsite November 7 to complete computer hardware maintenance and upgrades.
24. Some electrical components for the flare were repaired by Barry Electric between November 13 and 15.
25. Barry Electric was onsite November 19 to complete electrical system mapping and heat detection for City's Property Department.
26. Lenworth Dock & Door was onsite December 19 to complete repair work of overhead doors at the POF.
27. Envision Excavating was onsite between March 2024 to July 2024 to complete Phase 4 of the NFA LFG system expansion.
28. Maple Reinders, D.M. Wills, Behan Construction, Lundy Plumbing, Barry Electric and Summit Mechanical were onsite periodically between January 2024 to July 2024 to complete construction of the POF.

3.0 OPERATIONS AND MAINTENANCE

The PCCWMF has been operated under contract by R.W. Tomlinson since September 2012. The site operator is responsible for the following:

1. Acceptance of waste at the site. Hours of operation are from 8:00 a.m. to 4:45 p.m. Monday to Friday and from 8:00 a.m. to 3:45 p.m. on Saturdays;

2. Operation of the weigh scale;
3. Placement and compaction of waste;
4. Application of daily, interim and final cover;
5. Maintenance and operation of the public drop-off depot;
6. Construction of perimeter berms;
7. Litter control; and
8. Segregation of recyclable materials from the waste stream at the public drop-off depot.

City staff carry out daily, weekly, monthly and quarterly inspections to verify the site is being operated in accordance with the operating contract and the requirements of the ECA. Inspection forms are kept on file by the City in accordance with ECA Condition 10(1). Table 3.1 provides a month-by-month summary of the daily inspections undertaken in 2024.

No changes to the Landfill Operations Manual, Closure Plan or Emergency Response Plan have been completed since the last annual monitoring report.

3.1 Waste Disposal

When waste arrives at the site the weigh scale attendant obtains relevant information about the material to be disposed in order to screen for potential ECA violations. The attendant then directs the hauler to the disposal area. Signs also direct vehicles to the disposal area where drivers remove their tarps, if applicable, and back their vehicles into the tipping face as directed.

At the start of each day, the operator will excavate a hydraulic connection to the underlying waste layer to facilitate leachate movement to the drainage layer at the bottom of the landfill for collection. Waste is then placed in lifts approximately 0.5 meters (m) thick and compacted. Each daily lift of waste is approximately 2 m thick. Daily cover soil or alternative daily cover material is then spread over the waste to a depth of 0.15 m.

Grade stakes are periodically placed around the fill area to assist the operator in filling to approved final contours. At the end of each workday heavy equipment is cleaned, fueled and serviced. Prior to waste layers reaching adjacent ground elevations, a soil berm will be constructed around the perimeter of the fill area to isolate leachate impacted water and contain it within the active fill area.

Weigh scale records indicate that 35,774 tonnes of waste were disposed of on site in 2024. Non-commercial vehicles were directed to the Public Drop-off Depot where roll-off containers receive waste and recyclables. As waste containers reach capacity, they are hauled to the fill area. Containers with recyclable materials are taken off site for processing.

Further details of site operations are contained in the landfill operations contract. The Landfill Operations and Maintenance Manual (May 2013) provides additional information and is available for review.

ECA Condition 6(1) limits the disposal of waste to solid non-hazardous municipal, industrial, commercial and industrial wastes generated within the County/City. If it is found that haulers are bringing materials to the landfill that are not accepted under ECA Condition 6(1) or are materials that are banned under the solid waste By-law, a

violation notice is issued. To ensure proper waste handling procedures are followed, daily inspections are carried out by City staff.

Violation notices are issued to site users that do not abide with site regulations. Violators are warned that repeated violations will result in a fine. The following violations were reported in 2024:

- 1 warning was issued for abusive language;
- 1 offence where material brought into site was banned;
- 2 occurrences where the public did not confirm where garbage was generated;
- 62 occurrences where a vehicle did not weigh out, fines were issued to some offenders;
- 1 offense where direction from City staff was not obeyed;
- 6 occurrences of misrepresentation of facts;
- 47 occurrences where members of the public were from outside of the City/County of Peterborough;
- 77 violations where members of the public refused to pay and fines were subsequently issued to some offenders; and
- 4 untarped open load violations.

In accordance with City By-laws, users are charged a surcharge of $100 to $300 per load when the load does not conform to the By-law. The By-law does not permit loads with greater than 10 percent of recyclable material to be disposed of at the site. In 2024, there were no violations for loads containing excessive recyclables.

3.2 Daily, Interim and Final Cover

The site operator is responsible for hauling and placement of daily, interim and final cover at the landfill. The cover materials used in 2024 were obtained from the following sources:

1. On-site stockpiles of soil;
2. Contaminated soil received at the site; and
3. Clean wood/wood chips received at the site.

In 2024, final cover soil was placed on the slopes of Cells 2 and 3. A total of 2.68 ha of the NFA is currently under final cover. The approximate measured change in area under final cover from 2023 to 2024 is 0.43 ha.

In 2025, clean fill, contaminated soil, clean wood/wood chips, and compost screening overs will continue to be used as daily cover as required.

3.3 Equipment

Equipment used to operate the PCCWMF and POF is owned, operated, and maintained by the site operator. The equipment used by the site operator was satisfactory to operate the landfill and POF in 2024. The following equipment was used to operate the landfill in 2024:

1. 2012 CAT 826H Compactor;

2. 2012 CAT D6TXL Dozer;
3. 2012 CAT 329EL Excavator;
4. John Deere 250D Rock Truck;
5. 2012 CAT 950H Front End Loader;
6. International Paystar Service Truck;
7. 420F IT Backhoe;
8. Kubota 72-inch mower; and
9. 2012 GMC 2500 Series Crew Cab Truck.

The following equipment was used to operate the POF in 2024:

10. John Deere 724K loader;
11. John Deere 544p loader;
12. Freightliner 300G water truck;
13. Mack tandem dump truck;
14. John Deere 320G Skid steer;
15. Scarab windrow turner;
16. Doppstadt Slow speed grinder/shredder;
17. TN55 New Holland tractor with sweeper;
18. McCloskey 621 Screening plant; and
19. McCloskey material stacker.

There were no changes to equipment utilized by the site operator at the landfill in 2024, but 2024 was the first year that the POF was in operation.

3.4 Public Drop-Off Area

Currently, there are eighteen 40 cubic yard collection bins being utilized at the Public Drop-Off Depot. The bins are designated for waste, blue box recyclables, construction and demolition material, drywall, cardboard, green waste, tires, shingles, WEEE, scrap metal, Freon-containing appliances, and untreated wood.

3.5 Signs

At the site entrance a sign identifies hours of operation, 24-hour emergency contact phone number, tipping fees, regulations, acceptable wastes, and landfill bans. Other signs include:

1. Speed limit and traffic routing signs;
2. "No Entry" signs at maintenance and monitoring roads and at two secondary entrances;
3. Individual material designation signs, at the Public Drop-Off Depot;

4. “Operational Issues Inquire” sign required as per Ministry regulations; and
5. Public information signs at the scale house regarding site operations and respect to employees.

3.6 Liaison Committee and Resident Concerns

The Site Liaison Committee (SLC) met in-person on March 19, 2024 and September 10, 2024. The key items discussed in 2024 were as follows:

1. March 19, 2024 meeting items included:
    a. Discussion regarding landfill fee increase, including sorted/unsorted fee structure and incentives for diversion.
    b. Question was raised regarding methane gas production calculations, and estimated reduction of production with new GROW Peterborough Facility. The City indicated that the POF design estimated GHG production of 1900T CO_2 per annum.
    c. Discussion regarding high winds and litter and the City’s proactive clean-up plan and crew schedule.
    d. Discussion regarding Daryl Drain quarry pits, PCCWMF cell construction, excess soil management, and future uses for daily cover, berms, stockpile for capping, etc.
    e. Question was raised regarding the impact of May 2022 Derecho storm. City indicated that Leaf & Yard Waste production increased (~8k up to ~16k Tonnes) and was diverted from the landfill for composting.
    f. Discussion regarding the history of Peterborough Professional Group, involvement in past City & County reviews (Syracuse facility investigation with Mayor Sutherland), and tracking of Clarington facility development.
    g. Question was regarding future phases of SSO collection & processing. The City and County discussed private sector access to POF SSO processing, and importance of future SSO collection phases and working together for future opportunities.
2. September 10, 2024 meeting items included:
    1. A review of the 2023 Annual Monitoring Report was presented to the committee by WSP.
    2. The Township retained Cambium to complete the Annual Monitoring Report review.
    3. Overview of Cambium’s annual landfill site inspection completed in 2024 was presented to the committee.
    4. The City provided an overview of their Waste Management Facility update report.

3.7 Site Maintenance

The landfill is inspected regularly to ensure operation in accordance with ECA Condition 2(1). City staff complete daily, weekly, and monthly inspections. These inspections are documented on appropriate information collection forms. In addition, landfill operations and maintenance meetings are attended by the Owner, the Operator, and the Consultant on a regular basis to discuss and address site related matters.

3.7.1 Road Maintenance

Maintenance of the access and service roads in 2024 included the following:

1. Water was used to aid in dust control as needed;
2. Snow plowing during winter months, and road salt application as needed;
3. Placement of granular material or wood chips as necessary to provide access to the active fill area and cover material stockpiles; and
4. Sweeping of paved areas, as needed.

3.7.2 Final Cover

Final cover soil was placed on the entire SFA by 2013. Placement of topsoil and seeding on the SFA was completed in 2014. In 2020, localized capping enhancements on the northwest side of the SFA commenced and have been ongoing since. Upon completion of the final cover capping, standpipe installation and LFG repairs are proposed to be completed prior to tree planting in the SFA. Planting of trees in the SFA as per the closure plan, originally planned for 2018, was postponed due to ongoing site works.

Final cover placement in the NFA is completed as waste is landfilled to approved elevations. Currently 2.68 ha of the NFA is under final cover.

The majority of the final cover areas across both the NFA and SFA are well vegetated. A few localized areas currently lack fully established vegetation; these areas are monitored regularly and addressed through routine maintenance activities.

3.7.3 Litter Control

The following measures were undertaken in 2024 to minimize wind-blown litter:

1. On and off-site cleanup of litter was completed as needed; and
2. Maintenance of litter fence as required throughout the year.

3.7.4 Dust Control

To minimize dust, the main site access road is paved. Unpaved service and haul roads are watered as needed to reduce dust. In 2024, no dust complaints were received.

3.7.5 Vermin Control

To minimize odours and to discourage use of the site by rodents and birds, soil or alternate cover is placed daily. Progressive placement of final cover further reduces the potential for odour, litter and vermin impacts.

Permit No. DA 2723 from Environment Canada to scare or cull gulls was not renewed in 2024, and no gulls culled in 2024. No complaints related to gulls were received in 2024. The City will continue to evaluate the program on an annual basis.

3.7.6 Complaints Received in 2024

ECA Condition 4 requires the County/City to record and respond to complaints received regarding site operations. A Complaint Action Form is utilized for this purpose.

In 2024, thirty-six (36) complaints were received and documented in the complaints log. A summary of complaints received in 2024 is shown on Table 3.2. Complaints received are detailed below.

1. Nine (9) of the complaints were related to potential odours from the PCCWMF observed off-site of the landfill. Three (3) of the complaints related to temporary shutdowns of the landfill flare. In the other six (6) cases, the source of the odour could not be identified.
2. Twenty-seven (26) of the complaints were related potential odours from the POF observed off-site. Three (3) of the odour complaints were likely caused by nearby farm operations. In five (5) cases, odour could not be detected by staff, and in four (4) cases, odour was detected but the source of the odour could not be identified. Fourteen (14) of the complaints were caused by operations of the POF. Odour caused by operations of the POF should be minimized by operational changes instituted over the first year of operation.
3. One (1) of the POF odour complaints also included a complaint regarding trucks using incorrect haul routes. It was found that the trucks in questions were not delivering material to the landfill, but stockpiling finished compost on a nearby property.

4.0 LEACHATE COLLECTION SYSTEM

The SFA LCS and NFA LCS collect leachate generated within the waste, along with groundwater collected by the site's interceptor trench, and convey it to the City's Waste Water Treatment Plant (WWTP). A description of the LCS is provided in Appendix C. The LCS is shown on Figure C.1, Appendix C.

4.1 Leachate Monitoring

4.1.1 Leachate Quantity

Pursuant to ECA Condition 10(19) c. x), Table 4.1 presents a monthly summary of leachate/groundwater collected and transferred to the sanitary sewer at Neal Drive. Also, Table 4.2 presents the weekly amount of leachate/groundwater collected and transferred to the sanitary sewer. The volume of leachate and groundwater removed in 2024 was 84,259 m^3. This is an 8.1% decrease from the 91,727 m^3 removed in 2023.

The largest amount of leachate removed from site in one year was 107,981 m3, which occurred in 2011. Table C.1 (Appendix C) provides a historical comparison of recorded leachate/groundwater volumes.

Of the 84,259 m^3 of leachate and groundwater removed in 2024, 37,881 m^3 or 45.0% was from the SFA and 46,378 m3 or 55.0% was from the NFA. In comparison, 91,727m^3 of leachate and groundwater removed in 2023, with 41,175 m^3 or 44.9% from the SFA and 50,552 m^3 or 55.1% from the NFA. The ratio of precipitation to leachate generation from the SFA is expected to be relatively consistent on an annual basis as the entire SFA is under final cover. The volume of leachate produced within the NFA has increased greatly since the Cell 4 became operational in December 2022. This increase in leachate volume in the NFA is expected to continue until waste elevations reach final contours and final cover placement begins in Cell 4. Leachate quantities collected from both the NFA and SFA in 2024 slightly lower than 2023 quantities. This corresponds to weather patterns throughout the year and the lower volume of precipitation received on site in 2024.

4.1.2 Meteorological Data and Water Balance Analysis

To evaluate LCS performance, an assessment was made for the contributing factors to leachate production at the site. The data and calculations are included in Tables C.1 and C.2 (Appendix C) and are discussed below. The monthly leachate/groundwater volumes discharged to the sewer are provided in Table 4.1.

The total precipitation received at the Peterborough Airport in 2024 was measured to be 764 mm (Environment Canada, 2024), which is 6.5% decrease from the precipitation received at this location in 2023, and less than the climate normal of 840 mm recorded at the Peterborough Airport from 1991-2020. It is noted that the annual precipitation totals for 2021 through 2024 at the Peterborough Airport climate station have been supplemented by data from other, nearby climate stations for days in which data was unavailable at the Peterborough Airport station; for the calculations and interpretations within the 2024 monitoring report. A list of the supplemented data is on file. Approximately 44% of the collected leachate within the SFA during 2024 is attributed to precipitation infiltration through the landfill cap and refuse, with the remaining portion of the collected leachate attributed to groundwater inflow at various locations surrounding the cell. Appendix C provides a description of the calculations completed for the water balance.

The volume of leachate collected within the NFA in 2024 was a 8% decrease compared to the volume collected within the NFA in 2023. This corresponds with the decrease in precipitation in 2024, compared to 2023, as well as the small increase in area where final cover had been applied to the NFA. The collected leachate within the NFA resulting from precipitation infiltration is approximately 75%, compared to 44% in the SFA, which is not unexpected, as the SFA is completely under final cover.

4.1.3 Leachate Quality

South Fill Area

In 2024, leachate generated at the South Fill Area (SFA) was characterized by samples collected from the South Fill Area holding tank, maintenance hole MHT6-94 and from refuse monitor 23B. These locations were selected to ensure that representative samples are obtained which reflect actual leachate quality. The quality of the groundwater in the interceptor trench was characterized by samples collected from MH4. The 2024 leachate chemistry from the SFA collection system (holding tanks and MHT6-94), refuse monitor 23B, and interceptor trench MH4 is summarized in Table 4.3 along with historical leachate quality data and representative concentrations for municipal landfills in Ontario (Freeze & Cherry, 1979 and the Ministry of the Environment, 1993). In general, the 2024 leachate quality at the SFA was within the range of representative concentrations for municipal with the exception of:

- Chloride concentrations in the spring samples in 2024 within MH4 appear noticeably higher than previous, although concentrations decreased in the fall.
- Alkalinity concentrations at the SFA holding tank and MH6-94 were slightly above the typical leachate range but within historic range;
- TKN concentrations at the SFA holding tank in April and October, which were above the typical representative range, but within historic range;
- Chemical oxygen demand (COD), magnesium and sodium concentrations at refuse monitor 23B in spring 2024 which were above the typical representative range, but within historic range; and
- The ammonia concentration at MH6-94 during the October sampling event, above the typical representative range, but within historic range.
- Similar to previous years, potassium concentrations at the SFA holding tank in October were below the typical representative range but within historic range;

North Fill Area

Leachate generated at the North Fill Area (NFA) was characterized by samples collected from the North Fill Area holding tank. The 2024 leachate chemistry from the NFA collection system is summarized in Table 4.4 along with historical leachate quality data and representative concentrations for municipal landfills in Ontario (Freeze & Cherry, 1979 and the Ministry of the Environment, 1993). In general, the 2024 leachate quality at the NFA was within the range of representative concentrations for municipal with the exception of:

- TKN concentrations at the NFA holding tank in 2024 where elevated compared to typical representative range but within historic range; and,
- Potassium concentrations at the NFA holding tank in October were below the typical representative range but within historic range.

Both of these circumstances were consistent with previous years.

Peterborough Organics Facility

Compost generated leachate is referred to as ‘leafate’. Leafate generated at the POF was characterized by samples collected at a manhole (MH4; denoted BENSOLCH) located upstream of the connection with the North Fill Area gravity line.

The 2024 leafate chemistry from the POF collection system is summarized in **Table 4.5** along with historical leachate quality data and representative concentrations for municipal landfills in Ontario (Freeze & Cherry, 1979 and the Ministry of the Environment, 1993). In general, the 2024 leafate quality at the POF was within the range of representative concentrations for municipal with the exception of:

- Concentrations of ammonia and Total Kjeldahl Nitrogen (TKN) are higher in the leafate than the typical range of leachate.

Identification of Leachate Indicator Parameters

A comparison of historic background water quality and leachate results has allowed for the identification of site-specific leachate indicators. A combination of parameters with higher or lower concentrations in leachate relative to the background water quality can be used as leachate indicator parameters to identify landfill leachate influence in groundwater.

For the NFA and SFA the typical range of concentrations in most leachate indicator parameters. Leachate at the Site is characterized by elevated concentrations of alkalinity, ammonia, boron, COD, chloride, iron, manganese, phosphorus, potassium, sodium and TKN when compared with background “fresh” overburden and bedrock groundwater quality.

Areas of bedrock at the site have naturally occurring conditions of brine and concentrated brine, which causes interference when using chloride and sodium as indicator parameters. Deep bedrock groundwater quality classified as “brine”, leachate at the Site is characterized by elevated concentrations of alkalinity, ammonia, boron, COD, iron, manganese, phosphorus, potassium and TKN. For areas with deeper bedrock groundwater quality classified as “concentrated brine” leachate at the Site is characterized by elevated concentrations of only alkalinity, ammonia, iron, manganese, phosphorus and TKN. As such, these elevated parameters were chosen as diagnostic leachate indicator parameters for the discussion of the applicable downgradient groundwater quality.

Historically, chloride, TKN, alkalinity and iron have been used as the primary leachate indicator parameters. They continue to be considered the primary leachate indicator parameters, with the exception of chloride for the groundwater quality classified as brine and concentrated brine, as noted previously.

Identification of Leafate Indicator Parameters

Leafate indicator parameters were identified during design of the POF by D.M. Wills and Associates (Wills, 2021) and are summarized below:

- Alkalinity
- Ammonia+Ammonium
- Barium
- Boron
- Cadmium
- Calcium
- Chloride
- Conductivity
- Copper
- Iron
- Lead
- Magnesium
- Nickel
- Nitrate
- Phosphorus
- pH
- Sodium
- Sulphate
- Total Dissolved Solids
- Zinc
- Dissolved Organic Carbon (DOC)
- Biological Oxygen Demand (BOD_5)
- Chemical Oxygen Demand
- Field – pH
- Field Conductivity
- Total Suspended Solids

Typical leafate ranges for the identified parameters was not provided in Wills, 2021; however, the leafate characterization technical reference by Roy *et. al,* 2018 referenced provides a range of leachate concentrations. This analysis includes both open and closed facilities for a range of waste streams including mixed municipal wastes, yard wastes, green waste and wastewater treatment sludge for both enclosed, open tunnel and lab-scale scenarios. For comparison purposes, a range of typical leachate from yard and green wastes is provided in **Table 4.5** along with typical municipal solid waste leachate for comparison.

4.1.3.1 In-Waste Leachate Characterization South Fill Area

In-waste monitor 23B is located at the south end of Cell 1 – South (SFA). The laboratory results for the sampling events in 2024 at this monitor, along with the historical results since 2018, are contained in Appendix C.

As shown in the time-concentration graphs, concentrations of alkalinity, COD, chloride, iron, manganese, phosphorus, potassium, and TKN have generally fluctuated within a lower range since 2005 compared to the concentration ranges between 1986 and 1993 and have generally decreased between 2005 and 2024. Iron and manganese concentrations have fluctuated over a large range between 2004 and 2024. In the short term, concentrations for most parameters in 2024 were similar to or lower than in 2023. It is noted there is no chemistry data available between 1993 and 2005 for monitor 23B, based on the historical data provided by the City. The fluctuations between sampling events are attributed to the variable nature of leachate within the refuse. The leachate quality at this location is typical of older leachate.

Monitor 23B provides a general understanding of the leachate quality over time at the Site. Installation of additional in-waste monitors within the SFA is not warranted at this time.

4.1.3.2 Leachate Collection System Leachate Quality Characterization South Fill Area

Full historic laboratory results for the leachate holding tanks and MH6-94 are summarized in Appendix C. Time-concentration graphs for the samples obtained from the holding tanks are presented in Appendix C. As shown in the graphs, parameter concentrations at the SFA leachate holding tank generally fluctuated within a narrow range between 1991 and 2003, but the fluctuating range was greater between 2004 and 2007, returning to a narrower range since that time. Concentrations of alkalinity have remained stable since 2014.. Concentrations of alkalinity have steadily decreased at MH6-94, while concentrations of chloride generally decreased between from 2017 to an historic low in 2023 before increasing slightly in 2024. Iron concentrations have been steadily increasing at MH6-94 since 2021.

Similar to previous years, concentrations of VOCs in the SFA holding tanks were measured at detectable concentrations for the following parameters: 1,4-dichlorobenzene, benzene, chlorobenzene, and various forms of xylenes.

Based on the SFA leachate chemistry results, the 2024 leachate quality in the SFA holding tank generally satisfied criteria contained in Sewer Use By-law No. 15-075 with the exceptions of the following Total Kjeldahl Nitrogen (TKN) during the 2024 monitoring.

Since the SFA holding tank receives the groundwater pumped from the interceptor trench (MH4) and from the LCS, the concentration of leachate parameters will be affected by the relative proportion of groundwater that is in the holding tank at the time of sampling.

Grab samples collected from the holding tank when it has a higher proportion of groundwater will have lower concentrations of leachate indicator parameters. Grab samples collected from the holding tank when groundwater is not discharging from MH4 will have higher concentrations of the leachate indicator parameters. Other operational factors, such as regulating the leachate discharge rate from cells, will also impact the characteristics of the leachate in the holding tanks. On this basis, the following conditions for collection of leachate quality samples from the holding tanks should continue to be implemented:

- No discharge from the leachate interceptor trench pumping station (MH4) to the holding tank for 24 hours prior to sampling event. Record the MH4 pump hour records for the day before the sampling event and the day of the sampling event.
- Conduct sampling at least 72 hours after a precipitation event.
- Record the position of the leachate control valves at MH6-94 and TDCO-A0-05.

The above conditions were met during the collection of leachate samples obtained in 2024.

North Fill Area

Indicator parameters at the NFA leachate holding tank were generally similar to within the NFA holding tank have experienced high variability over time which is consistent with the evolution of leachate strength. The relative age of the existing waste at the site, along with the new waste recently placed in the NFA, also contributes to the variability of the leachate characteristics in the NFA holding tank.

The concentrations of most organic parameters analyzed for the leachate holding tank samples in 2024 were below the method detection limit for both sampling events, with the exception of those parameters listed in Table 4.4. In general, the detected parameters were similar to historical results, with the exception of detectable concentrations of 1,4-dichloroethane, dichloromethane, xylenes, and phenols in 2024 in the NFA holding tank.

Based on the NFA leachate chemistry results, the 2024 leachate quality in the NFA holding tank generally satisfied criteria contained in Sewer Use By-law No. 15-075 with the exceptions of the following total Kjeldahl Nitrogen (TKN) during the 2024 monitoring.

Peterborough Organics Facility

Leafate at the POF was first generated in 2024. As summarized in **Table 4.5,** the leafate quality is highly variable which is expected during the start up of operations. An dramatic increase between April and October is reported with respect to ammonia, COD, DOC and TSS as organic decomposition uses available oxygen within the unprocessed compost.

Styrene was the only Volatile organic compounds (VOCs) detected in the leafate in April 2024 with a concentration of 1.3 µg/L. All other VOCs were below their respective method detection limits.

4.1.3.3 Interceptor Quality Characterization

Results for the October 2024 sampling event at MH4 for the interceptor trench are contained in Appendix C. In general, parameter concentrations fluctuate with no distinguishable trend, although chloride and sodium concentrations have exhibited generally increasing trends since 2004. It is noted that, following a general decreasing trend between 2012 and 2015, concentrations for alkalinity, iron, TKN, potassium, and sodium increased in 2016 and have fluctuated since this time, with levels decreasing to historical lows for some parameters in 2021 and rebounding in 2022/2023 and again increasing in 2024. The concentration increases may be attributed to the relatively low amount of precipitation received during the year but continued monitoring will permit a further assessment of the long-term trend for the interceptor trench.

It is noted that concentrations of some parameters prior to 1993, including potassium, biochemical oxygen demand, and TKN, were elevated compared to concentrations during the following years. The subsequent decrease after 1992 is attributed to the discontinuation of the direct release of leachate into this system. The groundwater in the interceptor system is characterized as somewhat degraded due to natural conditions and brine influences, along with low levels of some residual leachate related parameters.

4.1.4 Waste Water Treatment Plant

ECA Condition 10(19) c. viii) requires that the annual monitoring report include an assessment of potential and actual impacts, if any, of leachate on the WWTP. A detailed assessment is provided in Appendix D.

The impact of leachate on the WWTP was evaluated based on the quantity and quality of leachate discharged. The mass loading of key leachate components was compared to the overall loading of parameters entering the WWTP. Key observations from 2024 and recommendations for 2025 are summarized below:

1. Samples were collected in March and October 2024 for analysis and compared to selected parameters in the City of Peterborough Sewer Use By-law;
2. April had the highest average daily flow of leachate with 510 m^3/day;
3. November had the lowest average daily flow rate of leachate with 56 m^3/day;
4. The average daily leachate flow rate in 2024 was 230 m^3/day. This was a 9% decrease from 2023;
5. In 2024, the average influent volume from the PCCWMF to the WWTP was 0.51% of total influent volume, which is considered insignificant in terms of hydraulic load;

6. In January 2024, the PCCWMF conveyed its highest fraction of influent, providing 0.86% of the total WWTP influent hydraulic load;
7. The leachate samples satisfied the By-Law criteria with the exceptions of TKN in the SFA and NFA holding tanks sampled both in March and October 2024, and BOD_5 in the NFA holding tank sampled October 2024.
8. BOD_5, TSS, phosphorus, and COD loads on the WWTP from landfill leachate are low and represent only a small portion of the WWTP capacity; and
9. TKN load on the WWTP appears to be in the range of 1.3% and 3.1%.

Based on the analysis of this data, it is concluded that leachate from the PCCWMF had little effect on the loadings at the WWTP.

4.2 Leachate Collection System Performance

4.2.1 Leachate Head Monitoring Locations

In 2024, leachate levels were monitored at standpipes and inclined standpipes within the SFA. Standpipes are located in the vicinity of the leachate toe drain along the eastern and northern limit of waste. Inclined standpipes are located along the limit of waste for Cell 1 - South and at the base of the waste below the east side of Cell 1 - North. The locations of all monitors in the SFA are shown on Figure 2.1.1 and Figure 5.1.

Inclined standpipes, designated ISP15 and ISP16, were installed in Cell 2 and Cell 3 of the NFA. Inclined standpipes are installed at the time of construction of the landfill cells and used to monitor the leachate levels within the cells. The results for the 2024 monitoring events at these locations are included in Table E.3. A new incline standpipe, designated ISP17, was installed during Cell 4 construction in 2022, to monitor leachate levels within Cell 4 of the NFA. The locations of the NFA inclined standpipe are shown on Figure 2.1.2 and Figure 5.1.

In 2024 new standpipe SP-21 was installed in Cell 2 to replace ISP-15 which was damaged.

4.2.2 Leachate Mound Assessment

A summary of 2024 monitoring results are presented in Tables E.2 for vertical standpipes and E.3 for inclined standpipes. Based on data obtained at locations within the waste mound the following is a summary of key observations:

- The long-term hydrograph for refuse Monitor 23B is contained in Appendix C. The leachate levels within Monitor 23B generally decreased in 2024 compared to 2023; however 2024 levels are within historic range.
- The standpipes were generally dry for 2024 with the exception of, SP8-90 and SP14-94 on at least one occasion in 2024. The levels within SP14-94 confirm the leachate level and the hydraulic connection to the leachate holding tank. The other monitors had measurable levels during monitoring events in February, June or November and were likely related to seasonal precipitation. In general, the standpipe levels (with the exception of SP14-94) were observed to be dry during the monitoring event following a measured level. The measurements in 2024 are consistent with those observed in 2023.Inclined standpipes at the SFA generally had low levels, with the exception of ISP7-95 a which is similar to historical results. Levels obtained from inclined standpipe ISP7-95 indicate there is some leachate mounding present within the upper cell of Cell 1-South, but the low levels are generally consistent with

historical data. These low levels indicate the LCSs in these locations are performing as designed and there is no evidence of significant mounding.

- Inclined standpipes at the NFA include ISP15, ISP 16 and ISP17. ISP16 was dry on all occasions in 2024. Levels obtained from inclined standpipes ISP16 and ISP17 indicate there is minimal although measurable leachate present within the south sides of the NFA Cells 3 and 4. ISP15 and ISP17 had observable levels of leachate in 2024 Data obtained by the City for monitor ISP15 are approximate readings as there were often issued collecting the measurements within the pipe. Monitor ISP15 appears to have been damaged, but City staff were able to get reliable measurements in 2024. The intent was to have this monitor replaced with a vertical refuse monitor during the Landfill Gas Control System (LFGCS) Phase 4 works in the spring of 2024. This work was completed in 2024. The installation of the refuse monitor within Cell 2 will be in accordance with the recommendations in the D&O report.

In summary, the leachate level mounding results at the monitored locations confirms the SFA is performing as designed, and the minimal leachate mounding is comparable to historical results; but continued monitoring and additional field investigations regarding monitor condition should be considered. Leachate level mounding in the NFA is measured with some difficulty at three locations. The installation of the refuse monitor within Cell 2 will be in accordance with the recommendations in the D&O report.

Consideration should also be given to the repair of several corroded casings, if conditions allow without further compromising the integrity of the standpipes. Continued monitoring will permit ongoing assessments of potential mounding, in the future.

4.3 Surface Seepage Monitoring

As part of the surface water management strategy, inspection for evidence of leachate seepage is undertaken on a regular basis. In 2024, two small seeps were noted on the south and east side of the NFA landfill by WSP during the LFG monitoring event on September 19. The landfill manager was notified, and the two areas were repaired the following day by Tomlinson. Throughout the remainder of the year, the seep was observed to be contained and was not observed after September 2024.

4.4 Leachate System and Interceptor Trench Inspection and Maintenance

During 2024, the City regularly inspected the operation of the leachate management system as part of the site inspection process. Table 3.1 summarizes the key maintenance activities that were undertaken on a monthly basis in 2024, for the entire site including the leachate management system.

4.4.1 Flushing and Video Inspection

ECA Condition 6(42) requires the LCS to be video inspected every two years and newly installed LCS to be video inspected annually for 5 years following the installation. In 2024 the NFA and SFA were required to be flushed, and the NFA video inspected as per the terms in the ECA. Due to miscommunication with the Cell 4 contractor, flushing and video inspection of Cell 4 was missed in 2023 and was instead completed on March 28, 2024 as part of the 2023 flushing and inspection program.

The NFA LCS was flushed and video inspected by the City during multiple site visits between September and October, 2024. The SFA LCS and interceptor line was flushed during the same period. A summary of inspection and flushing completed in 2024 is included in Table 4.6. Figures 4.1 and 4.2 illustrate the locations of the

collection piping flushed in 2024, and Figures 4.3 and 4.4 illustrate the locations of the collection piping video inspected in 2024.

On Figures 4.1 and 4.2, it can be seen that portions of the LCS were only partially flushed. Typically, this is due to flushing equipment having to climb up-slope through the LCS pipes. When the flushing equipment can no longer climb the slope, flushing is ceased. Cells 2, 3, and 4 in the NFA were flushed and video inspected 2024. Review of the 2024 data shows the LCS in Cell 4 is functioning as designed. The majority of the SFA was flushed with the exception of some of the LCS pipes central to the waste mound. Access to these pipes is limited due to equipment unable to pass couplings or bends in the pipes on top of equipment having to climb upslope through the LCS pipes.

The video inspection of the NFA identified no obstructions to the flow of leachate and the LCS continues to function as designed. The City will continue to flush the NFA and SFA LCS on an annual basis. As per Condition 6(42) of the ECA, Cell 4 will be required to be video inspected annually until 2027. Condition 6(42) a) requires the LCS to be video inspected every two years. The LCS in the SFA, will be video inspected again in 2025, while the next required video inspection in Cell 2 and Cell 3 will be in 2026. Should conditions change, the frequency of maintenance and inspection will be re-evaluated.

4.4.2 Leachate Pump Stations and Forcemains

In 2010, Cell 2 of the NFA was constructed. Construction included a new pump station and forcemain to convey leachate from the NFA to the sanitary sewer manhole on Bensfort Road. The pump station and forcemain have been operational since July 2010. The NFA pump station and forcemain are operating as designed. These services will be maintained in accordance with the requirements of the ECA.

The following site works and maintenance activities related to the pump stations and forcemains were completed in 2024:

1. The flowmeter on the NFA pump was reset to zero on January 2.
2. Level sensor was adjusted for forcemain pumps 1 and 2 in the NFA on January 15.
3. Pump control failure resulted in a minor leak of leachate from SFA pump station on February 13. Leachate was contained within the area and affected material was promptly cleaned up and placed in the landfill. Spill was reported to Spills Action Centre (Ref#1-UNHS9V). The pump control was repaired on February 14.
4. NFA condensate pump failed on March 1. The pump was replaced by Barry Electric on the same day.
5. The leachate forcemain was pressure tested on November 6.

5.0 GROUNDWATER MONITORING

5.1 Site Conceptual Model

5.1.1 Physical Setting

The PCCWMF and POF is situated in the Peterborough drumlin field physiographic region (Chapman and Putman, 1984). This physiographic region is characterized by a series of elongated hills known as drumlins rising above a glacial till plane. Locally, these drumlins are oriented north-east to southwest. Local portions of the area are veneered with glaciolacustrine fine sands, silt, and clay that were deposited in ponded glacial meltwaters.

At some locations wetlands have formed in depressions between the drumlins. The SFA is situated on the eastern flank of a well-defined drumlin. The NFA is situated in an area between drumlin features, while the POF is located on the southeastern flank of a poorly defined drumlin. A physical setting is presented in **Figure 6.1**.

5.1.2 Surface Water and Drainage

A pre-development surface water divide is inferred to be present across the POF. The surface water divide may have been partially graded out the development of the POF or reinstated to the northwest as a berm along the northern property line. This feature will direct drainage and overland flow at the Site in a predominantly southeast direction. The topographical high present here will drive the overland flow of the Site. Post construction activities included grading and concrete lining of a majority of the southern portion of the Site, with future plans to add non permeable surfaces (asphalt) to the east portion of the Site where a stormwater management pond collects surface flow and conveys it to the sewage works.

Western Creek is located approximately 250 m southeast of the Site. Western Creek flows southwest through the Crystal Springs Wetland located between the South Fill Area and North Fill Area.

The wetland area between the NFA and SFA is relatively flat and poorly drained. It is mostly underlain by glaciolacustrine silt and clay soils similar to those overlying the drumlin margins east of the South Fill Area. The wetland is part of a larger complex which ultimately drains to the Otonabee River which flows via the Trent River to Lake Ontario.

5.1.3 Previous Investigations

Previous investigations at the Site include hydrogeological and geotechnical reports for subsurface investigation,

North Fill Area and South Fill Area

- *Jagger Hims Ltd. 2004. Peterborough County/City Waste Management Facility North Fill Area Detailed Hydrogeological Study. Prepared by Jagger Hims Limited. Prepared for Earth Tech Canada Inc. Dated January 26, 2004. Project 880016.12*

This report includes a detailed hydrogeological study for pre-design of the North Fill Area which was completed by Jagger Hims Ltd. (JHL, 2004).

- *Gartner Lee Ltd. 1991. City of Peterborough Bensfort Road Landfill Site, Application for Interim Expansion (borelogs and cross sections reviewed).*

This report was completed as part of an interim expansion application. The boreholes and cross sections were contained in JHL, 2004, above.

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- *D. M. Wills and Associates Ltd. (2021). Hydrogeological Assessment Report Southern half of Lot 16, Concession 14, Township of Otonabee-south Monaghan, County of Peterborough, ON. Prepared for the City of Peterborough. Prepared by D. M. Will Associate Ltd. Dated: January 2021. Project 19-7325.*

This report summarizes a soil and groundwater investigation at the Site for work completed in 2020 to support the Official Plan and Zoning By-law amendment and ECA application.

Areas surrounding the Site

Borehole logs were also reviewed from Provincial Water Well Information System (WWIS) to gain geological information north, west and east of the Site.

5.1.4 Stratigraphy

The borehole information and well construction details were compiled from previous subsurface investigations. Most of the available information pertains to the subsurface underlying the North Fill Area and South Fill Area. Additional information from the Peterborough Organics Facility was also incorporated.

Boreholes at 344 locations were compiled to create plan view and cross sections of the Site and surrounding areas. Of those 344 boreholes, 200 are active monitoring wells and 113 included nested wells, with a selection shown in **Figure 5.1**.

5.1.5 Overburden Geology

Shallow surficial deposits of mainly silt and clay were intersected in some boreholes drilled in parts of the Crystal Springs Wetland. Based on borehole data, the thickness of the fine grained soils in the Crystal Springs Wetland area varied between 1.9 m and 8.4 m.

As part of the JHL (2004) and GLL (1991) investigations, over 100 borehole logs were reviewed from the NFA and SFA areas. The interpreted stratigraphy based on the geology obtained from the boreholes is of a glacial till plain comprised predominantly of a silty sand till. In the North Fill Area the total thickness of the overburden was found to be between 11.0 m and 20.7 m.

The silty sand till was inferred to be bouldery in nature and typically increases in density with depth. The upper 5 m of the till is weathered as characterized by the brown colouration and fractures. The deeper unweathered portion of the till is typically grey and very dense.

Within the till matrix, zones of generally coarser textured sediments were at many of the boreholes. The thickness of these zones ranged from 0.3 m to 3.4 m and were horizontally discontinuous. Borehole log descriptions classified the material as sandy gravel to silty fine sand; however, particle size analysis grades the material as a fine sand and silt.

At the POF, the investigation by Wills (2021) reported similar soil descriptions to the JHL (2004) report and summarized that overburden geology is classified as fine textured sandy silt to silty sand till deposits of varying thickness. Borehole logs described brown dense soils with orange mottling within 5 metres of ground surface. Most logs described an increase in density and changing colour to grey till at depths greater than 5 metres. Increasing density is supported by the distinct increase in blow counts on the penetration test. Samples of the overburden were collected and submitted for grain size analysis.

Borehole logs were also reviewed from the Provincial Water Well Information System (WWIS) to gain overburden information north, west and east of the Site. The Well Records include the drillers description which often refer to hard pan, or coloured till as the predominant overburden material.

5.1.6 Bedrock Geology

Underlying the North Fill Area and South Fill Area overburden is a grey, finely crystalline Paleozoic limestone of the Verulam Formation.

The limestone is characterized as containing shaley laminae and some shaley interbeds. Few vugs were observed in the limestone. Adjacent and south of the Site, 48 borehole logs previous investigations encountered

bedrock JHL (2004) and GLL (1991). Under the southwestern portion of the South Fill Area and northwestern portion of the North Fill Area the bedrock surface is topographically high beneath the glacial till plan. From these areas of high bedrock the bedrock slopes downward toward the low lying area beneath the Crystal Springs Wetland. This buried bedrock channel trends easterly to southeast. The interpreted bedrock surface adapted from JHL 2004 is shown on **Figure 5.2**. Core samples were collected and logged as part of this program.

The rock appeared unweathered at boreholes 86, 90, 104 and 107, while at other locations the rock surface appeared weathered. Borehole logs were also reviewed from Water Well Information System (WWIS) to gain bedrock information north, west and east of the Site. Approximately 350 m north of the Site bedrock was found approximately 15 metres below ground surface (mbgs).

The 38 boreholes completed as part of Wills (2021) investigation at the POF did not encounter bedrock. Two of the deepest boreholes completed as part of this drilling program were advanced to 18.3 mbgs without encountering bedrock. As such, there is no Site specific information on the depth to bedrock directly underlying the Site.

A water supply well WWIS tag A248965 was drilled at the POF in 2021 to provide a source of potable water for operations. The well record indicates shale limestone at a depth of 18.6 metres below ground surface which is consistent with the surrounding geology.

Three boreholes were completed in bedrock in early 2025 and will be added to the conceptual model and discussion in the 2025 Annual Monitoring Report.

5.2 Hydrostratigraphy

Based largely on information contained in JHL (2004), for areas south of the Site the general geologic units found across the site correspond to hydrostratigraphic units as follows:

- Weathered Till – unconsolidated, fractured, weathered, brown
- Unweathered Till – unconsolidated, porous, unweathered, grey
- Bedrock – consolidated, fractured limestone, grey

The overburden groundwater flow regime is located within the Weathered Till and Unweathered Till (collectively referred to as the Tills) and the upper boundary of the system consists of the groundwater table. Generally, this is a subtle reflection of the surface topography.

The NFA is situated on a rolling glacial till plain. This till plain merges with a high relief drumlin which dominates the south portion of the PCCWMF. Soil within these features is a silty sand till deposited by glacial action. Discontinuous sand seams occur randomly in the till. There is a topographical low area within the southern portion of the NFA that is partially occupied by the Crystal Springs Wetland. Clay and silt veneer the till within the lowland. Soil thickness over the bedrock is between approximately 12 and 21 m. The upper part of the bedrock is a groundwater aquifer.

Overburden groundwater flow at the POF is in a southeast direction. The 2021 investigation by Wills (2021) supports the JHL (2004) interpretation of the till units at the Site; however, the groundwater monitoring data do not support a separate shallow and a deeper aquifer within the Till. The Till units share a water table and have near neutral vertical gradients with decreasing hydraulic conductivity with depth. Groundwater in the overburden is typically highest in the spring and lowest in the summer and early fall.

Groundwater in both the soil and rock naturally flows from the topographically higher portions of the till plain southeasterly towards the wetland, at flow rates summarized further in Sections 5.3.3 and 5.3.4 below. The wetland is generally a groundwater discharge zone. Water quality is generally considered potable in the till and weathered bedrock. Deeper into the rock and locally near the rock surface, some groundwater is characterized as a brine.

The bedrock groundwater flow regime under the POF is currently uncharacterized. With the presence of the overlying till formation, the bedrock is considered a confined aquifer. For areas south of the Site, the potentiometric surface (confined groundwater elevation) of the bedrock is a reflection of the overburden flow system, as groundwater flows from the higher elevations towards the Crystal Springs Wetland. Vertical gradients will be discussed further in section 5.5).

5.2.1 Hydraulic Conductivity

Saturated hydraulic conductivity is the measure of the soil's ability to conduct water under saturated conditions. It can be derived empirically by comparing to soils properties (such as grain size) or measured experimentally through fall head/rising head displacement tests or water level response to pumping tests on nearby wells. From previous investigations, the calculated ranges of hydraulic conductivities for each of the three units are summarized below.

Estimates of Hydraulic Conductivity (m/s)

Investigation	Source/Method	Geometric Mean	Range
Weathered Till			
Wills (2021)	Falling Head Test at MW20-22		5.5×10^{-7} to 2.3×10^{-6}
Wills (2021)	Falling Head Test at MW20-27		3.5×10^{-6} to 6.5×10^{-6}
JHL (2004)	7-hour pumping test	1.26×10^{-6}	
Unweathered Till			
JHL (2004)	x8 Rising Head Tests	2.0×10^{-7}	1.6×10^{-8} to 1.3×10^{-6}
JHL (2004)	Grainsize	2.0×10^{-8}	1.0×10^{-8} to 2.0×10^{-7}
JHL (2004)	7-hour pumping test	4.4×10^{-6}	
Bedrock			
JHL (2004)	x7 Rising Head Tests	2.9×10^{-7}	1.4×10^{-9} to 4.2×10^{-5}

5.2.2 Gradients

Horizontal gradients and vertical gradients are measured between locations within the same hydrostratigraphic unit and determine the direction of groundwater flow. Reported measurements of horizontal gradient from previous investigations for each of the three units is summarized in below.

Estimates of Horizontal Gradient (m/m)

Investigation	Horizontal Gradient
Unweathered Till	

Investigation	Horizontal Gradient
Wills (2021)	0.02
JHL (2004)	0.029
WSP (2024)	0.024
Bedrock	
JHL (2004)	0.021 (North Fill Area)
WSP (2024)	0.021 (North Fill Area)

The vertical gradients within the Till at the Site are neutral to downward. Vertical gradients are also downward through the Till and the bedrock within the North Fill Area, with localized upward gradients discharging to the Crystal Springs Wetland.

5.3 Cross Sections

Representative cross sections were prepared for the Site based on the borehole log information, hydrostratigraphic interpretation and groundwater flow information presented above. The locations of the two cross sections are shown on **Figure 5.1** in plan view.

Cross Section A-A' (**Figure 5.3**) summarizes the information along a north to south trending section through the Site. The northern extent of the section crosses Baseline Road and includes domestic wells. Moving south along the profile towards the POF, the boreholes from the 2020 investigation at the Site (Wills, 2021) are depicted with some offsets to allow for inclusion. The screened intervals illustrate the vertical and horizontal gradients between monitoring wells.

Moving south along the section from the Site towards the Landfill, borehole logs and cross section information from the previous investigations (JHL, 2004 and GLL, 1991) has been graphically compiled. Pre-construction ground surface and depth to bedrock are shown along with landfill specific features such as liner, leachate collection system and limit of waste. **Figure 5.4** identifies the cross-section detail of the profile through Cell 2 of the North Fill Area. Continuing south, the bedrock discharges local upward to the till and the Crystal Springs Wetland and Western Creek. The relief of the closed South Fill Area is evident to the south.

Cross Section B-B' (**Figure 5.5**) summarized the information along a west to east trending second along the southern boundary of the POF and northern boundary of the NFA projecting nearby bedrock information where possible.

Moving east along the section, there is an interpreted bedrock high based on the 2004 investigation (JHL, 2004). Two other boreholes along Section B-B' encountered bedrock at similar elevations. This suggests that POF monitor MW20-19 (offset north) may have been constructed at or near the bedrock contact. The POF stormwater management pond base elevation is also depicted followed by the berm at the property line and finishing with Bensfort Road. Moving further to the east there is little bedrock information to characterize the eastern boundary of the Site.

As further described in Section 5.4 of this report, the groundwater quality at the site has been grouped into four categories, for ease of comparison and discussion. Based upon the interpretation of historical monitoring results and their unique groundwater quality, the monitoring locations have been classified as overburden, fresh bedrock,

brine or concentrated brine. Overburden monitoring locations are screened within the weathered and unweathered till, while the fresh bedrock, brine and concentrated brine monitoring locations are screened within the bedrock.

5.4 Groundwater Monitoring Program

In 2024, the groundwater monitoring was conducted in accordance with the amended ECA for the SFA and NFA and POF, as shown in **Table 1.1**.

The groundwater monitoring program is carried out by City of Peterborough staff, and field notes are maintained by City staff during each sampling event. Based on a review of information provided by the City of Peterborough, the groundwater monitors included in the monitoring network are capped, locked, and protected from damage in general compliance with *O.Reg. 903*. It is noted that monitors which require monitor cap replacements and minor repairs are generally repaired by the City, or their consultant, on an ongoing basis.

The existing on-site groundwater monitoring locations are used for monitoring purposes at the site and will continue to be included in the 2024 program.

Private well monitoring was undertaken based on the sampling program identified in the City of Peterborough/Township of Otonabee-South Monaghan Agreement.

5.4.1 Background

A rationalized groundwater monitoring program was presented in the 2006 Annual Monitoring Report with the objectives to:

1. Update the program to reflect existing Site conditions (i.e., property limits and NFA approval);
2. Establish baseline monitoring in the NFA; and
3. Rationalize the SFA program in advance of closure of this area.

The rationalized program was implemented for the 2008 monitoring period (commencing January 1, 2008). Details of the rationalized program are provided in the 2006 Annual Monitoring Report. A summary of the groundwater monitor details is provided in Table E.1, Appendix E.

Upon completion of the NFA Cell 2 construction, additional groundwater monitoring nests, identified as monitoring locations 108, 109, and 110, were installed adjacent to Cell 2 in late 2010, in accordance with the recommendations provided in the D&O Report for the site. Monitors 63-I,II,III and 75-I,II were incorporated into the routine monitoring program in Fall 2014, in accordance with Ministry comments and ECA Amendment Notice No. 1, dated January 5, 2015.

In December 2016, additional groundwater monitoring nests, identified as 111 and 112, were installed adjacent to Cell 3, in accordance with the recommendations in the D&O Report for the site. The three monitors at monitoring location 70 were decommissioned in 2016 and replaced with three new groundwater monitors at monitoring location 113. The monitors at monitoring location 70 were decommissioned due to persistent flooded conditions at the monitoring location, and the replacement location permits compliance with Ontario Regulation (O.Reg.) 903. The new monitors were incorporated into the routine monitoring program in 2017.

In 2020, monitor 52-II was reported as damaged, and monitor 109-II was noted to be compromised. Monitors 52-II and 109-II were both replaced in September 2022.

It is noted that Monitor 84-II was unable to be monitored in spring 2023, due to well damage during construction of Cell 4. Repairs were completed on June 2, 2023, and the well was reinstated to the monitoring program in the fall of 2023.

5.4.2 Changes to Monitoring Program

In February 2024, additional groundwater monitoring nests, identified as 114 and 115, were installed adjacent to Cell 4, in accordance with the recommendations in the D&O Report for the site. These wells were incorporated into the annual monitoring program for 2024 and the results are summarized in this report.

The 2024 monitoring program includes monitoring at the POF and the monitoring wells and results are summarized in this report.

5.5 Groundwater Elevations and Flow

A summary of the 2024 water level elevations is presented in **Table 5.1**. The groundwater monitoring locations are shown on **Figure 5.1**. The 2024 and historical water elevations are presented in in Appendix E and sorted by aquifer unit. The following section describes trends in groundwater elevations based on source area (SFA/NFAPOF) and aquifer unit.

5.5.1 Overburden Flow System

Groundwater elevations at the overburden flow system wells during 2024 were generally comparable to historical values, with seasonal and climatic variations present. Based on the groundwater elevation graphs, the following notable trends are observed:

South Fill Area

- The magnitude of seasonal fluctuation displayed at Monitor 40-II increased abruptly in 2016. The seasonal high levels recorded from 2016 to 2023 are consistent with the pre-2016 results; however, the seasonal fluctuation was less pronounced in 2024 and the September 2024 groundwater measurement was near grade.

North Fill Area

- Groundwater levels at Basal Overburden Monitor 84-I appear to be declining since 2022, although the magnitude of seasonal change is similar to the range observed between 2013 and 2022. Continued monitoring is recommended to access the long-term tends at this location.
- A similar trend is observed at Monitors 104-II and 104-III with relatively stable seasonal fluctuations over the last 10 years. Spring 2024 groundwater was slightly higher that previous years but within historic range. This decrease is likely an influence of the Cell 2 construction and operation.
- Monitors along the eastern site boundary of the NFA including 85-III, 85-II, 86-III, 86-II, 87-III and 87-II have groundwater elevations in 2024 that are consistent with the historic measurements and ranges.

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- Two rounds of water levels were available in 2024 from monitors at the POF. Trends are not readily discernable at this time.

Offsite wells

- The seasonal high groundwater level in Shallow Monitor 46-III located east of Bensfort Road and within the groundwater easement zone and steadily decreased since 2015, with 2023 and 2024 have two of the lowest spring values. This trend is not evident at other nearby offsite shallow monitors 61-III 63-III, or onsite shallow monitors BH48 or 74-III. A slight decreasing trend is observed at the intermediate screen at 74-II.

5.5.2 Bedrock Flow System

Groundwater elevations at the bedrock flow system wells during 2024 were generally comparable to historical values, with seasonal and climatic variations present. Based on the groundwater elevation graphs, the following notable trends are observed:

South Fill Area

- Groundwater levels Shallow Bedrock monitor 17A were observed a new maximum in March 2024.Groundwater levels at Deep Bedrock monitor 17-I were observed at a new maximum in March 2024. Monitoring of these location was re-instated in 2022 and trends for the recent data cannot be assessed at this time. Continued monitoring is recommended to access the long-term tends at this location.

North Fill Area

- Groundwater levels at Shallow Bedrock monitoring 88-I were observed to be slightly lower in 2023 and 2024 compared to previous years.

Offsite Wells

- Water levels in Shallow Bedrock Monitor 75-1 appear to have stabilized in 2024.
- The increase in groundwater level at Deep Bedrock Monitor 76-I continues in 2024, but has slowed compared to previous years. The magnitude of seasonal fluctuations remains similar to previous years. Continued monitoring is required to access the long-term tends at this location.

5.5.3 Horizontal Hydraulic Gradients

In 2024, the measured horizontal gradients are summarized below and show on **Figure 5.6** (overburden) and **Figure 5.7** (bedrock).

In 2024, the calculated horizontal gradients across the Site were:

- SFA Overburden – 0.044 m/m (March) and 0.044 m/m (September);
- SFA Shallow Bedrock – 0.030 m/m (March) and 0.033 m/m (September);
- NFA Overburden – 0.024 m/m (March) and 0.023 m/m (September);
- NFA Shallow Bedrock – 0.022 m/m (March) and 0.021 m/m (September); and,
- POF Overburden – 0.020 m/m (March) and 0.020 m/m (September).

Higher horizontal gradients are generally anticipated in the SFA, where relief is higher. These values are consistent with those measured in previous years.

5.5.4 Vertical Hydraulic Gradients

Vertical hydraulic gradients between hydrostratigraphic units can be evaluated at monitoring wells where multiple well screens have been installed at the same location, but at varying depths. The 2024 vertical hydraulic gradients calculated from the nested well locations are presented in **Table 5.2** and are summarized below and depicted graphically on Cross Section A-A' (**Figure 5.3**).

In the South Fill Area, similar to previous years, the vertical gradients are summarized as follows:

- Flowing conditions were observed at shallow bedrock Monitors 18A and 44-II in March, and indicated upward gradients between the overburden and shallow bedrock at the Monitor nest locations. Monitor 18A is located adjacent to the central watercourse and Monitor 44-II is located west of the low-lying Crystal Springs Wetland area, near the western watercourse.
- Within the Cell 1 South area, downward gradients were observed between the overburden and shallow bedrock at Monitor nest 19, shallow bedrock and deep bedrock at Monitor nests 41 and 44, and overburden and deep bedrock at Monitor nest 62. Downward gradients were observed between the overburden and deep bedrock at Monitor nest 62.
- Upward gradients were observed between the overburden and shallow bedrock at Monitor nests 18 and 20, located near the Groundwater Interceptor Trench. Upward gradients were also observed between the overburden and bedrock at Monitor nests 44, 52 and 64, which are located in the Cell 1 South area.
- Within the Cell 1 North area, neutral to weak upward vertical gradients were observed between the overburden and deep bedrock at Monitor nest 63 and weakly downward gradients were observed between the overburden and deep bedrock at Monitor nest 66.
- Flowing conditions were observed at bedrock Monitor 113-I in March, which indicated an upward gradient was present between the overburden and shallow bedrock. Monitor 113 is located within the low-lying Crystal Springs Wetland area between the North and South Fill Areas. An upward gradient was also calculated between the overburden and shallow bedrock at Monitor nest 113 in September.
- Within the Cell 1 North area, neutral gradients were generally observed between the overburden and shallow bedrock at Monitor nests 50 and 61. Downward gradients were observed between the overburden and shallow bedrock at Monitor nests 46, 75, 81 and 101 in 2023, with the strongest downward gradients observed at nest 75.

In the North Fill Area, similar to previous years, the vertical gradients are summarized as follows:

- Within the North Fill Area, vertical gradients between the overburden and shallow bedrock were typically weakly downward. The exceptions include weak upward gradients at Monitor nests 86 and 92, and neutral gradients at Monitor nest 106 in March and Monitor nest 89 in September. It is noted that the downward gradients observed at Monitor nest 91 are stronger than at the other nested wells in the North Fill Area.

At the POF, vertical gradients were not able to be calculated in 2024. Nested overburden wells do exist at the POF although not all locations area sampled. It is recommended that groundwater levels should be collected at monitoring wells MW20-02A/B and MW20-28A/B to allow for an assessment of vertical gradients within the overburden at the POF.

Additionally, when the three newly installed bedrock wells are added to the monitoring program, vertical gradients between the overburden and bedrock will be available at two locations on the eastern and southern portions of the site.

As described in Section 5.3.1, the hydraulic conductivity of the overburden material in which the monitoring wells are screened was historically estimated to be between 4.7 x 10^{-8} to 8.5 x 10^{-7} m/s. A typical average porosity of 0.4 was assumed for the overburden material (conservative assumption), based upon the range identified for silt and clay (Freeze and Cherry, 1979). Considering the measured in-situ hydraulic conductivity and an average hydraulic gradient of 0.12 in 2024, a hypothetical vertical component of groundwater flow rate of between 0.4 m/year and 8.0 m/year is predicted within the SFA overburden material. For the NFA, a hypothetical flow rate of between 0.2 m/year and 2.8 m/year is predicted, for the 2024 hydraulic gradient average of 0.04.

5.5.5 Interpretation of Flow

The interpretation of the 2024 overburden groundwater flow regime is presented in **Figure 5.6**. An interpretation of the 2024 groundwater potentiometric elevations within the shallow bedrock is presented in **Figure 5.7**. The bedrock groundwater flow pattern generally mirrors the flow directions within the overburden.

Overburden

In the SFA, a drumlin forms a topographical high and groundwater recharge area, with radial groundwater flow and discharge to the adjacent surface water features near the base of the drumlin.

Flow through the refuse and overburden to the east is captured by the landfill underdrain systems and toe drains. Additionally, some groundwater is removed from an interceptor system to the east of the SFA between the fill area and Bensfort Road.

The influence of the groundwater interceptor trench in the SFA is indicated by the lower groundwater level elevations in the vicinity of the trench at monitors T1 and T5, and at adjacent monitoring wells 17, 18, 19 and 20.

The NFA is characterized by the till plain with lower relief, and a gradual slope toward the wetland in the central portion of the Site.

In the NFA, shallow groundwater flow is in a general southeasterly direction, towards the wetland area, with the exception of shallow groundwater within close proximity of Cells 2 and 3. As shown in Figure 5.2, shallow groundwater in close proximity of the cells is towards the refuse cells, since the leachate/liquid levels within the cells are maintained at a level near the base of each cell, due to the underdrain LCS. The configuration of the shallow groundwater flow within the area of Cell 2, Cell 3, and Cell 4 indicates the “hydraulic trap” for the cell is functioning properly and as designed, as measured during monitoring events in 2023 and as shown in **Figure 5.4**.

In the POF area overburden groundwater flow is in a general southeasterly direction.

Bedrock

The bedrock topography forms a top of bedrock high beneath the drumlin and a low beneath surface water features, forming a subdued replica of the ground topography. Groundwater is typically found at about 10 m below ground surface near the crest of the drumlin, about 5 m or less below ground surface on the till plain, and near surface or discharging at surface water features.

As described above, the SFA is characterized by the high relief drumlin and the waste filling areas, with radial groundwater flow to the east towards the central watercourse and north toward the Crystal Springs Wetland. The

groundwater interceptor trench has reduced the potential for off-site groundwater flow from the upgradient drumlin and waste filling areas and the potential discharge of leachate to the central watercourse.

In the NFA, groundwater flow is controlled by the glacial till plain topography. In general, groundwater flow in the NFA is southerly toward the Crystal Springs Wetland.

Bedrock flow under the POF will be evaluated as part of the 2025 annual monitoring report when the new bedrock monitoring wells are incorporated into the monitoring program.

5.6 Groundwater Quality

The 2024 groundwater chemical results are presented along with historical data in, Appendix F. **Table 5.3** identifies the monitoring location summary.

5.6.1 Groundwater Interpretation Groupings

Based on the interpretation of the groundwater regimes, established flow patterns in 2024 were similar to previous years. **Figure 5.1** identifies the monitoring locations at a site wide level and Figures 2.1, 2.2 and 2.3 display the monitoring locations on a site scale basis for the NFA, SFA and POF. Monitors are grouped into areas relative to the direction of groundwater flow and their relative proximity to the refuse cells. These monitor designations are provided on Table 5.3. The areas have been divided as follows:

- SFA Cell 1–South (including former Cells A, B, C and D and part of former Phase 1); which is representative of easterly flow toward the interceptor trench.
- SFA Cell 1–North – east side (including Cells I and J); which is representative of north-easterly flow toward Bensfort Road.
- SFA Cell 1–North – north side (including Cells G and H); which is representative of northerly flow toward the Crystal Springs Wetland.
- SFA Cell 1–North – north and west side (including Phase 2); which is representative of northwesterly flow toward the Crystal Springs Wetland, and
- NFA, which is representative of southerly flow toward the Crystal Springs Wetland
- POF which includes all approved monitoring wells.

5.6.2 QA/QC Results for Groundwater

As part of the field QA/QC program, groundwater duplicate samples were obtained in 2024 for the spring and fall sampling events and submitted for chemical analyses. Results of statistical comparisons between original and duplicate samples for inorganic and organic parameters in groundwater are provided in **Tables G.1** and **G.2**, respectively, in Appendix G.

It is considered that the results of samples for which the relative percent differences (RPD) are less than 20%, applied to parameter concentrations that are at least 5 times greater than the Method Detection Limit (MDL), can generally be interpreted with confidence. Non-detect results and results less than 5 times the MDL are excluded from the RPD analysis. As shown in **Tables G.1 and G.2**, the RPD values for the groundwater duplicate samples generally satisfy the 20% RPD standard, with the following exceptions:

- Alkalinity – BH-17B (March)

- Conductivity – BH-17B (March)
- Chloride – BH-17B (March), BH-53-I (April)
- Sulphate – BH-17B (March)
- Iron – BH-106-III (March), BH63-III (March)
- Nitrate – BH-106-III (March), BH-17B (March), BH-16A (April)

It is noted that the concentrations for the original and duplicate samples referenced above were within the historical range for these monitors, and/or the concentrations within these samples were only slightly above the 20% RPD or 5 times detection limit guideline.

Field blanks were also submitted to the laboratory to provide additional quality assurance. The results for the field blanks are provided in **Table G.4**, Appendix G. As shown in Table G.4, the parameter concentrations in 2024 were generally lower than the laboratory MDL, with the exception of:

- Ammonia in the March 12th, April 10th, and April 16th field blanks and in all three hydrasleeve field blanks;
- COD in the April 10th field blank;
- DOC in the March 18th and September 3rd field blanks;
- Iron in the March 26th hydrasleeve field blank; and
- Molybdenum in the March 12th and March 18th field blanks and the March 5th hydrasleeve field blank. The molybdenum results for groundwater samples collected during these dates should be interpreted with a lower level of confidence based on the elevated concentrations in the sample banks.

The low detected levels in the field blank samples are satisfactory for the sampling program at this site, as the natural concentrations within the groundwater and surface water are typically higher than the concentrations within the field blanks.

It is noted that two field/trip blanks for organic parameters were completed in 2024 and there were no parameters over the method detection limits (**Table G.4**).

Based on the results of the QA/QC program, it is concluded the overall chemistry results are accurate and precise for interpretation purposes.

5.6.3 Results

As previously mentioned, four hydrogeologic units on Site have been classified as overburden, fresh bedrock, brine, concentrated brine, based on the interpretation of historical monitoring results at specific monitoring locations. The 2024 groundwater results are provided in tabular format and as time concentration plots in Appendix F. The series of plots and graphs have been produced for each area of the Site (SFA, NFA, and POF) and sorted by hydrostratigraphic unit to aid in the interpretation of the site.

5.6.3.1 South Fill Area

A comparison of the SFA leachate indicator parameters is compared to reference background quality of each unit in **Table 5.5**.

Overburden

Located in the northwest area of Cell 1 within the SFA, groundwater quality from Monitor 44-III, is used to represent reference quality for the SFA overburden. This monitor was sampled once in 2024 and, as shown in **Table 5.4**, showed one ODWQS exceedance for hardness. In general, this location is reflective of background groundwater. Calcium concentrations have increased since 2019; however, this has not been accompanied by increased in other primary landfill leachate indicators.

At the other overburden wells located in the SFA, exceedances of ODWQS for hardness were also commonly observed as well as exceedances for DOC, iron, manganese, and TDS. Less frequent exceedances were also observed for alkalinity, aluminum, arsenic, barium, chloride, nitrate, sodium, benzene, and 1,4-dichlorobenzene.

As shown on **Table 5.5**, the leachate indicator parameter concentrations at the SFA overburden wells were generally similar to, or greater than, the reference groundwater quality. In 2024, the concentrations of some of the leachate indicator parameters were elevated compared to the reference quality; however, at most locations, only three or fewer parameters were elevated. The exceptions included:

- Monitor 19B located in the Cell 1 South area between the fill area and the groundwater interceptor trench, which had elevated concentrations of most leachate indicator parameters.
- Monitor 52-II located in the Cell 1 South area beyond the groundwater interceptor trench, which had elevated concentrations of alkalinity, COD, chloride and sodium compared to the reference quality. Monitor 52-II was not sampled between 2020 and 2022 as the well was damaged. The well was replaced in September 2022.
- Monitors 48 and 81-III, which are located adjacent to the waste, east of the Cell 1 North fill area. At Monitor 48, concentrations of alkalinity and manganese were elevated compared to the reference quality. At Monitor 81-III, concentrations of alkalinity, ammonia, iron, manganese and TKN were elevated compared to the reference quality.
- Monitors 66-II and 66-III, which are located within an area of known leachate impacts adjacent to the Cell 1 North fill area. Concentrations of most leachate indicator parameters were elevated at these wells compared to the reference quality.
- On the north side of Cell 1 in 2024, monitor 113-II had concentrations of alkalinity, chloride and iron while monitor 113-III had elevated concentrations of alkalinity, iron and manganese.
- On the north/northwest side of Cell 1 alkalinity was elevated at monitor 101-III.

The historic time series graphs in Appendix F show consistent primary leachate indicator parameter concentrations over the long term, with values remaining constant or fluctuating within a range. The notable exceptions are summarized below:

- Monitor nest 18 is located between the interceptor trench and central watercourse. Chloride concentrations at Monitor 18B have been increasing since 2013.
- Located along the north side of Cell 1 North, chloride concentrations exhibit a decreasing trend at BH 33-II and BH33-III since 2016. A complementary trend is observed with sodium.

- Chloride concentrations have increased at BH46-II since 2008 and appear to have in concentrations that is not observed in other indicator parameters.
- At Monitor 52-II located beyond the central watercourse and adjacent to Bensfort Road, chloride concentrations have fluctuated but generally increased from 1993 through to 2023, with a significant increase observed in the April 2023 and again in 2024. The Monitor became damaged in late 2019/early 2020 and, therefore, samples were not collected between 2020 and 2022. The well was replaced in September 2022. As such, the April 2023 sample was the first sample collected from the replacement well and the new results may not be analogous to the historic trend.
- Chloride concentrations at Monitor 61-II have increased since 2009 to a new maximum concentration of 48 mg/L in 2024. Concentrations in shallow monitor BH61-III are also at an historic high of 179 mg/L, but appear to higher variability since 2009.
- Chloride concentrations within overburden Monitor 74-III have decreased over the long term, whereas the chloride concentrations within overburden Monitor 74-II have remained steady over the long term. Alkalinity concentrations within these monitors exhibit fluctuating and increasing trends over the long term, although the trend is more distinguished within Monitor 74-II. Monitor nest 74 is located adjacent to a landfill service road, north of Cell 1 North.
- At Monitor nest 81, located adjacent to a landfill service road along the east side of Cell 1 North, chloride concentrations decreased since 2014 but have increased in 2024. Other indicator parameters have remained stable of within historic ranges.
- Monitors at nests 63 and 75 are located further east in the buffer lands and were monitored from 1991 to 2008 and taken out of the routine monitoring program in 2008. These monitors were then reincorporated back into the routine monitoring program in the fall of 2014. At monitor 63-III concentrations of chloride and nitrate have risen in 2024 to historic maximums at this location. The deeper overburden nest does not exhibit the same trend. While nitrate is not a leachate indicator for the site; however, other parameters within the nitrogen cycle including TKN and ammonia are identified and can be transformed to nitrate through oxidation. Agricultural land use practices should be identified and documented for areas within the Contaminant Attenuation Zone. Similar increases in nitrate are not identified at nearby nest 61. Results at Monitor 75 are consistent with previous years.
- Parameter concentrations at Monitor 70-II were relatively constant, and concentrations within Monitor 70-III generally fluctuated over the long term; with no distinguishable trends noted. Monitors 70-II and 70-III were replaced by Monitors 113-II and 113-III in 2016, at a closer location to the SFA compared to borehole location 70. Chloride concentrations at replacement Monitor 113-II are noticeably higher compared to the historical range at 70-II, whereas the remaining parameter concentrations are comparable to the results from monitor nest 70. Chloride concentrations along with other leachate indicators at Monitor 113-III have shown a steady increasing trend since 2016.
- Chloride concentrations at Monitor 77-1 rose steadily between 2010 and 2018 but have since leveled off and remain stable in 2024.
- Alkalinity concentrations within monitors 40-II and 44-III exhibited a fluctuating but decreasing trend between 2002 and 2017. Monitor 44-III shows an increasing alkalinity concentration trend from 2016 to 2023. Chloride concentrations at Monitor 40-II exhibited a general decreasing trend from 2008 to 2016

and have stabilized since. Monitor nests 40 and 44 are located to the west of the SFA, near the western watercourse and wetland areas. As part of the monitoring program, analysis of VOCs is completed at select overburden wells. As shown in **Table 5.4**, there were detections of VOC parameters at the overburden wells located in the SFA with the exceptions of Monitors 19B, 48, 66-III, 81-II and 81-III. The 2024 VOC detections were generally similar to historical results. The detected concentrations were generally slightly above the laboratory detection limit, and were lower than each respective ODWQS, with the exception of 1,4-dichlorobenzene at Monitor 81-III and benzene at 66-III and 81-III, which exceeded their respective ODWQS. Monitors 66-III and 81-III are located near the toe of the north and east slopes of the SFA, respectively, within the central portion of the site.

Freshwater Bedrock

Also located with the northwest area of Cell 1 within the SFA, groundwater quality from Monitor 101-I, located in the SFA, is used to represent reference quality for fresh bedrock. Monitor 101-I has historically exceeded the ODWQS for hardness, although it did not exceed in 2024 (as shown by the absence on **Table 5.4**).

At the remaining fresh bedrock wells, the 2024 ODWQS exceedances, in addition to hardness, observed at the following locations:

- Monitor 17A: iron;
- Monitor 53-I: iron;
- Monitor 81-I: alkalinity, barium and TDS;

The 2024 ODWQS exceedances are generally similar to historical results.

As shown on **Table 5.5**, the leachate indicator parameter concentrations at the SFA fresh bedrock wells were generally similar to, or lower than, the reference groundwater quality. In 2024, the concentrations of some of the leachate indicator parameters were elevated compared to the reference quality; however, at most locations, only three or fewer parameters were elevated with the exception of alkalinity (53-I; 63-1; 81-I); iron (53-I); Manganese (53-I); and sodium (63-I).

At Cell 1 Monitors 5-V, 53-I, 81-I and 41-II, concentrations of two or less leachate indicator parameters were elevated compared to the reference quality. At Monitor 63-I, located on the east side of Cell 1 North, concentrations of alkalinity, boron and sodium were elevated compared to the reference quality.

The historic time series graphs in Appendix F show consistent primary leachate indicator parameter concentrations over the long term, with values remaining constant or fluctuating within a range. The notable exceptions are summarized below:

- Concentrations manganese at Monitor 5-V appears to have a seasonal fluctuation since 2018 that is not represented by the other more stable parameters of chloride, alkalinity, and iron. Since 2016, TKN concentrations and to a less extent, iron have exhibited a similar fluctuating pattern where higher concentrations are reported in the spring sampling events. This may be indicative of local reducing conditions.
- At Monitor 53-I alkalinity and iron concentrations appear to be increasing again in 2024 after a dramatic decrease in 2023.

- Monitor 63-I was monitored from 1991 to 2008, taken out of the routine monitoring program in 2008 and subsequently reincorporated into the routine monitoring program in the fall of 2014. Following reincorporation of the well into the monitoring program in 2014, concentrations of chloride and alkalinity were lower than the pre-2008 results, while concentrations of iron and TKN were higher than the pre-2008 results. Since 2020, the primary leachate indicator parameter concentrations have stabilized at concentrations similar to the pre-2008 historical range with the exception of sodium which has ben increasing since 2015.
- Trends of several leachate indicators are increasing at Monitor 66-I since 2010, although the results in 2024 are lower than the maximum values reported in 2021/2022.
- At Monitor 81-I alkalinity has decreased from the recent high in 2023 but overall has been increasing since 2014. A similar trend is noted for sodium, hardness and to a lesser extent TDS. The is accompanied by a decreasing trend in chloride and iron in this shallow bedrock monitor.

As part of the monitoring program, analysis of VOCs is completed at select fresh bedrock wells. As shown in **Table 5.4**, there were no detections of VOC parameters at the fresh bedrock wells at the SFA in 2024, which is consistent with historical results.

Brine and Concentrated Brine Bedrock

Historical groundwater quality from Monitor 38-I is used to represent reference quality for the brine wells. As shown in **Table 5.5**, concentrations of chloride, iron, lead, manganese and sodium have occasionally exceeded the ODWQS at Monitor 38-I. At the remaining brine wells sampled on-site, the 2024 groundwater quality results typically exceeded the ODWQS for chloride, DOC, hardness, iron, manganese, sodium and TDS. In addition, concentrations of alkalinity and barium exceeded the ODWQS at Monitor 19A, and the concentration of alkalinity exceeded the ODWQS at Monitor 66-I. This is consistent with previous years.

As shown in **Table 5.5**, the leachate indicator parameter concentrations at the brine wells were generally similar to the reference groundwater quality with some exceptions:

- In 2024, in Cell 1 South, Monitor 5-IV had elevated ammonia, COD, iron, and potassium compared to background quality. Monitor 18A and 20A were both elevated for alkalinity and manganese when compared to background. 62-I, located in the Cell 1 South area of the Site, had concentrations of COD, and potassium elevated above the reference quality range. At Monitor 19A, located in the Cell 1 South area, concentrations of alkalinity, COD, iron and manganese were elevated compared to the reference quality range.
- Within the Cell 1 North area of the Site, concentrations of three or less leachate indicator parameters were elevated at Monitors 46-I and 75-I, Monitor 66-I.

Three sampled wells are classified as ‘concentrated brine’ based on historical monitoring results and all three of the wells are located within the South Fill Area. Groundwater quality from Monitor 44-I is used to represent reference quality for the concentrated brine wells. As shown in Table **5.4,** concentrations of chloride, hardness, iron, sodium and TDS exceed the ODWQS at the concentrated brine reference monitor in 2024. As shown in **Table 5.5**, the leachate indicator parameter concentrations at the concentrated brine wells 41-I and 76-I were similar to the reference quality. Concentrations of the primary leachate indicator parameters have been generally consistent over the long term, with values remaining constant or fluctuating within a large range.

In summary, based on the available results, leachate impacts are not observed at the sampled concentrated brine wells.

5.6.3.2 North Fill Area

Overburden

For the period up to 2022, Monitor 88-III is used to represent reference quality for the overburden in the North Fill Area. Since that time, concentrations of some parameters, including leachate indicator parameters are increasing. Monitors 114 and 115 will be evaluated for their potential as background groundwater reference wells once sufficient data has been collected.

Overburden wells located in the NFA, had ODWQS exceedances in 2024 for parameters for the following:

- Monitors Alkalinity concentrations exceeded the ODWQS at Monitors 109-III and 110-III);
- Chloride concentrations exceeded the ODWQS at Monitors 85-I, and 85-II);
- Chloride concentrations exceeded the ODWQS at Monitors 106-II and 106-III;
- Dissolved Organic Carbon exceeded the ODWQS at Monitors 104-III; 109-III and 110-III; 112-II; 112-111 (March only);
- Sodium concentrations exceeded the ODWQS at Monitors 106-II (March only) and 106-III;
- Iron, manganese and TDS exceeds the ODWQS as several locations.

As shown in **Table 5.6**, the leachate indicator parameter concentrations at the NFA overburden wells were generally similar to, or lower than, the reference groundwater quality. At several wells, concentrations of some of the leachate indicator parameters were elevated compared to the reference quality; however, at most locations, only three or fewer parameters were elevated. The exceptions included Monitors 92-III and 109-III. At Monitor 92-III, concentrations of alkalinity, chloride, iron, manganese, potassium and TKN were elevated compared to the reference quality. At Monitor 109-III, concentrations of alkalinity, ammonia, chloride, iron, manganese, potassium, sodium and TKN were elevated. The elevated concentrations of several leachate indicator parameters at Monitors 92-III and 109-III indicate a leachate influence is observed at the well locations.

The overburden and bedrock groundwater quality at the NFA wells are representative of the natural baseline conditions up to late 2010, as no landfilling activities took place in the NFA prior to the sampling events in 2010.

The historic time series graphs in Appendix F show consistent primary leachate indicator parameter concentrations over the long term, with values remaining constant or fluctuating within a range. The notable exceptions are summarized below:

- Monitors 85-I and 85-II have concentrations of increasing chloride. The shallow well is very cyclical, while the deeper nest is steadily increasing. In the shallow 85-II other leachate indicator parameters have remained stable or within historic ranges, at the deeper location 85-I, other salts including calcium and sodium show a similar trend to chloride.
- Chloride and alkalinity concentrations at Monitors 87-II continue to increase in 2024, and there is a new maximum iron concentration at this location. Alkalinity and chloride are with historic ranges at 87-III.

- Chloride concentrations within background monitors 88-II has remained stable, while in the shallower nest 88-III sulphate calcium and magnesium have increased since 2022 with a new high concentration of chloride is noted in 2024. The use of this location as a background reference point will be limited to up to 2022 data.
- In 2024, Monitor 93-II is observed to have increasing chloride and alkalinity concentrations since 2023
- Concentrations of chloride and sodium have increased since 2013 at 106-II and 106-III, while other parameters have remained relatively stable or within historic ranges.
- Chloride concentrations at Monitor 107-II reached a new high in 2024 while other parameters exhibited little or no trend and concentrations at 107-III exhibited no trends in 2024.
- Concentrations of the primary leachate indicator parameters at Monitor 109-III have increased since 2016; however, a similar trend is not observed in the deeper installations 109-I or 109-II.
- Monitor 110-II and 110-III have increases in indicator parameters parameters, but not at deeper installation 110-I. Continued monitoring is required to assess the long-term trends at this borehole location as these monitors are located adjacent to the refuse area but are also downgradient of other infrastructure on site. It is noted that the timeframe for the concentration increases at monitoring location 110 is comparable to the timeframe for concentration increases at other monitors that are upgradient or laterally removed from the refuse area.

As part of the monitoring program, analysis of VOCs is completed at select overburden wells. As shown in **Table 5.4**, there were no detections of VOC parameters at the overburden wells located in the NFA in 2024.

Bedrock

As shown in **Table 5.4**, concentrations of hardness consistently exceed the ODWQS at most wells including background well 88-I. Background well 88-I also had an exceedance for iron in 2024. At the remaining fresh bedrock wells, the 2024 ODWQS exceedances were similar to the reference quality, with the following exceptions:

- The concentration of chloride at 86-I exceed the ODWQS on both occasions;
- The concentration of manganese at Monitor 92-I exceeded the ODWQS in September;
- The concentration of sodium at 86-I and 89-I exceeded the ODWQS; and,
- The concentrations of TDS at Monitors 86-I, 89-I, 106-I and 107-I exceeded the ODWQS on at least one occasion.

As shown in **Table 5.6**, the leachate indicator parameter concentrations at the fresh bedrock wells at the NFA were generally similar to the reference groundwater quality with some exceptions.

Within the North Fill Area, concentrations of three or less leachate indicator parameters at Monitors 92-I, 104-I and 106-I exceeded the reference quality. At Monitor 107-I, concentrations of alkalinity, ammonia, boron, chloride, manganese and sodium exceeded the reference quality.

The concentration-time graphs typically show consistent primary leachate indicator parameter concentrations over the long term, with values remaining constant or fluctuating within a range. The notable exceptions are summarized below:

- Iron and manganese increased in 2024 at 84-I to new historic maximums;
- Sulphate increased at 104-I to a new maximum.
- Monitor 106-I is seasonally influenced and there is a new maximum of sodium and chloride in 2024 at this location. In addition, elevated concentrations of several leachate indicator parameters were observed at Monitor 107-I, located east of the North Fill Area. Leachate indicator parameter concentrations have been stable at this location since 2020.

As part of the monitoring program, analysis of VOCs is completed at select fresh bedrock wells. As shown in **Table 5.4**, there were no detections of VOC parameters at the fresh bedrock wells sampled in 2024 at the NFA, which is consistent with historical results.

5.6.3.3 Peterborough Organics Facility Overburden

For overburden wells at the POF, only MW20-30 exceeded the ODWQS for TDS as shown in **Table 5.4**.

Groundwater quality from MW20-28A located in the POF, is used to represent reference quality for the background overburden. This monitor was sampled once twice in 2024. All other monitoring locations, including the background well did not have any exceedances.

As shown in **Table 5.7**, the leafate indicator parameter concentrations at the POF overburden wells were generally similar to the reference groundwater quality and well below the range of concentrations associated with the leafate samples. There is insufficient data at the POF to discuss seasonal or long-term trends in the data.

In 2024, the bedrock monitoring wells were not yet installed. As previously discussed, these wells will be sampled and the results will be discussed in the 2025 AMR.

5.6.4 Groundwater Quality Interpretation

To aid in the illustration of the varying groundwater conditions at the Site, a Durov diagram has been compiled for the Spring 2024 groundwater samples for the South Fill Area (**Figure 5.8**) and North Fill Area (**Figure 5.9**). This approach visualizes the proportional milliequivalents of the major ions in the collected samples. The two triangular ternary plots graph the relative percentages of the major anions (chloride, sulphate and bicarbonate) and major cations (sodium/potassium, magnesium and calcium). The combination of these two endpoints are matched on the square plot. This allows for a visualization of the groundwater ‘type’. Then a third parameter, in this case Total Dissolved Solids (TDS; mg/L) can be added to further characterize the groundwater from the perspective of being potentially impacted by leachate. Rings around the individual points represent conductivity above 100 µS/cm, with the size of the rings being a logarithmic scale. This comparative approach is provided to assist in identifying the characteristics of samples from leachate as compared to shallow and deep bedrock samples, to determine means of tracing leachate impacts.

The wells are split into clear groups consisting of bedrock and overburden wells. The groups are then divided by colour with the shallow overburden wells in light green and the intermediate overburden wells in blue. The bedrock wells are group as shallow bedrock in brown, a lower bedrock within the channel as pick and deep bedrock as orange points. The wells identified as brine plot in orange on **Figure 5.8**. The characterization of leachate is depicted by the red points. The end points of the bedrock wells plot in a similar area to the leachate ; however, when expanded with TDS, the visualization of the difference between the brine wells and leachate impacted wells becomes clearer as elevated TDS will trend further from the baseline TDS axis. This approach is

also helpful to aid in the interpretation of areas affected by road salt and mineralization as the relative composition water will cluster.

South Fill Area

As shown on **Figure 5.8** within the SFA, leachate collected from MH4 plot (Red Point 58) generally trend towards a sodium/potassium rich area of the diagram. When adding the third parameter of TDS, the leachate signature becomes quite evident as the red points move far to the right of baseline. The leachate at refuse monitor BH-23B (Red Point 59) is indicative of leachate from a mature landfill where chloride and TDS have been decreasing for several years. This is supported by the trend plots in Appendix F. The addition of major and minor ions to the sampling suite would aid in the interpretation of the evolution of leachate over time.

Within the overburden at the SFA, there is interpreted localized leachate impacts downgradient of Cell 1 South, in the vicinity of the groundwater interceptor trench, as indicated by the overburden groundwater quality at Monitor 19B. On the Durov diagram, Monitor 19B (Green Point 13) plots in the general area of the leachate quality. Monitor 17B (Green Point 11) is located at the southern end of the interceptor trench and also trends towards leachate characterized water. The extent of the impacts in 2024 remained similar to previous years; although some increasing parameter concentrations have been noted.

The historic interpretation suggested potential leachate impacts at Monitor 48 and 81-III; however, the Durov diagram indicates this may be related to road salting activities and the end points do not include leachate indicators in the ratios that would be expected to be trending towards leachate (Green Point 31 and Green Point 19). Overall, the 2024 overburden groundwater quality results in this area of the Site were similar to previous years and remain stable and within historic ranges.

Similarly, road salt appears to the cause of elevated concentrations at Monitor 52-II, located east of groundwater interceptor trench. When adding the third parameters of TDS (Green Point 21) this location does not cluster with the other wells inferred to be impacted by leachate. Similarly, groundwater quality in the area to the east of Cell 1 North is complicated by the application of road salt to the on-site road and Bensfort Road for snow and ice control. The monitoring wells included in the routine sampling program are adjacent to the landfill cells, therefore, many of the monitors in this area show road salt impacts, and some limited leachate influences, within the groundwater.

Additionally, the north side of Cell 1 North shows landfill and road salt influences. These monitors are located on the north side of the drumlin and refuse, between the SFA and Crystal Springs Wetland. Water quality during the sampling events in 2024 for this area is generally similar to previous years. The Durov diagram support the interpretation that road salt influences are evident at shallow overburden Monitor 66-III (Green Point 27).

When visualizing deeper overburden and shallow bedrock in the same location, Monitor 66-II (Blue Point 6) is composed of groundwater with a more mineralized signature and may be impacted by landfill leachate trending towards leachate impacts. A similar trend is observed with bedrock monitor at this location 66-I (Purple Point 57). When adding the third parameter of TDS, Monitors 66-II and 66-I are clustering towards leachate impacted groundwater. Further downgradient monitor nests 40 and 44, the 2024 water quality was similar to historical results.

Along the east side of the SFA within the fresh bedrock, Monitor 81-I (Brown Point 53) is located in a known area of leachate impact close to the landfill that is being closely monitored. No remedial action is required at the present time, as monitoring wells downgradient of this location do not display the same increase.

For monitors completed within brine conditions, leachate impacts are interpreted at Monitor 19A (Brown Point 43), which is located immediately downgradient of the Cell 1 South area. Further downgradient, Monitor 52-I (Brown Point 49) have end members on the ternary plots that type the groundwater as brine. Similarly, Monitor 46-I (Brown Point 47) is located downgradient of Cell North 1 along Bensfort Road, and is classified as brine. At Monitor 52-I and 46-I, the increased composition of alkalinity at these brine locations suggest a limited impact by leachate may be altering the characterization of the groundwater. Despite the interpretation of being potentially impacted by leachate, concentrations of indicator parameters, while variable, have remained stable for 20 years with no long-term water quality trends.

North Fill Area

Leachate at the NFA was characterized using a sample collected from 2012 and adding the 2024 samples from the South Fill Are (MH4). The addition of major and minor ions to the sampling suite would aid in the interpretation of the evolution of North Fill area leachate over time. The leachate sample from 2012 (Red Point 63) described a young leachate, whereas the samples from MH4 indicated a more evolved leachate with a high composition of other salts. The leachate end-point characterisation of the NFA leachate likely lies within the triangular area of the three red points on **Figure 5.9**.

Within the overburden at the NFA there are several locations which trend toward road salt impacted or increased mineralization without a change in composition that would suggest impacts from leachate.

The Durov diagram supports the interpretation of road salt influences Monitor 85-I and 85-II, although more monitoring is required to determine if the wells are trending towards more mineralized groundwater composition.

The recent increase in parameter concentrations, between 2017 and 2024, at several monitoring locations, are not attributed to landfill leachate impacts in the NFA. Despite Monitor locations 104 and 108 being located upgradient of the waste footprint, there are several leachate indicators observed at Monitor 104-III and this location should continue to be monitored.

Monitors 106, 85, 86 and 87 are removed from the fill area and are inferred to be cross gradient. The increase in chloride at these monitors may be associated with road salting on-site, due to the traffic increase from landfilling activities within the NFA and continued monitoring is required to confirm the significance of the recent concentration increases. The Durov diagram supports increased mineralization at these locations and when considering TDS the groundwater composition is different at these locations compared to other overburden and bedrock wells across the site. Monitors 106-I (Brown Point 59), 106-II (Blue Point 13) and 106-III (Green Point 40) display a shift in overall composition towards more mineralized groundwater, particularly at the two shallow locations. There is highly variable and apparent seasonal fluctuations of sodium and chloride in the deep bedrock installation, a year over year increasing concentration of chloride in the intermediate well, and a highly variable and increasing concentration at the shallow installation. Vertical hydraulic gradients within this nest in 2024 were measured as having an upward vertical gradient in the spring (March), near neutral gradients in the summer (June) and downward gradients in the fall (September). The nearby stormwater pond may be recharging salt laden water in the vicinity of nests 106, 107 and 85. If stormwater is used for dust suppression in these areas, the additional loading of various salts may be occurring. Alternatively, the leachate forcemain/gravity line is located between the landfill footprint and the monitoring locations with 106 and 85 being the closest downgradient monitoring locations in proximity to the leachate lines. If concentrations continue to increase at these locations, additional investigation may be warranted. These locations should continue to be monitored.

A leachate influence is evident at Monitor 109-III, based on elevated concentrations of several leachate indicator parameters compared to the reference quality, and notably increasing concentrations of the primary leachate indicator parameters since 2016. Monitor 109-III is located immediately adjacent to the NFA. The Durov diagram supports this interpretation, with the composition of the overburden breaking from the cluster (Green Point 43). The leachate impacts are interpreted to be localized based on the lack of elevated leachate indicator parameter concentrations at downgradient Monitors 94-I and 94-II.

At monitor 92-III (Green Point 35), the significant increases for concentrations of chloride, iron, TKN, and alkalinity at various times between 2013 and 2017 may be attributed to a localized perched condition within the waste, above grade, where leachate was not permitted to migrate downwards into the underlying waste due to the presence of interim cover or other soils. As a result, the leachate eventually migrated laterally through the waste and into the adjacent overburden. It is noted, however, that this condition may have been rectified during the construction of the landfill gas collection system (Phase 1) in the NFA, which was completed in 2015. Phase 1 included the installation of horizontal landfill gas collection pipes within Cell 2 which are placed in clear stone filled trenches. The installation of the stone filled trench would subsequently permit the perched leachate to migrate downwards into the underlying waste instead of through the adjacent overburden. This possibility is demonstrated by the subsequent decrease in concentrations of the identified parameters after the installation of the landfill gas system. The time lag between relative spikes and decreases for the parameters is attributed to the relative mobility of the parameters within the groundwater. The Durov diagram plots 92-III as a more mineralized composition which support this interpretation. Continued monitoring is required to confirm the trends for these parameters in the future.

5.7 Groundwater Quality Compliance

5.7.1 Reasonable Use Guideline B-7

ECA Condition 19.c requires an assessment of the criteria set out in the Ministry Reasonable Use Guideline B-7.

The following formula were used to calculate the criteria:

$$C_m = C_b + X(C_r - C_b)$$

Where:

- C_m = Maximum acceptable concentration of a particular parameter.
- C_b = Natural background concentration of a particular parameter.
- C_r = Drinking Water Quality Standard for a particular parameter.
- X = Reduction Factor. For drinking water X equals 0.5 for non-health related parameters, and 0.25 for health-related parameters.

A comparison of the groundwater quality within the different stratigraphic units beneath the site was made between the upgradient monitors and the monitors located near the property boundary, based on the Guideline B-7 criteria. The results of this comparison for overburden and bedrock monitors are presented in **Tables 5.8** (SFA) and **Table 5.9** (NFA/POF). Inorganic parameters which do not have an ODWQS were excluded from the analysis. Hardness and TDS were also excluded from the analysis, as concentrations of both parameters are naturally elevated above the ODWQS in the groundwater at the Site and are not considered leachate indicator parameters. The geometric mean of the historical results from each representative background well was used to determine the

reference quality (C_b) for each potable hydrostratigraphic unit. For parameters with concentrations that were not detected above the laboratory MDL, half of the MDL value was used to represent the non-detect result.

5.7.2 South Fill Area

Overburden

As shown in **Table 5.8**, the Guideline B-7 criteria developed using reference quality from overburden Monitor 44-III has been applied to overburden monitors at nests 48, 46, 61, 63, 64, 74 and 75, which are located near the property boundary within the SFA.

Groundwater quality within the overburden in this area met the Guideline B-7 criteria for all health-related ODWQS parameters with the exception of nitrate (at 46-III, 63-II, and 63-III) and arsenic (at 63-II). The elevated nitrate concentrations at Monitors 46-III and 63-III are not attributed to the landfill since nitrate concentrations are low in the leachate (**Table 4.4**) and nitrate is not considered a leachate indicator parameter. Given the location of these wells, the source of nitrate is interpreted to be related to local agricultural land use. Additional Guideline B-7 criteria exceedances within the SFA overburden wells include:

- Alkalinity at Monitor 48;
- Aluminum at Monitors 63-III and 75-II;
- Chloride at Monitor 61-III;
- DOC at Monitor 48;
- Iron at Monitors 46-II, 48, 63-II, 74-III, and 75-II; and
- Manganese at Monitors 48, 64-II, and 74-III.

The exceedances observed at Monitor 48 are attributed to leachate impacts as the well is located adjacent to the waste fill area. It is noted the City/County of Peterborough currently owns the properties adjacent to the PCCWMF, as shown in **Figure 2.1**, which would provide additional attenuation capacity downgradient of Monitor 48. It is noted that leachate impacts are not interpreted at Monitors 61-III and 63-II, located downgradient of Monitor 48.

The occasional exceedances related to aluminum, chloride, DOC, iron and/or manganese in the overburden at Monitor nests 46, 61, 63, 74 and 75 are not attributed to the landfill. As shown in **Table 5.5**, leachate indicator parameter concentrations at these wells are mostly similar to the reference quality range. Increasing chloride concentrations observed at nest 46, 61, 63 and 75 are accompanied by stable or decreasing concentrations of other leachate indicator parameters, which suggests that these wells are being impacted by road salt. These wells are located in close proximity to Bensfort Road. In addition, the presence of elevated nitrate in the overburden at nests 46 and 63 may indicate that an off-site source is impacting the groundwater at these locations.

Fresh Bedrock

As shown in **Table 5.8**, the Guideline B-7 criteria developed using reference quality from the upgradient bedrock wells has been applied to the fresh bedrock monitors at nests 41 and 63 located near the property boundary within the SFA.

Within the SFA, groundwater quality met the Guideline B-7 criteria for all health-related ODWQS parameters within the fresh bedrock. Additional Guideline B-7 criteria exceedances within the SFA included DOC and iron at Monitor 41-II and sodium at Monitor 63-I.

Though sodium exceedances observed at Monitor 63-I are greater than reference quality and show an increasing trend, it should also be noted that chloride concentrations at this monitor are also increasing while concentrations of other leachate indicator parameters have been stable or decreasing. As previously mentioned, it is inferred that groundwater quality at several well nests close to Bensfort Road, including nest 63, are impacted by road salting activities.

The Guideline B-7 criteria exceedances related to DOC and iron at Monitor 41-II are not considered to be related to leachate impacts, as the parameter concentrations are similar to the reference quality (**Table 5.5**) and primary leachate indicator concentrations have been stable over the long term.

5.7.3 North Fill Area

Overburden

The Guideline B-7 criteria developed using reference quality from overburden Monitor 88-III has been applied to overburden monitors at nests 86, 87, 89 and 104, which are located near the property boundary within the NFA (**Table 5.9**).

Within the NFA, the 2024 overburden groundwater quality met the Guideline B-7 criteria for all health-related ODWQS parameters with the exception of barium at Monitor 86-III and nitrate at Monitor 89-III and Monitor 104-II. Barium has consistently been elevated at Monitor 86-III since monitoring of the well began. The elevated barium concentrations are not attributed to the landfill, given that the well is laterally removed from the fill area. The elevated nitrate concentrations at Monitor 89-III and 104-II are not attributed to the landfill since nitrate concentrations are low in the leachate (**Table 4.4**) and nitrate is not considered a leachate indicator parameter. Given the location of these wells near the perimeter of the Site, the source of nitrate is interpreted to be related to local agricultural land use. Additional Guideline B-7 criteria exceedances within the NFA overburden wells include:

- Alkalinity at Monitors 87-III and 104-III (September only);
- Chloride at Monitor 86-III
- DOC at Monitor 104-III;
- Iron at Monitors 86-III (September only), 87-II, and 104-III (September only);
- Manganese at Monitors 86-III (September only), 87-III, and 104-III (September only); and
- Sulphate at Monitor 104-III (March only).

As discussed in Section 5.7.2, elevated sodium and chloride concentrations at Monitor 86-III are attributed to road salting activities.

At Monitor 104-III, results for several leachate indicator parameters were elevated above Guideline B-7 criteria, namely alkalinity, iron, and manganese. Despite these exceedances, most 2024 LIP results at 104-III are either within or less than the historical reference range for overburden in the NFA with the exception of alkalinity which is slightly elevated. Minor increasing trends beginning in 2021 are noted for LIPs alkalinity, chloride, iron, manganese, and TKN and will continue to be monitored in 2025.

Elevated Guideline B-7 parameters at Monitors 86-III, 87-II, and 87-III are still within reference quality range and below NFA leachate range. Therefore, no landfill leachate impact is suspected at these monitor locations at this time.

Fresh Bedrock

As shown in **Table 5.9**, the Guideline B-7 criteria developed using reference quality from the upgradient bedrock wells has been applied to the bedrock monitor 87-I located near the property boundary within the NFA.

At Monitor 87-I, groundwater quality met the Guideline B-7 criteria for all health-related ODWQS parameters. One non-health related ODWQS parameter exceedance was observed for alkalinity at a concentration outside the reference quality range. This exceedance, observed in March 2024, appears to be an outlier compared to historical results at this monitor location and considering results for alkalinity in September 2024 returned to normal historical range. It is also noted that results for other leachate indicator parameters remain within reference quality range and below NFA leachate concentration range. Considering this, this Guideline B-7 exceedance is not considered to be indicative of landfill leachate impacts.

5.7.4 Peterborough Organics Facility

As per condition 9(12), the RUC limits presented in the D.M. Wills report (Wills, 2021) will be updated in 5 years when sufficient data is available for statistical purposes. In the meantime, background overburden quality was used from Monitor 88-III for all available data up to 2021 (**Table 5.9**).

One health related ODWQS parameter (nitrate) exceeded at MW20-30, considered to be a background location. For non-health related ODWQS parameters, iron was greater than the Guideline B-7 at MW20-28A, also considered to be a background monitoring location.

This Guideline B-7 exceedance is not considered to be indicative of leafate impacts from composting processing.

5.7.5 Groundwater Quality Trigger Level Compliance

ECA Conditions 9(8) to 9(10) require a comparison of the groundwater quality to trigger levels criteria set at 80% of the Guideline B-7 values for parameters that have an ODWQS value, as outlined in the D&O Report for the site. The results of the comparison indicate the parameter exceedances of the trigger levels were comparable to the exceedances that are outlined and discussed in Section 5.4.4.1, as shown on Tables 5.8 (SFA), 5.9 (NFA/POF) during the sampling events in 2024.

Trigger Mechanism for the South Fill Area and North Fill Area

With the exception of overburden Monitor 48, which is interpreted to be impacted by leachate, the trigger level exceedances are generally not attributed to the landfill leachate impacts, but are considered to be naturally occurring or influenced by other sources; therefore, the groundwater quality at the selected boundary monitors satisfied the trigger levels established for the site. It is noted the City/County of Peterborough currently owns the properties adjacent to the PCCWMF, as shown in **Figure 1.2**. Therefore, the properties owned by the City/County are available and sufficient for attenuation of elevated landfill related parameters in the vicinity of Monitor 48.

Trigger Mechanism for the Peterborough Organics Facility

Per Condition 9(14) of the ECA, if three leachate indicator parameters exceed the trigger concentrations at the trigger wells described under condition (9(13) during three consecutive monitoring events, the City of Peterborough shall initiate a Contingency Plan consisting of items a) through c) of Condition 9(14).

Based on results of the sampling events in 2024 at the POF, the groundwater quality satisfied the trigger levels established for the site and the trigger mechanism was not initiated.

6.0 SURFACE WATER MONITORING

6.1 Surface Water Setting

The surface water that flows over and around the landfill site is ephemeral, having significant and continual flows on a seasonal basis (spring) and under storm conditions. The watercourses in proximity to the landfill outlet into the Otonabee River approximately 925 m southwest of the landfill site. The adjacent surface watercourses are shown in **Figure 6.1** and are defined as the following:

1. The central watercourse, which parallels the southeastern property boundary. Water flow within this channel is towards the southwest. Stations SW1, SW2, SW3, SW18, SW19 (upstream) and SW20 (upstream) are established along this watercourse.
2. The Bensfort Road ditch which runs north-south along the east side of Bensfort Road. Stations SW17, SW21 (upstream) and SW23 are established along this watercourse.
3. The western watercourse, within the Crystal Springs Wetland area, in the central portion of the site that divides the SFA and NFA, where station SW24 is established. Inputs to the western watercourse area include the Bensfort Road ditch and the stormwater management pond.

6.2 Surface Water Flow

In 2024, surface water flows were monitored in the months of February, April, June, August, October, and December, using a Global Water FP111 propeller type flow meter, where possible. A summary of the results are shown in Table H.1, Appendix H. As shown in **Table H.1**, flow was only measurable during the February and April monitoring events at select surface water monitor locations. During all other monitoring events in 2024, all locations were either dry, frozen, stagnant, or had minimal flow such that it could not be accurately measured. It is noted that flow could not be measured during any event in 2024 at SW19 and SW24 while all other surface water locations record at least one flow measurement. Surface water samples were collected at a monitoring location if sufficient water was present, even if no flow could be measured.

6.3 Surface Water Quality

6.3.1 QA/QC Results

As part of the field QA/QC program, duplicate surface water samples were obtained in 2024 during the February, April, June, and October sampling events and submitted for chemical analysis. Results of RPD comparisons between original and duplicate samples are provided for surface water samples in Table G.3 in Appendix G.

It is considered that the results of samples for which the relative percent differences (RPD) are less than 20%, applied to parameter concentrations that are at least 5 times greater than the Method Detection Limit (MDL), can generally be interpreted with confidence. Non-detect results and results less than 5 times the MDL are excluded from the RPD analysis. As shown in Table G.3, the RPD values for the surface water duplicate samples generally satisfy the 20% RPD standard, with the following exceptions:

- Iron – SW17 (February, RPD=37%); and,
- Sulphate – SW23 (October, RPD=25%).

It is noted that the concentrations for the original and duplicate samples referenced above were within historical range for these stations and the RPD between these samples were only slightly above the 20% RPD threshold. As such, these RPD exceedances are not considered indicative of a broader data quality issue.

6.3.2 Concentration Trends

The surface water station locations are shown on **Figure 6.1**. The surface water monitoring program included the collection of water samples at the surface water stations in February, April, June, and October 2024, when sufficient water was present. Field measurements were obtained for pH, conductivity, temperature, and dissolved oxygen. Laboratory chemical results for the events completed in 2024 are summarized in **Table 6.1**. Historical analytical results and historical concentration-time trend charts are contained in Appendix H.

Generally, over the long term and through 2024, key chemical parameters (chloride, alkalinity, iron, and TKN) show fluctuation with no distinguishable trends, with the following exceptions:

- Parameter concentrations at the on-site and downstream stations, along the central watercourse, are generally comparable to the water quality at the upstream locations SW19 and SW20 except for chloride where downstream station concentrations are generally slightly elevated compared to the upstream stations. It is noted, however, that the chloride concentrations at downstream stations along the central watercourse are comparable to, or lower than, the chloride concentrations at the stations within the Bensfort Road ditch, including SW17, SW21, and SW23. This pattern indicates the elevated chloride concentrations at downstream central watercourse stations are likely a reflection of the influence of a road salt usage and are not landfill related.
- In the western watercourse, downstream monitor SW24 has historically been compared to upstream stations along the central watercourse (SW19 and SW20) and Bensfort Road ditch (SW21) since no upstream monitoring station has been established within the western watercourse. Concentrations of key parameters at SW24 are generally similar to or less than concentrations at these upstream monitors. It is recommended that a new surface water monitoring station should be established within the western watercourse upstream of SW24 so concentration trends may be directly compared to relative background levels within the Crystal Springs Wetland area.
- Key parameter concentrations at the downstream stations within the Bensfort Road ditch are generally similar to concentrations observed at upstream station SW21. Chloride concentrations at these Bensfort Road stations are elevated compared to those at surface water stations along the central watercourse. This pattern is attributed to the effect of road salt operations along Bensfort Road.

6.3.3 Water Quality Compliance for South Fill Area and North Fill Area

The 2024 surface water analytical results are summarized in **Table 6.1**. Surface water quality generally complied with the Provincial Water Quality Objectives (PWQO) during the sampling events in 2024, with the exceptions of the results that are bolded/shaded in **Table 6.1**. Exceedances were limited to dissolved oxygen (field), iron, and phosphorous and were observed intermittently at most monitoring locations, including upstream locations SW19, SW20, and SW21. SW17, a downstream station along Bensfort Road, is the only monitoring station that did not see any exceedances in 2024, however, it is noted that this station only had sufficient volume for sampling during the February and April sampling events.

Dissolved oxygen exceedances were observed at upstream stations SW19 and SW20 (central watercourse) in June. Phosphorous exceedances were observed at SW20 and SW21 (along Bensfort Road) in June. Iron

exceedances were observed at all upstream monitors in June. Exceedances for iron and phosphorous were observed at all downstream stations that were sampled in June 2024. It is noted that all surface water stations in June 2024 were either dry or stagnant. Isolated exceedances for phosphorous were also observed in February at SW23 and for dissolved oxygen at SW24 in April and at SW23 in October.

Historically, in the central watercourse, exceedances of DO, iron, and phosphorous at downstream stations have been similar to or greater than those observed at the upstream stations. This trend continues in 2024 and will continue to be monitored, however, no increasing trends can be observed at the downstream stations at this time.

At the Bensfort Road ditch stations, exceedances at downstream stations have historically been similar to or less than those at upstream stations. In 2024, exceedances at downstream stations exceeded those at upstream stations, however, this occurrence is not historically unique. Results from the Bensfort Road ditch downstream stations will continue to be monitored in 2025 for any emergence of increasing concentration trends.

Exceedances of DO, iron, and phosphorous at SW24 within the western watercourse have historically been similar to those observed at upstream stations in the central watercourse and Bensfort Road ditch. As mentioned in Section 6.3.2, it is recommended that an upstream surface water monitoring station be established within the western watercourse in order to better characterize the water quality within the Crystal Springs Wetland.

Though downstream stations regularly exceed the PWQO at concentrations greater than those at upstream stations, no increasing trends are observed and downstream station locations with the greatest exceedances vary by year. This suggests that the observed exceedances are likely related to individual sampling location conditions rather than influence by a shared, persistent source. Based on these observations, there is no measurable landfill influence on the surface water quality on or off-site. Continued monitoring is recommended to identify and assess any emerging trends in the concentrations of parameters measured.

6.3.4 Water Quality Compliance for Peterborough Organics Facility

In accordance with ECA No. 4156-CRM7RY for the approved stormwater and sewage works at the POF, a performance compliance report was prepared and submitted to the District Manager prior to March 31, 2025. This includes leafate and surface water sampling at the POF. A copy of this report is contained in **Appendix J**.

6.3.5 Surface Water Quality Trigger Level Compliance

ECA Conditions 9(16) to 9(18) require a comparison of the surface water quality to trigger levels that are related to the PWQO and to the upstream surface water quality; similar to the comparison provided in Section 6.3.3. As indicated in Section 6.3.3, water quality at the downstream surface water stations generally satisfied the PWQO, with exceedances for iron and phosphorus at some of the stations during events in 2024. The magnitudes of the exceedances at the upstream stations were generally similar to the exceedances at the downstream stations, with the exceptions noted in Section 6.3.3. This pattern indicates the exceedances which occur at the downstream stations are generally attributed to other causes/sources and are not landfill related.

Based on results of the sampling events in 2024, the surface water quality satisfied the trigger levels established for the site.

6.4 Stormwater Pond Monitoring

The stormwater management system is approved and operated in accordance with ECA No. 2231-8YCPHG under the OWRA. The stormwater management pond is located southeast of the NFA, as shown in **Figure 6.1**. The stormwater management pond is intended to store, attenuate and discharge stormwater into the western

watercourse within the Crystal Springs Wetland. The pond consists of two 900 mm inlet culverts, which discharge the collected stormwater from the drainage ditches into the sediment forebay of the pond. The stormwater management pond is lined with compacted processed native till. A 250 mm diameter pipe then discharges the water from the forebay into the main cell. Water is discharged from the stormwater management pond via a 1500 mm diameter corrugated steel pipe riser outlet structure onto a rip rap splash pad, and a subsequent deep grassed outlet channel into the creek.

OWRA ECA Condition 6 outlines the monitoring program for the effluent from the stormwater management pond to provide a performance record for future references and to trigger corrective action proactively and voluntarily before environmental impairment occurs. Water samples were able to be obtained from the pond inlet on April 3, 2024; and from the pond outlet on January 10, April 3, June 17, and July 10, 2024. The ponds were utilized for site dust control in 2024. It is noted that no discharge occurred during many additional attempts to sample the pond in 2024; Table H.3 lists the inlet and outlet sampling events that were attempted in 2024. The chemical results of the stormwater pond effluent monitoring program in 2024 are summarized in **Table 6.2**. All historical analytical data at this location is available in **Appendix H**. The City had sediment levels in their storm water receiving pond checked by City Staff throughout the year, and it was determined that they were within acceptable levels; therefore, no service was required.

OWRA ECA Condition 7 outlines the Pond Effluent Objectives (PEO) for discharge from the outlet of the stormwater management pond, which are included in **Table 6.2**. As shown in Table 6.2, the effluent water quality generally satisfied the PEO during the sampling events in 2024 for the parameters analyzed with one exception for turbidity (37.5 NTU) during the January sampling event which marginally exceeded the PEO of 25 NTU. No PEO is specified for organic parameters; however, it is noted that there were no detections within the samples obtained at the inflow or outflow for the organic parameters analysed during the sampling events in 2024.

The elevated turbidity concentration during the January event is attributed to high sediment content and limited stormwater retention time within the pond. The sampling event in January occurred after several days of rainfall that occurred while the pond surface was still frozen. This resulted in the bulk of stormwater flow travelling over the top of the frozen pond surface, thereby limiting the retention time of the stormwater within the pond and the pond's ability to mitigate sediment before discharge. Turbidity results during the other 2024 sampling events when the pond's surface was not frozen were all well below the 25 NTU PEO with a maximum result of 3.7 NTU in June and July.

7.0 LANDFILL GAS CONTROL SYSTEM

The LFGCS is operated as required by the ECA Conditions 6 (45) through (64). The major components of the LFGCS are the gas collection fields in the SFA and NFA, the LGUP, and the landfill gas flare. Figure 7.1 presents the current layout of the LFGCS.

Soil gas probe monitoring is undertaken at the landfill to determine whether landfill gas is migrating outside the limit of waste. As listed in ECA Condition 9 (26), subsurface migration of combustible (methane) gas at the site should meet the requirements of Ontario Regulation 232/98 as follows:

26(a). The concentration of methane gas below the surface of the land at the limit of the property boundary must be less than 2.5 per cent by volume;

26(b). The concentration of methane gas must be less than 1.0 per cent by volume (15% of the Lower Explosive Limit of methane) in any on-site building or enclosed structure, and in the area immediately outside the foundation

or basement floor of the building or structure, if the building or structure is accessible to any person or contains electrical equipment or a potential source of ignition;

26(c). Sub-condition 26(b) does not apply to a leachate collection, storage or pumping station or a landfill gas collection and/or treatment facility for which specific Occupational Health and Safety measures and procedures relating to the risk of asphyxiation and the risk of explosion must be followed; and

26(d). The concentration of methane gas from the Site in any off-site building or enclosed structure, and in the area immediately outside the foundation or basement floor of the building or structure, if the building or structure is accessible to any person or contains electrical equipment or a potential source of ignition, must be less than 0.05 per cent by volume

Soil gas probe monitoring was conducted in February, May, July and October in 2024. There were no exceedances to the 1 percent by volume (v/v) methane trigger level in 2024. During the monitoring events, the maximum concentration was found to be 0.3 percent methane (v/v), which indicates landfill gas is generally not migrating outside the limit of waste at concentrations exceeding the above trigger levels. The locations of soil gas probes are shown on Figure 2.1 and Figure 5.1. Gas probe monitoring results from 2024 are presented in Table 7.1 and discussed further in Section 7.4.

7.1 Landfill Gas Control System Development, Modifications and Maintenance

In December 2016, a new soil gas monitoring probe was installed north of Cell 3 to monitor potential migrating landfill gas from the recently constructed cell. Monitoring of the new soil gas probe, GP10, began in 2017.

In November 2019, replacement soil gas monitoring probes were installed near the original locations of GP2 and GP3, and the new gas probes were incorporated into the gas monitoring program in 2020.

Construction of Phase 3 of the landfill gas collection system in the NFA started in December of 2019 and was substantially completed February 12, 2020. Phase 3 included the installation of three vertical landfill gas extraction wells in Cell 2 and two horizontal landfill gas collection pipes in Cell 3.

During Cell 4 construction, the LFG main header was expanded around the exterior of Cell 4. Approximately 520 m of header pipe was installed with eight (8) capped branch saddles for future connections.

Construction of Phase 4 of the landfill gas collection system in the NFA started in March 2024 and was substantially complete on July 31, 2024. Phase 4 included the installation of nine vertical landfill gas extraction wells in Cells 2 and 3.

Gas probe GP1 was damaged during winter maintenance operations in 2023 and was replaced in February 2024.

7.2 Landfill Gas Control System Monitoring

In 2024, data collection took place at extraction points in the LFGCS to assist with balancing and maintaining efficient operation of the LFGCS. The pressure and concentration of LFGCS were monitored on a regular basis by the City staff. Monthly monitoring as required by the ECA is completed by the City's engineer on record for the PCCWMF.

During monitoring, measurements of static pressure, percent methane, carbon dioxide and oxygen were obtained from each extraction point in the system. Adjustment of the collection field was undertaken based on monitoring

results by the City staff. Appendix I includes a summary of the landfill gas monitoring program as well as the results of the monthly landfill gas monitoring for 2024.

During flare operations, the exhaust temperature was monitored in accordance with ECA Condition 6(46). The flare temperature was monitored by a programmable logic controller (PLC) and recorded by an on-site data-logger. The reliability of the data logger was greater than 99.5 percent. The landfill gas flare PLC is configured to automatically shut down when the flame temperature falls below or exceeds the operating temperature range. Peterborough Utilities Group (PUG) records and retains temperature data. During 2024, the LFGCS operated in accordance with the ECA.

The LGUP is generally operational full time on site. PUG is responsible for the operation and maintenance of the LGUP system. When methane concentrations are too low to support the operation of the generator, the system automatically shuts down. After analysis of the shutdown, the flare is manually started to collect LFG from the NFA and SFA. When methane levels increase the LUGP system is restarted.

On January 7, 2024 the LGUP broke down and has not yet been repaired, as the long term planning and future use of the LGUP is currently under review by the City and PUG. The flare was operational throughout 2024, except during the periods noted in Table 3.1. Although landfill gas was not utilized for energy recovery and was instead combusted by the flare, the flare remains an effective control mechanism for managing landfill gas and mitigating odours in accordance with regulatory requirements. However, it does not offer the energy recovery potential that the LGUP provides. These considerations will be included in the ongoing evaluation of the LGUP's future role in landfill gas management.

7.3 Landfill Gas Surface Monitoring

A landfill gas surface monitoring program was undertaken on August 15, 2024. The associated report dated March 17, 2025 is included in Appendix I.

The report states that the majority of the SFA is covered with vegetation, with some small barren areas and unpaved roads. Total hydrocarbon (THC) concentrations greater than 500 ppm were measured at 8 of 178 sample locations. All THC concentrations greater than 500 ppm were found near maintenance holes. It is likely that landfill gas is entering the LCS and being released through these maintenance holes.

The report recommended further effort to remediate elevated THC concentrations emanating from manholes, suggesting possible upgrades to the existing manhole covers.

7.4 Perimeter Soil Gas Monitoring

Landfill gas migration monitoring is undertaken at soil gas probes along the north, east and south boundaries of the SFA and near BH106, MHG2, and north of Cells 2 and 3 in the NFA. The probes are equipped with stopcock and hose barb assemblies to prevent atmospheric air intrusion. The LFGCS monitoring program consists of recording: percent by volume (v/v) for methane, carbon dioxide, oxygen and water levels in the probes.

Perimeter gas probe monitoring events were completed in 2024 to monitor soil gas quality and water levels. Monitoring was conducted at ten locations, GP1 through GP10, as shown on Figure 5.1.

Typically, pressure readings are collected first, followed by combustible gas and oxygen readings. Water levels were measured to determine if the probe screen was flooded or not (i.e. if water level was above the screen). Table 7.1 summarizes the results of the perimeter soil gas probe monitoring in 2024.

The gas migration monitoring program shows no evidence of off-site landfill gas migration at concentrations above the trigger criteria or potential for imminent off-site landfill gas migration. There has been no indication to date that landfill gas is migrating in the subsurface from the site.

Trigger Condition

If the 20 percent Lower Explosive Limit (1 percent methane (v/v)) trigger level is exceeded at any gas probe during two successive monitoring events it may be necessary to increase the monitoring frequency and to establish and monitor other landfill gas probes in the vicinity of the affected probe.

During the 2024 monitoring events, no wells were found to exceed 1 percent methane (v/v).

8.0 PETERBOROUGH ORGANICS FACILITY (COMPOST FACILITY)

In February 2024, the Peterborough Organics Facility (POF) began processing source separated organics (SSO) to produce compost.

8.1 Compost Quantities

In 2024, the City reported four different waste types received at the POF including green waste, woodchips, organics, and construction and demolition (C&D) transfer. The following operational adjustments were completed throughout the year for tracking compost waste:

- Woodchips were received at the Harper Road compost site and tonnages were not tracked between January and March.
- C&D waste was processed under landfill activities by the City in January and February. C&D waste was stockpiled prior to being processed through the shredder before being used by the City for road building and other uses.
- Starting in June, large tree pieces were accepted under the material type "Bulky Wood" from the PW. This tonnage was included in the annual green waste amount.
- In March 2024, a total of approximately 231.5 tonnes of material was transferred to Miller Compost in Pickering, Ontario and Tomlinson Environmental in Kingston, Ontario.

Table 8.1 summarizes the ECA required information related to the POF:

- Annual amounts of the four organic waste types received at the POF and the different compost waste sources;
- Annual quantity and quality of compost transferred from Site, including final destination;
- A summary of rejected waste;
- Annual amount of the Residual Waste transferred from the Site for final disposal and its destination;
- Number of Composting and curing windrows and the status of processing at the end of the operating year;
- Amount of unprocessed organic waste temporarily stored at the POF at the end of the operating year; and,

- Amount of compost temporarily stored at the POF at the end of the operating year.

In 2024, POF received compost at rates within the limits specified in ECA Condition 8(4) a., except for one week in October and three weeks in November. These exceedances were due to increased volumes of leaf and yard waste collected during the fall season.

8.2 Compost Quality

In 2024, the City produced a total of 4,804 tonnes (4,438 tonnes of processed compost transferred off-site and 366 tonnes stockpiled on-Site at the end of the year) of organic waste. The City submitted a total of nine samples from feedstock, two compost samples from the Harper Road compost site and four finished compost samples. This is in compliance with the sampling frequency outlined in ECA Schedule D - Table A1.

All sample results for metals were below the category AA compost maximum concentrations outlined in ECA Schedule D - Tables 3.1 and 3.2.

All samples were submitted to A & L Canada Laboratories Inc., a Canadian Association for Laboratory Accreditation (CALA) certified laboratory. Laboratory Certificates of Analysis for metals, pathogens, maturity and foreign matter can be made available upon request. Samples results are summarized in Tables 8.2 for Harper Road composite site; Table 8.3 for finished compost and Table 8.4 for feedstock sample metals results.

The four finished compost samples were also submitted for foreign material analysis. Total foreign matter greater than 3 mm did not exceed 1.0% and plastic did not exceed 0.5% for each of the finished compost samples; however, each sample with exception of the September 12, 2024 sample reported at least one piece of foreign matter greater than 25 mm per 500 ml (1 on May 27, July 25 and October 10, 2024). Due to foreign material being detected in May, July and October 2024, the City requested the on-Site contractor to utilize a finer screened trommel and to rescreen the material again. Following each rescreening event, three samples were resubmitted for the May 27, September 12 and October 10, 2024 sample events on June 12, October 16 and November 14, 2024, respectively. One piece per 500 ml of foreign matter that was greater than 25 mm was detected on October 16, 2024 and three pieces were reported on November 14, 2024.

Sharp foreign matter was not detected in the July 25, 2024 sample; however one sharp foreign matter (greater than 12.5 mm), one sharp foreign matter (greater than 2.8 mm, but less than 12.5 mm) and one sharp foreign matter (greater than 2.8 mm, but less than 12.5 mm) detected on May 27, September 12 and October 10 2024, respectively. Sharp foreign material above the detection limit was not detected in any of the three samples resubmitted on June 12, October 16 and November 14, 2024.

It is noted that the foreign material detected after the rescreening process consisted of plastic bag fragments that were marginally greater than 25 mm and are considered negligible since the screening process was capable of removing the solid sharp material to below the detection limit of 2.8 mm.

9.0 STATUS OF CONTINGENCY PLANS

In accordance with ECA Conditions 9(8), 9(9), 9(10) and 9(11), the following presents an overview of the status of the Contingency Plans for the SFA and NFA. Contingency Plans are documented in the Peterborough County/City Waste Management Facility Final Design, South Fill Area, Design & Operations Report – Volume 1 report dated January 2004 (Final Design Report).

The updated contingency plans included measures to address the following:

1. Leachate migration;
2. Leachate head build-up;
3. Leachate seepage; and
4. Landfill gas control.

Monitoring and inspection data for 2024 were reviewed relative to the requirements of the contingency plans. The results of the review indicate that none of the relevant trigger levels have been exceeded and the contingency measures related to leachate or landfill gas are therefore not required at this time.

10.0 PROPOSED 2025 ANNUAL MONITORING PROGRAM

The monitoring program, as undertaken in 2024, is presented in Table 1.1. Alterations to the established monitoring program for the site were implemented in 2015 as required under Condition 9(4) of the ECA.

External Reporting

1. Pursuant to Section 2.7 of the Ministry Site Inspection Report of March 28, 2013, sampling and analysis of PCB within the collection system leachate will be continued on a quarterly basis as part of the 2024 monitoring program. The results of the PCB sampling will continue to be reported under a separate document prepared for the WWTP.

Leachate Monitoring

2. The addition of major and minor ions to the sampling suite for leachate at all leachate monitoring locations including the holding tanks would aid in the continued use of the Durov diagrams in the interpretation of groundwater quality and evolution of leachate over time.

Groundwater Monitoring

3. Groundwater elevations should be collected at monitoring wells MW20-02A/B and MW20-28A/B to allow for an assessment of vertical gradients within the overburden at the POF.

Surface Water

4. It is recommended that an upstream surface water monitoring station be established within the western watercourse in order to better characterize the water quality within the Crystal Springs Wetland.

No further additional changes to the landfills annual monitoring program are recommended for 2025.

11.0 ADDITIONAL INFORMATION REQUESTED IN 2024

In 2024, there was no additional information requested by the Ministry (ECA Condition 10(19) c. xviii) that is not included elsewhere in the 2024 Annual Monitoring Report.

12.0 SUMMARY OF KEY OBSERVATIONS AND CONCLUSIONS

The following presents the key observations and conclusions resulting from the 2024 annual monitoring program for the PCCWMF:

Site Development

1. Construction of the POF started in 2023 and was substantially completed on June 28, 2024. POF began accepting material on February 6, 2024.

2. Construction of Phase 4 of the landfill gas collection system in the NFA started in March 2024 and was substantially complete on July 31, 2024.
3. R.W. Tomlinson is the Landfill Site Operator. They have operated the site since September 2012.
4. In 2024, 35,774 tonnes of waste was placed in the NFA.
5. 2,394,294 tonnes of waste have been disposed in the PCCWMF to December 31, 2024.
6. The highest daily quantity of material received on site in 2023 was 1,336.40 tonnes, received on February 2, 2024, as reported by the City via email dated March 24, 2025.
7. The NFA will provide capacity for approximately 1,023,090 tonnes of waste based on air space of 1,527,000 m^3 and an apparent waste density of 0.67 tonnes/m^3.
8. Remaining waste disposal capacity for the County/City at the PCCWMF is approximately 10.2 years (from December 31, 2024) based on an assumed annual waste disposal rate of 44,073 tonnes and an apparent waste density of 0.67 tonnes/m^3.
9. There is approximately 156,695 m^3 of soil currently available in on-site stockpiles. The stockpiled soil will be used as daily cover and other site needs. The estimated remaining quantity of daily, interim and final cover required for the NFA is 206,370 m^3. Contaminated soil will continue to be received at the site for use as daily cover.
10. Approximately 5,998 tonnes of recyclable material, not including materials received for use as alternate daily cover, were diverted from disposal at the on-site Public Drop-off Depot at the PCCWMF in 2024.
11. The City has implemented a weekly curbside organic waste collection and composting program that began on October 31, 2023. Organic waste was anticipated to be hauled and processed at the newly constructed POF in 2023 but was delayed until 2024. Organics received at the PCCWMF were initially transferred to the Harper Road composting site, but as a result of operational issues at the Harper Road composting site, on February 14, 2024, the city transferred 226 tonnes of partially composed material to the POF.
12. Due to limited processing capacity at the POF, SSO was transferred to private processing facilities between March 15, 2024 and March 28, 2024. An additional windrow cover was purchased which allowed additional processing capacity, and as of April 1, 2024, all organics received at the PCCWMF was processed at the POF.
13. A total of 6,527 tonnes of SSO were received at the POF in 2024.
14. In 2023 there were no violations of Condition 6(23) of the ECA where contaminated soil stockpiled onsite exceeded the three months of annual daily interim cover material volume required.

Operations and Maintenance

15. Final cover was placed within Cell 2 and 3 in 2024 covering approximately 0.43 ha.
16. The Site Liaison Committee (SLC) met in-person on March 19, 2024 and September 10, 2024. Key information discussed at the meetings included review of the 2023 monitoring report, site operations, complaints, capital works, and other related topics.
17. In 2024, thirty-six (36) complaints were received and documented:

    - Nine (9) of the complaints were related to potential odours from the PCCWMF observed off-site of the landfill. Three (3) of the complaints related to temporary shutdowns of the landfill flare. In the other six (6) cases, the source of the odour could not be identified.

- Twenty-seven (26) of the complaints were related potential odours from the POF observed off-site. Three (3) of the odour complaints were likely caused by nearby farm operations. In five (5) cases, odour could not be detected by staff, and in four (4) cases, odour was detected but the source of the odour could not be identified. Fourteen (14) of the complaints were caused by operations of the POF. Odour caused by operations of the POF should be minimized by operational chances instituted over the first year of operation.
- One (1) of the POF odour complaints also included a complaint regarding trucks using incorrect haul routes. It was found that the trucks in questions were not delivering material to the landfill, but stockpiling finished compost on a nearby property.

Leachate Collection System Monitoring, Operation and Maintenance

18. The volume of leachate and groundwater removed in 2024 was approximately 84,259 m^3, a 8.1% decrease from the 91,727 m^3 removed in 2023.
19. The quantity of leachate collected within the NFA and SFA decreased in 2024, compared to the amount collected in 2023. This corresponds to weather patterns throughout the year and the lower volume of precipitation received on site in 2024.
20. Monitor ISP15 was replaced with a vertical refuse monitor during the LFGCS Phase 4 works in 2024.
21. Leachate at the Site is generally characterized by elevated concentrations of alkalinity, ammonia, boron, COD, chloride, iron, manganese, phosphorus, potassium, sodium and TKN when compared with background overburden and bedrock groundwater quality. In comparison with the deep background bedrock groundwater quality classified as “brine”, leachate at the Site is characterized by elevated concentrations of alkalinity, ammonia, boron, COD, iron, manganese, phosphorus, potassium and TKN. In comparison with the deeper background bedrock groundwater quality classified as “concentrated brine”, leachate at the Site is characterized by elevated concentrations of only alkalinity, ammonia, iron, manganese, phosphorus and TKN. As such, these elevated parameters were chosen as diagnostic leachate indicator parameters for the discussion of the applicable downgradient groundwater quality. Chloride, TKN, alkalinity and iron continued to be considered the primary leachate indicator parameters, with the exception of chloride for the groundwater quality classified as brine and concentrated brine, as noted previously.
22. For the South Fill Area, in-waste leachate concentrations of alkalinity, COD, chloride, iron, manganese, phosphorus, potassium, and TKN have generally fluctuated within a lower range since 2005 compared to the concentration ranges between 1986 and 1993, and have generally decreased between 2005 and 2024. The concentration fluctuations are attributed to the variable nature of leachate within refuse although it is expected that parameter concentrations within the refuse will decrease over the long term. Installation of additional in-waste monitors is not warranted at this time. For the South Fill Area, groundwater interceptor leachate quality, in general, has fluctuated with no distinguishable trends. Several leachate indicators increased in spring 2024 but then either decreased or stabilized in fall 2024. The concentration increases may be attributed to the relatively low amount of precipitation received during the year but continued monitoring will permit a further assessment of the long-term trend for the interceptor trench.

23. The quality of leachate generated in 2024 generally satisfied Sewer Use By-law No.15-075 criteria with the exceptions of TKN in the SFA and NFA holding tanks sampled both in March and October 2024, and BOD_5 in the NFA holding tank sampled October 2024. Historically, TKN and nonyl-phenols concentrations have periodically exceeded Sewer Use By-law criteria.

24. The quantity of leachate discharged to the City's sewer system in 2024 was within historical rates and is considered insignificant with respect to leachate hydraulic loading on the WWTP. Leachate contributed less than 1 percent of the total influent volume of the WWTP in 2024.

25. BOD_5, TSS, phosphorus, and COD loads on the WWTP from landfill leachate are low and represent only a small portion of the WWTP capacity.

26. TKN load on the WWTP in 2024 appears to be in the range of 1.3% to 3.1%.

27. Two small seeps were noted on the south and east side of the NFA landfill by WSP during the LFG monitoring event on September 19. The landfill manager was notified, and the two areas were repaired the following day by Tomlinson. Throughout the remainder of the year, the seep was observed to be contained.

28. Both the SFA and NFA LCS were flushed between September and October in 2024. Due to miscommunication with the Cell 4 contractor, flushing and video inspection of Cell 4 was missed in 2023 and was instead completed on March 28, 2024. The City will continue to flush the LCS on an annual basis.

29. The NFA LCS was video inspected in 2024. NFA Cell 4 LCS will be video inspected in 2025 as per ECA Condition 6(42) c. and every year thereafter until 2027. NFA Cells 2 and 3 and the SFA will be video inspected in 2026 as per ECA Condition 6(42) a. and every other year thereafter.

Groundwater Monitoring Assessment

30. In February 2024, additional groundwater monitoring nests, identified as 114 and 115, were installed adjacent to Cell 4, in accordance with the recommendations in the D&O Report for the site. These wells were incorporated into the annual monitoring program in 2024.

31. Groundwater quality impacts from the South Fill Area are attributed to landfill leachate and road salt to the east and north. Leachate influences are limited to overburden monitors immediately downgradient of the waste in these areas and are similar to previous results.

32. Groundwater quality at the North Fill Area is generally representative of the natural baseline conditions, as no landfilling activities took place until late 2010. Based on the 2024 results and previous monitoring, the groundwater quality indicates fresh overburden and bedrock groundwater, with brine influenced bedrock groundwater at two monitor locations, 86-I and 89-I. Concentrations for select parameters, including chloride, alkalinity, and iron have increased at several monitors within the NFA. Several of these increases have also occurred at the upgradient and side gradient monitors and these increases are generally not attributed to the landfill site. The exception is a localized leachate influence interpreted at overburden Monitor 109-III, which is located immediately adjacent to the NFA. Increased mineralization of groundwater at 106 and 85 suggest impacts from onsite road salting activities although continued monitoring is recommended.

33. Groundwater quality at the Peterborough Organics Facility is not observed to be impacted by site operations in 2024.

34. The Reasonable Use Policy limits that were exceeded are generally related to road salt or natural groundwater quality variability at the site and are not attributed to landfill leachate, with the exception of interpreted leachate impacts resulting in exceedances within the overburden at Monitor 48. Groundwater quality downgradient of Monitor 48 complied with the Guideline B-7 criteria. The monitoring program results from 2024 demonstrate that no contingency measures are required at this time.

Surface Water Monitoring

35. Surface water quality during 2024 was similar to previous years. Water quality generally satisfied the PWQO with the exception of dissolved oxygen, iron and phosphorus at surface water stations, during at least one sampling event in 2024. The magnitudes of the dissolved oxygen, iron and phosphorus exceedances at the downstream stations have historically been generally similar to, or lower than, the exceedances at the upstream stations. Dissolved oxygen, iron and phosphorous exceedances were observed at upstream station SW20 (central watercourse), as well as at upstream station SW21 (along Bensfort Road) for iron and phoshorus in 2024. These exceedances at the upstream stations indicate that PWQO exceedances at the downstream stations are considered to be naturally occurring or the result of runoff from the roadway and/or adjacent lands; the exceedances are mainly associated with sediment within the water and/or stagnant water located at the sampling location. The landfill site does not have a measurable influence on the water quality within the adjacent surface water bodies.

36. Effluent from the stormwater management pond satisfied the PEO during the sampling events in 2023 for the parameters analysed, with the exception of turbidity in January. The current configuration of the stormwater management pond is adequate for reducing the majority of parameter concentrations from discharging to the adjacent watercourse.

Landfill Gas Odour Control System

37. During 2024, the LFGCS operated in compliance with the ECA.

38. Landfill gas surface monitoring was undertaken on August 15, 2024. THC concentrations greater than 500 ppm were measured at 8 of 178 sample locations. THC concentrations greater than 500 ppm were found near maintenance holes.

39. Soil gas probe monitoring was completed four times in 2024. Soil gas probe monitoring from 2024 shows no evidence of gas migration beyond the property boundary at concentrations exceeding the trigger limits.

Compost Processing

40. Compost processing met the quality standards required for Class AA compost. Sample frequency was completed in accordance with the ECA.

41. Finished compost samples which did not pass guideline values foreign matter and sharps were re-processed and resampled.

Contingency Plans

42. Monitoring shows the implementation of contingency measures is not required at this time.

Compliance with ECA

43. No violations of ECA conditions were noted in 2024.

13.0 RECOMMENDATIONS

The following recommendations are based on the results of the 2024 annual monitoring program and other information collected in 2024:

1. THC levels should continue to be monitored in manholes where high levels were observed during 2024 surface monitoring, and remedial action should be taken as required.
2. Odour complaints continue to be addressed through operation and expansion of the LFGCS as required.
3. The addition of major and minor ions to the sampling suite for leachate at all leachate monitoring locations including the holding tanks will aid in the interpretation of groundwater quality and leachate evolution.
4. Agricultural land use practices within the CAZ should be identified and documented. Similar increases in nitrate are not identified at nearby nest 61 and the results at Monitor 75 are consistent with previous years.
5. It is recommended that an upstream surface water monitoring station be established within the western watercourse to better characterize the water quality within the Crystal Springs Wetland.
6. Monitors ISP8 and ISP9 should be replaced with vertical standpipe monitors upon completion of the localized capping activities.
7. Several standpipe casings were observed to be corroded during the 2024 monitoring program. Standpipe casings should be assessed and replaced as necessary during the 2025 monitoring program if conditions allow without further compromising the integrity of the standpipes.

14.0 GLOSSARY OF TERMS

BOD_5: Biochemical Oxygen Demand

C&D: Construction and Demolition

COD: Chemical Oxygen Demand

County/City: County of Peterborough/City of Peterborough

D&O Report: Design and Operations Report

ECA: Environmental Compliance Approval

ha: hectare

HHW: Household Hazardous Waste

LCS: Leachate Collection System

LFG: Landfill Gas

LFGCS: Landfill Gas Control System

LOQ: Limit of Quantitation

LGUP: Landfill Gas Utilization Plant

m: meters

Ministry: Ontario Ministry of the Environment, Conservation and Parks

MRF: Materials Recycling Facility

NFA: North Fill Area

ODWQ: Ontario Drinking Water Quality

O.Reg.: Ontario Regulation

OWRA: Ontario Water Resources Act

PCCWMF: Peterborough County/City Waste Management Facility

PEO: Pond Effluent Objectives

PLC: Programmable Logic Controller

POF: Peterborough Organics Facility

PUG: Peterborough Utilities Group

PWQO: Provincial Water Quality Objectives

RPD: Relative Percent Differences

SFA: South Fill Area

SLC: Site Liaison Committee

SSO: Source Separated Organics

TDS: Total Dissolved Solids

THC: Total Hydrocarbon

TKN: Total Kjeldahl nitrogen

(v/v): Percent by Volume

WEEE: Waste Electrical and Electronic Equipment

WWTP: Waste Water Treatment Plant

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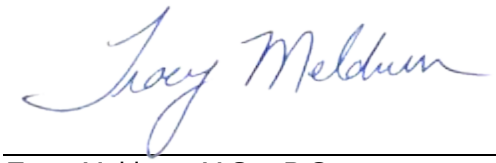

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TABLES

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

GROUNDWATER

Group	Monitoring Designation	Monitoring Events		Comments
		March / April	September / October	
G1	18A, 18B, 19A, 19B, 20B, 48, 63-I, 63-II, 63-III, 66-III, 75-I, 75-II, 81-I, 81-II, 81-III	Water Levels Analysis List 1 Analysis List 2 Analysis List 3	Water Levels Analysis List 1	SFA – Cell 1 – South (southeast)
G2	16A, 20A, 33-II, 33-III, 40-II, 41-I, 41-II, 44-I, 44-II, 44-III, 46-I, 46-II, 46-III, 50-I, 50-II, 52-I, 52-II, 53-I, 54-II, 61-I, 61-II, 61-III, 62-IR, 64-I, 64-II, 66-I, 66-II, 74-II, 76-I, 77-I, 101-I, 101-II, 101-III, 113-I, 113-II, 113-III	Water Levels Analysis List 1	Water Levels	SFA – Cell 1 – North (northeast)
G3	5-V, 5-VI, 62-II	Water Levels Analysis List 1	Water Levels Analysis List 1	SFA – Cell 1 – North (northern)
G4	5-IV, 16C, 50-III, 74-III	Water Levels Analysis List 1	Water Levels Analysis List 3	SFA – Cell 1 – North (northwest)
G5	84-I, 84-II, 85-I, 85-II, 86-I, 86-II, 86-III, 87-I, 87-II, 87-III, 88-I, 88-II, 88-III, 89-I, 89-II, 89-III, 91-I, 91-II, 91-III, 92-I, 92-II, 92-III, 93-I, 93-II, 94-I, 94-II, 95-I, 95-II, 104-I, 104-II, 104-III, 106-I, 106-II, 106-III, 107-I, 107-II, 107-III, 108-I, 108-II, 108-III, 109-I, 109-II, 109-III, 110-I, 110-II, 110-III, 111-I, 111-II, 111-III, 112-I, 112-II, 112-III, 114-I, 114-II, 114-III, 115-1, 115-II, 115-III	Water Levels Analysis List 1 Analysis List 2 Analysis List 3	Water Levels Analysis List 1	NFA

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

PRIVATE WELLS

Group	Monitoring Designation	Monitoring Events	Comments
		March / April	
P1	In accordance with the agreement between the Corporation of the City of Peterborough and the Corporation of the Township of Otonabee – January 1993 as amended by previous annual reports	Analysis List 4	As per agreement

SURFACE WATER

Group	Monitoring Designation	Monitoring Events						Comments
		January / February	March / April	May / June	July / August	September / October	November / December	
S1	SW1, SW2, SW3, SW17, SW18, SW19, SW20, SW21, SW23, SW24	Flow Rate Analysis List 1 Analysis List 6	Flow Rate Analysis List 1 Analysis List 6	Flow Rate Analysis List 1 Analysis List 6	Flow Rate Analysis List 1 Analysis List 6	Flow Rate Analysis List 1 Analysis List 6	Flow Rate Analysis List 1 Analysis List 6	

LEACHATE

Group	Monitoring Designation	Monitoring Events						Comments
		January / February	March / April	May / June	July / August	September / October	November / December	
L1	Holding Tank		By-Law + COD			By-Law + COD Analysis List 5a		
L2	MHT6-94					Analysis List 5		

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Group	Monitoring Designation	Monitoring Events						Comments
		January / February	March / April	May / June	July / August	September / October	November / December	
L3	23B		Leachate Levels Analysis List 1			Leachate Levels Analysis List 2		In-waste leachate monitors
L4	ISP7-95, ISPL-1, ISPL-2, ISPL2-1, ISPL2-2, ISP8, ISP9, ISP11, ISP12, ISP13, ISP14, ISP15, ISP16, ISP17, SP1-90, SP2-90, SP3-90, SP4-90, SP6-90, SP7-90, SP8-90, SP10-94, SP11-94, SP14-91, SP15-91, SP16-91, SP18-96, SP19-96, SP20-96	Leachate Level	Leachate Level	Leachate Level	Leachate Level	Leachate Level	Leachate Level	

INTERCEPTOR TRENCH

Group	Monitoring Designation	Monitoring Events						Comments
		January / February	March / April	May / June	July / August	September / October	November / December	
T1	MH-4					Analysis List 5		

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

LANDFILL GAS

Group	Monitoring Designation	Monitoring Events						Comments
		January / February	March / April	May / June	July / August	September / October	November / December	
LF G-1	GP1-96, GP2-96, GP3-96, GP4-96, GP5-96, GP6-96, GP7-13, GP8-13, GP9-13 and GP10-16		monitor		monitor	monitor	monitor	Soil gas monitoring

COMPOSTING FACILITY

Group	Monitoring Designation	Monitoring Events	Analysis List	
Groundwater	Background Wells: MW20-30, MW20-28A and 1(TBD) bedrock well Downgradient Wells: MW20-01 and (1) TBD bedrock well Trigger Wells: MW20-19 and MW20-22	Twice per year (Spring and Fall)	Laboratory: Alkalinity Ammonia Ammonium Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH	Sodium Sulphate Total Dissolved Solids Zinc Dissolved Organic Carbon Chemical Oxygen Demand Total Suspended Solids Benzene, Toluene, Ethylbenzene, Xylene (BTEX) Field Parameters: pH, conductivity, temperature, water level

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Leachate	(1) TBD leachate well	Three times per year (Spring, Summer and Fall)	Laboratory: Alkalinity Ammonia Ammonium Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH Sodium Sulphate	Total Dissolved Solids Zinc Dissolved Organic Carbon BOD5 Chemical Oxygen Demand Total Suspended Solids Benzene, Toluene, Ethylbenzene, Xylene (BTEX) Field Parameters: pH, conductivity, temperature, water level
Leachate Collection System		Three times per year (Spring, Summer and Fall)	Laboratory: Alkalinity Ammonia Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH	Sodium Sulphate Total Dissolved Solids Zinc Dissolved Organic Carbon BOD5 Chemical Oxygen Demand Total Suspended Solids VOCs Field Parameters: pH, conductivity, temperature

TABLE 1.1
2024 Monitoring Program
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Analysis List 1: Ca, Mg, Na, K, Cl, SO_4, Alkalinity, NO_3, NO_2, NH_3, TKN, pH, Conductivity, Fe, Mn, As, DOC, COD, Total Phenolics, Total P, P (dissolved), field pH and field conductivity, Anion Sum, Cation Sum, Bicarbonate, Carbonate, Hardness, Ion Balance, Orthophosphate (as P), field temperature, and Total Dissolved Solids (TDS).

Analysis List 2: Al, Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, and Zn.

Analysis List 3: VOC Scan

Analysis List 4: pH, conductivity, Alkalinity, Cl, SO_4, Total P, Soluble P, TKN, NH_3, NO_2, NO_3, K, Mg, Ca, Na, Fe, COD, DOC, Phenols, field pH and field conductivity.

Analysis List 5: cBOD5, BODs, TSS, TKN, NH_4, Phenolics, Fe, Cl, Sr, Br, Alkalinity, K, Na, field pH and field conductivity.

Analysis List 5a: cBOD5, Sr, Br, Alkalinity, K, Na, field pH and field conductivity.

Analysis List 6: BOD5, TOC, TSS, TDS, Turbidity, Fe (field filtered), temperature, DO, field pH and field conductivity.

By-Law + COD: City of Peterborough By-Law 05-104 Schedule ‘H’, Table 1 “Sanitary and Combined Sewer Discharge Limits.”

Soil Gas Monitoring: percent by volume (v/v) for methane, carbon dioxide, oxygen, and water level in the probe.

TABLE 2.1
Summary of Monthly Disposal Quantities
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

	Monthly Disposal Quantities in Tonnes [1]					
Month	**Total Waste**	**Daily/Interim Cover[2]**	**Diverted Materials[3]**	**Total Waste, Cover, and Diverted Materials[4]**	**Total Contaminated Soil**	**Total Hazardous Waste**
January	2,433.29	432.50	830.90[5]	3,696.69	3,980.70	0.00
February	2,319.34	8.66	766.00[5]	3,094.00	54.04	0.00
March	3,321.09	427.95	842.37[5]	4,591.41	244.23	0.00
April	3,253.00	16.55	358.43	3,627.98	456.35	0.00
May	3,288.70	0.00	530.89	3,819.59	1,619.33	0.06
June	3,111.86	9.62	437.49	3,558.97	792.26	0.27
July	3,620.65	15.46	465.57	4,101.68	1,039.19	0.07
August	3,515.31	63.92	438.89	4,018.12	551.21	0.00
September	2,990.90	41.93	330.38	3,363.21	224.62	0.00
October	3,210.94	98.18	436.75	3,745.87	260.42	0.00
November	2,602.04	28.24	388.04	3,018.32	185.71	0.00
December	2,106.73	89.01	172.18	2,367.92	257.96	0.00
Totals	**35,774**	**1,232**	**5,998**	**43,004**	**9,666**	**0.40**

Notes:

1. Information provided by the City of Peterborough.
2. Daily/Interim Cover includes clean wood/woodchips and compost screening overs.
3. Diverted Materials include C&D, green waste, scrap metal, tires, drywall, electronics, cardboard/boxboard, other mixed recyclables, mattresses, re-use materials and organics.
4. Quantities exclude contaminated soil and hazardous waste.
5. City started weekly curbside collection of organics on October 31, 2023. Material was weighed at the landfill and then diverted to Harper Road (from January 1, 2025 - Februry 5, 2021) or the POF (February 6, 2025 - March 31, 2025) for composting. As of April 1, 2025, the organics bound for the POF were no longer included in the "Diverted Materials".

TABLE 2.2

Weekly Summary of Inbound Material in 2024
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Week	Clean Wood/ Woodchips	Contaminated Soil - Cover	Compost Screening Overs	Construction & Demolition	Green Waste	Scrap Metal	Tires	Drywall	Electronics	Cardboard/ Boxboard	Mixed Recyclables	Mattress	Hazardous Waste	Re-use Material	Textile Diversion	Organics[4]	Mixed Solid Waste	Total Weekly Inbound
Jan.1-7	14.96	50.67		30.36		4.75		8.77		5.70	1.41			1.19			789.30	907.11
Jan.8-14	16.50	107.11		24.30	6.39		19.14	10.70		3.25		5.47		0.45			642.81	836.12
Jan.15-21		23.51		12.42		4.30	7.97	11.68		2.74		4.49		0.41	0.23		570.35	638.10
Jan.22-28		4.64		25.51		2.29		12.83		1.72	1.17	5.81		0.83	0.01		615.17	669.98
Jan.29- Feb. 4	44.81	2162.53		28.61	3.41	2.20			5.11	4.38		1.66		0.58	0.07	595.14	174.80	3023.30
Feb.5-11	10.45	41.67		23.22	3.26	5.31	22.48	21.39		2.17		1.56		0.49			665.37	797.37
Feb.12-18	11.99	30.95		24.79		1.42		11.62		4.19	1.36	3.32		0.31	0.09		648.42	738.46
Feb.19-25	10.06	17.17		28.34						2.14		11.04		0.51			645.32	714.58
Feb.25-March. 3	117.22	27.95		30.25	6.69	3.66				2.90		2.95		0.75	0.10	538.37	190.16	921.00
March. 4-10	38.83	21.09		30.44	10.42	5.04		24.32		3.22	2.01	4.30		0.26	0.03		1053.93	1193.89
March.11-17	5.62	14.92		40.56	16.85	1.99		9.88		3.87		3.96		0.65	0.01		1088.95	1187.26
March.18.24	13.17	22.41		29.99	27.76	2.63			3.98	3.39	1.74	2.86		0.37	0.56		688.94	797.80
March.24- 31	3.72	7.07		27.83	23.67	2.79		21.24		2.20		7.13		0.60	0.03	510.56	300.20	907.04
April.1-7	15.22	11.71		20.72	17.60	3.76	5.22			4.40	1.17	0.39		0.71			873.61	954.51
April.8-14		14.15	2.44	17.24	11.73	4.57		10.69		1.67		7.33		1.35	0.16		734.83	806.16
April.15-21		42.39		43.07	20.31	1.84	4.34	13.50		3.88		2.41		0.59	0.04		709.00	841.37
April.22-28	6.73	34.98		37.23	27.15	7.78	7.88	8.78	5.00	3.88	1.79	1.39		1.20	0.07		759.41	903.27
April.29-May 5		106.88		45.39	41.42	4.86		6.74		4.92		14.29		1.19	0.07		669.01	894.77
May.6-12	8.26	215.30		53.58	43.99	4.48		12.40		4.31	1.80	3.46	0.03	0.64			803.29	1151.54
May.13-19	1.53	263.33		49.04	42.82	7.75	23.39	9.36		4.19		6.92		0.49			676.13	1084.95
May.20-26		286.54		36.49	43.81	5.69	0.99			3.11		4.16	0.03	0.56			692.18	1073.56
May.27- June 2		271.16		35.82	38.64	7.77		8.32	3.85	2.27	1.05	4.39		0.44	3.60		725.40	1102.71
June.3-9	0.18	1637.47		35.26	35.94	4.85	49.34	7.58		2.10		4.68	0.21	0.43			800.00	2578.04
June.10-16		268.63		47.23	30.67	4.85		9.66		3.24		8.44		0.70			755.54	1128.96
June.17-23		108.21		31.21	25.59	5.66				3.89	1.71	8.90	0.06	0.75	0.08		717.86	903.92
June.24-30	1.25	1265.08		42.24	44.26	6.05		10.44		4.67		5.76		1.00			737.31	2118.06
July.1-7	2.14	1436.43		33.44	23.67	6.15		11.36	5.55	3.75		3.63	0.05	0.45			704.79	2231.41
July.8-14	60.00	73.19		49.11	31.11	3.79				4.18	1.49	10.22	0.02	0.36			821.36	1054.83
July.15-21		175.82		60.48	27.12	1.71	0.96	13.12		3.51	3.02	6.69		6.88	0.04		739.21	1038.56
July.22-28	1.95	24.90		54.48	25.38	8.39				3.89		3.67		0.54			805.45	928.65

TABLE 2.2

Weekly Summary of Inbound Material in 2024
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Week	Clean Wood/ Woodchips	Contaminated Soil - Cover	Compost Screening Overs	Construction & Demolition	Green Waste	Scrap Metal	Tires	Drywall	Electronics	Cardboard/ Boxboard	Mixed Recyclables	Mattress	Hazardous Waste	Re-use Material	Textile Diversion	Organics[4]	Mixed Solid Waste	Total Weekly Inbound
July.29 - Aug.4	3.49	135.56	427.00	31.50	26.01	5.64		11.64	2.83	3.76	1.98	6.55		3.91			894.19	1554.06
Aug.5-11		36.62		31.47	42.15	2.26	15.04	8.17		4.36		10.14		0.49			667.82	818.52
Aug.12-18	0.54	25.27		43.73	28.51	4.42				3.76	1.33	1.77		0.77			893.24	1003.34
Aug.19-25		120.91		38.00	19.60	4.56	5.74	10.49		4.16	1.10	5.82		0.42	0.16		840.59	1051.55
Aug.26- Sept.1		46.75		34.62	33.87	7.29	9.78	11.54	4.36	3.49		8.64		0.42			769.32	930.08
Sept. 2-8	1.43	95.46		30.00	18.92	3.86		10.93		2.59	2.44	1.09		0.61			690.99	858.32
Sept. 9-15	1.99	40.21		30.88	27.58	2.99				4.18		9.65		1.00			769.72	888.20
Sept. 16-22	13.27	36.00		43.19	25.36	7.03				1.64	1.68	6.92		0.72	0.18		706.93	842.92
Sept.23- 29	24.50	49.88		43.98	19.03	4.67		10.06		3.67		3.40		0.37	0.01		672.87	832.44
Sept.30-Oct.6		77.62		47.87	41.37	2.65		11.92		1.98	0.67	7.36		0.41	0.08		797.00	988.93
Oct. 7-13	2.19	108.43		27.15	41.74	6.41	3.37	9.83	4.73	2.85		8.42		0.54	0.02		693.37	909.05
Oct.14-20		10.03		29.60	24.81	3.45				3.39		2.05		0.41			636.02	709.76
Oct.21-27		6.03		34.19	28.16	6.07		9.73		2.91	0.76	6.11		0.56	0.13		725.72	820.37
Oct. 28- Nov.3		49.96		31.85	35.28	3.34		10.11	4.58	6.57		6.99		0.67	0.15		670.96	820.46
Nov.4-10	5.45	42.56		23.93	43.14	5.17	6.29	10.01		3.05		3.62		0.52	0.11		657.32	801.17
Nov.11-17	2.22	8.42		47.19	31.90	3.29	6.75					5.23		1.20	0.07		597.99	704.26
Nov.18-24	6.38	36.75		33.76	26.24	2.40		11.53		3.83	1.51	7.23		3.31			622.42	755.36
Nov.25-Dec.1		22.42		27.90	26.30	5.18		11.25	2.46	3.68		6.64		0.57	0.04		562.60	669.04
Dec.2-8		52.99		27.53	3.97	2.75				3.47		1.32		0.73			512.56	605.32
Dec.9-15		9.78		19.36		4.32		12.63		2.94		2.53		0.44			488.45	540.45
Dec.16-22	15.73	141.67		25.78	7.81	3.28				3.57	1.63	5.05		0.62			514.00	719.14
Dec.23-Dec 29		2.35		7.76				11.40		1.68				0.10	0.10		329.71	353.10
Dec.30-31	8.77		241.50	10.98	4.42	1.08				2.64	2.22			0.04	0.03		262.01	533.69
Yearly Total	**470.55**	**9923.53**	**670.94**	**1770.87**	**1185.83**	**218.44**	**188.68**	**415.62**	**42.45**	**177.90**	**35.04**	**267.81**	**0.40**	**44.51**	**6.27**	**1644.07**	**35773.90**	**52836.81**

Notes:
1. All values are in tonnes.
2. There will be some discrepancies between the weekly data and the monthly data (shown on Table 2.1) due to weekly data being recorded on inbound traffic only, whereas data used for the monthly values is recorded on both inbound and outbound traffic.
3. City started weekly curbside collection of organics on October 31, 2023. Material was weighed at the landfill and then diverted to Harper Road for composting until completion of the organics facility north of the landfill on April 1, 2025.
4. City started weekly curbside collection of organics on October 31, 2023. Material was weighed at the landfill and then diverted to Harper Road (from January 1, 2025 - Februry 5, 2021) or the POF (February 6, 2025 - March 31, 2025) for composting. As of April 1, 2025, the organics bound for the POF were no longer included in this table.

TABLE 2.3
Historical Waste Quantities
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Year	Amount of Waste Disposed Annually			Cumulative Total Waste (tonnes)
	Peterborough [1] (tonnes)	Commercial Haulers [2] (tonnes)	Total Waste (tonnes)	
1981	18,277	52,635 tons	64,331	64,331
1982	18,533	not recorded	NA [3]	104,331
1983	19,174	34,445 tons & 10,176 yd^3	50,259	154,590
1984	19,168	297,277 yd^3	64,585	219,175
1985	19,613	296,119 yd^3	64,805	283,980
1986	20,571	146,559 yd^3 & 28,403 tons	67,697	351,677
1987	19,644	58,023 tons	70,460	422,137
1988	18,512	58,065 tons	69,470	491,607
1989	23,669	54,441 tons	70,861	562,468
1990 [4]	19,052	35,495 tonnes	54,548	617,016
1991	26,510	17,350 tonnes	43,860	660,876
1992	16,260	19,975 tonnes	36,235	697,111
1993	16,335	18,236 tonnes	34,571	731,682
1994	15,760	17,007 tonnes	32,767	764,449
1995	14,014	29,702 tonnes	43,716	808,165
1996	13,731	30,247 tonnes	43,978	852,143
1997	12,349	30,825 tonnes	43,174	895,317
1998	12,126	34,120 tonnes	46,296	941,613
1999	12,672	36,753 tonnes	48,882	990,495
2000	13, 092	35,425 tonnes	48,517	1,039,012
2001	15, 201	39,748 tonnes	53,802	1,092,814
2002 [5]	-	-	59,716	1,152,530
2003	27,136	41,380 tonnes	68,516	1,221,046
2004	38,146	44, 214 tonnes	82,360	1,303,406
2005	28,752	48,632 tonnes	77,374	1,380,780
2006 [6]	35,185	47,634 tonnes	82,819	1,463,599

TABLE 2.3
Historical Waste Quantities
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Year	Amount of Waste Disposed Annually			
	Peterborough [1] (tonnes)	Commercial Haulers [2] (tonnes)	Total Waste (tonnes)	Cumulative Total Waste (tonnes)
2007	32,796	41,422	74,218	1,537,817
2008	29,278	38,692	67,970	1,605,787
2009 [7]	N/A	N/A	69,282	1,675,069
2010	46,754	13,494	60,248	1,735,317
2011	50,154	12,969	63,123	1,798,440
2012	38,931	21,151	60,082	1,858,522
2013	37,926	13,454	51,380	1,909,901
2014	32,393	12,571	44,964	1,954,865
2015	28,787	12,386	41,173	1,996,038
2016	31,454	10,194	41,649	2,037,687
2017	34,563	10,000	44,563	2,082,250
2018	37,897	6,743	44,640	2,126,890
2019	40,982	6,056	47,038	2,173,927
2020	40,703	7,076	47,779	2,221,706
2021	41,311	5,865	47,176	2,268,882
2022	38,539	7,840	46,379	2,315,261
2023	36,619	6,640	43,259	2,358,520
2024	29,454	6,320	35,774	2,394,294

Notes:
1. Waste tonnage for the City of Peterborough and the Townships of Otonabee-South Monaghan and Havelock-Belmont-Methuen. Tonnage from July 1, 2002 is from City and County of Peterborough.
2. Prior to 1990, all volumes in cubic yards were converted into tonnes (tons) assuming a density of 210 kg/m^3 (350 lb/yd^3). These volumes are based on assumed truck capacities prior to placement in the landfill and compaction.
3. Assumed 40,000 tonnes total waste for 1982.
4. Annual waste tonnages for 1990 to present are based on data from the computerized scale records.
5. Determination of waste based on these catagories not made.
6. Peterborough waste tonnage calculated based on report, "Details of Peterborough County by Material Source Code", printed on January 24, 2007.
7. Commercial Hauler waste tonnage based on difference between total waste tonnage and Peterborough waste tonnage.

TABLE 2.4
Summary of Remaining Landfill Capacity, Soil Quantities and Site Life - North Fill Area (Cells 2, 3 and 4)
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

No.	Description	Unit	Jan-24	Jan-25
1	Approved 9.5 ha NFA volume (including final cover)	m^3	1,622,000	1,622,000
2	Volume of final cover for 9.5 ha NFA	m^3	95,000	95,000
3	Approved 9.5 ha NFA volume (excluding final cover)	m^3	1,527,000	1,527,000
4	Cells 2, 3 & 4 - Volume utilized (excluding final cover)	m^3	800,100	853,200
5	Cells 2, 3 & 4 - Volume **operational airspace*** remaining (excluding final cover)	m^3	726,900	673,800
6	Cells 2, 3 & 4 - Volume utilized in calendar year	m^3	67,200	53,100
7	Cells 2, 3 & 4 - Cumulative quantity of waste landfilled	tonne	535,709	571,483
8	Cells 2, 3 & 4 - Final cover placed	ha	2.25	2.68
9	Cells 2, 3 & 4 - Remaining area requiring final cover	ha	7.25	6.82
10	Cells 2, 3 & 4 - Total fill area	ha	9.50	9.50
11	Cells 2, 3 & 4 - Volume required for final cover	m^3	76,125	71,610
12	Cells 2, 3 & 4 - Volume remaining daily/intermediate cover required	m^3	145,380	134,760
13	Cells 2, 3 & 4 - Apparent waste density	tonnes/m^3	0.67	0.67
14	Estimated annual volume	m^3/yr	69,179	65,781
15	Cells 2, 3 & 4 Remaining operational site life	yr	10.5	10.2
16	NFA - Cells 2, 3 and 4 - Total site life remaining	yr	10.5	10.2
17	NFA - Cells 2, 3 and 4 - Total volume remaining (excluding final cover)	m^3	726,900	673,800

Notes:

1. *** "Operational air space"** is defined as the volume of waste and daily cover that can be placed within the engineered part of the landfill.

Row No.	Additional Information
1	Volume from design of NFA.
2	Volume from design of NFA.
3	Equal to total NFA Volume (Row 1) minus Volume of Final Cover for NFA (Row 2)
4	Volume from topographic mapping.
5	Volume from topographic mapping.
6	Volume utilized in calendar year from topographic mapping.
7	Volume from City weighscale records.
8 to 10	Area from topographic mapping.
11	Volume based on depth of 0.9m of compacted soil and 0.15m of topsoil over area of Cells 2,3 and 4.
12	Volume equal to 1/5th of total air space remaining for waste and daily cover (i.e. waste to daily cover ratio = 4:1).
13	Equal to total waste placed divided by total volume utilized from site opening for waste and daily cover only (Row 6 / Row 4).
14	2022 - Estimated annual volume assumed based on a 5 year average of 46,600 tonnes of waste per year and apparent waste density of 0.67 tonnes/cubic metre.. 2023 - Estimated annual volume assumed based on a 5 year average of 46,350 tonnes of waste per year and apparent waste density of 0.67 tonnes/cubic metre.
15	Volume remaining for waste and daily cover in NFA (Row 5) divided by estimated volume required per year (Row 13).
16	Total Volume of NFA excluding final cover (Row 3) minus Landfill Volume Utilized (Row 4) divided by estimated volume required per year (Row 13).
17	Total Volume of NFA excluding final cover (Row 3) minus Landfill Volume Utilized (Row 4).

TABLE 3.1
2024 Daily Inspection Reports Summary
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Activities
January 2024	• The flowmeter on the NFA pump was reset to zero on January 2. • LGUP was offline for two (2) hours on January 2 for maintenance. The flare was operational during the maintenance work. • The LGUP broke down on January 7 and was not repaired in 2024. The flare was operational all through 2024 except for the times noted in this table. • Level sensor was adjusted for forcemain pumps 1 and 2 in the NFA on January 15. • Maple Reinders, D.M. Wills, Lundy Plumbing, Barry Electric and Summit Mechanical were onsite throughout the month of January for construction of the POF. • Red Tail Hawks, Turkey Vultures and White-tailed Deer were observed periodically throughout the month of January at the landfill. • Wind-blown litter was collected on site during two (2) days in January.
February 2024	• Pump control failure resulted in a minor leak of leachate from SFA pump station on February 13. Leachate was contained within the area and affected material was promptly cleaned up and placed in the landfill. Spill was reported to Spills Action Centre (Ref#1-UNHS9V). The pump control was repaired on February 14. • Strata Drilling Group was onsite from February 9 to 21 to install new monitoring wells and gas probe as well as complete repair work on existing wells. • Maple Reinders, Lundy Plumbing, Behan, Barry Electric and Summit Mechanical were onsite throughout the month of February for construction of the POF. • The flare was operational during the entire month of February. • Turkey Vultures were observed periodically throughout the month of February at the landfill. • Wind-blown litter was collected on site during four (4) days in February.
March 2024	• NFA condensate pump failed on March 1. Pump was replaced by Barry Electric on the same day. • Road salt was applied on access roads on March 20. • Propane ignition system on the flare failed on March 25. Repair was completed on the same day by City staff and an electrical contractor. The flare was down for 1.25 hours. • Odour was observed at the tipping face on March 25. • Maple Reinders, Lundy Plumbing, Behan, Barry Electric and Summit Mechanical were onsite throughout the month of March for construction of the POF.

TABLE 3.1
2024 Daily Inspection Reports Summary
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Activities
	• Turkey Vultures were observed periodically throughout the month of March at the landfill. • Wind-blown litter was collected on site during five (5) days in March.
April 2024	• Envision was onsite periodically throughout the month of April to complete Phase 4 of the NFA LFG system expansion. • Maple Reinders and Behan, Barry Electric and Summit Mechanical were onsite throughout the month of April for construction of the POF. • The flare was operational during the entire month of April. • Wild Turkeys, Red Tail Hawks and Turkey Vultures were observed periodically throughout the month of April at the landfill. • Wind-blown litter was collected on site during six (6) days in April.
May 2024	• Nexicom was on onsite May 24 to fix internet issues. • Surplus materials from POF construction were moved to the stockpile area north of Cell 4 on May 27. • Bensfort Road and ditches were cleaned up by Tomlinson on May 29. • Envision was onsite periodically throughout the month of May to complete Phase 4 of the NFA LFG system expansion. • Maple Reinders was onsite periodically throughout the month of May for construction of the POF. • The flare was operational during the entire month of May. • Canada Geese and Turkey Vultures were observed periodically throughout the month of May at the landfill. • Wind-blown litter was collected on site during two (2) days in May.
June 2024	• Barry Electric was onsite June 4. • Turtles were observed at the landfill site on June 10. • New traffic control signage installed around the public drop off area for better traffic flow and direction on June 12. • Flare was offline for 1 hour (6:00 am – 7:00 am) on June 24. • Maple Reinders was onsite periodically throughout the month of June for construction of the POF. • Odour control unit at the POF was operational periodically throughout the month of June. • Turkey Vultures were observed periodically throughout the month of June at the landfill.
July 2024	• MECP was onsite July 2. • Repairs to Cell 2 litter fence was completed between July 29 to 31. Phase 4 of the NFA LFG system expansion was substantially completed on July 31.

TABLE 3.1
2024 Daily Inspection Reports Summary
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Activities
	• Maple Reinders was onsite periodically throughout the month of July for construction of the POF. • Baseline Road and Bensfort Road dry Hydrant was repaired and returned to service in July. • The flare was operational during the entire month of April. • Odour control unit at the POF was operational periodically throughout the month of July. • Wild Turkeys, Crows and Turkey Vultures were observed periodically throughout the month of July at the landfill. • Water was used to aid in dust control periodically in July. • Wind-blown litter was collected on site during one (1) day in July.
August 2024	• Odour was observed at the tipping face on August 27. • Flare was shut down for a small electrical repair on August 31. Repair was completed on September 1. • Odour control unit at the POF was operational periodically throughout the month of August. • Wild Turkeys and Turkey Vultures were observed periodically throughout the month of August at the landfill. • Water was used to aid in dust control periodically in August.
September 2024	• Final cover was placed on the south side of Cell 3 on September 18. • Electrical services were installed at the POF office trailer on September 18. • Megawatt Generator Service was onsite September 12. • D&F Insulation was onsite September 13. • Barry Electric was onsite periodically throughout the month of September. • The flare was operational during the entire month of September. • Odour control unit at the POF was operational periodically throughout the month of September. • Turkey Vultures were observed periodically throughout the month of September at the landfill. • Wind-blown litter was collected on site during three (3) days in September.
October 2024	• Trent University students toured the landfill and POF on October 9. • Topsoil for final cover was placed in Cells 2 and 3 on October 16. • Summit Mechanical was onsite October 8 and 9 to complete work at the POF. • City Sewer Crew was onsite October 22. • City Water Works Crew was onsite October 25.

TABLE 3.1
2024 Daily Inspection Reports Summary
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Activities
	• Barry Electric was onsite periodically throughout the month of October. • The flare was operational during the entire month of October. • Water was used to aid in dust control periodically in October. • Wind-blown litter was collected on site during five (5) days in October.
November 2024	• The leachate forcemain was pressure tested on November 6. • There were issues with internet connection on November 6. The issue was repaired on the same day. • Some electrical components for the flare were repaired by Barry Electric between November 13 and 15. • Barry Electric was onsite November 19 to complete electrical system mapping and heat detection for City's Property Department. • Odour was observed at the tipping face on November 22. • PTS was onsite November 7 to complete computer hardware maintenance and upgrades. • The flare was operational during the entire month of November. • Water was used to aid in dust control periodically in November. • Wind-blown litter was collected on site during three (3) days in November.
December 2024	• Lenworth Dock & Door was onsite December 19 to complete repair work of overhead doors at the POF. • The flare was operational during the entire month of December. • Wind-blown litter was collected on site during four (4) days in November.

TABLE 3.2
2024 Landfill Complaints
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility and Peterborough Organics Facility

Complaint Number	Date of Complaint	Date of Incident /Complainant	Complaint Received By	Complaint	Reason/Outcome
1	February 6	February 6th, Odour complaint from Rochelle on County Road #2 between Bensfort Rd and Crowley Line	Don Briand	Odour from Landfill Facility in morning	Investigation revealed flare and gas collection system working correctly. Don continued to monitor.
2	February 26	February 26th, Odour complaint from Jay Schiller on Cloverdale Road	Don Briand	Strong odour around 9:30 pm	Investigation did not reveal a cause of the odour. Don followed up the following day with complainant and continued to monitor.
3	July 2	July 2nd, Odour complaint from Elizabeth Young	Don Briand	Odour issue complaint received by email on July 2nd in the morning to Don Briand.	Landfill Flare had shut down with an electrical issue between 5:00am and 8:35am, combining with low barometric pressure likely causing the odour.
4	July 9	July 9th, Odour complaint from Joe Crowley, 1540 Crowley Line	Don Briand	Odour from Compost facility in morning	Don could not detect odour at compost facility. Don responded to complainant.
5	July 18	July 18th, Odour complaint from Elizabeth Young	Don Briand	Odour issue complaint received by email on July 18th in the morning to Don Briand.	Don investigated and could detect odour, but could not find cause. Odour only lasted half an hour then was gone. Don responded to complainant by email
6	August 26	August 26, Odour complaint by Liz at 1540 Crowley Line	Don Briand	Odour issue complaint received by email on August 26th in the morning to Don Briand.	Don could not detect odour at Landfill or compost facility, and odour control system was functioning at the time of the complaint. Don responded to complainant
7	September 3	September 3, Odour complaint by Liz at 1540 Crowley Line	Don Briand	Odour issue complaint received by email on September 3rd in the morning to Don Briand.	Flare was offline overnight and required minor repairs, was back online in the morning. Don responded to complainant by email
8	September 11	September 11, Odour complaint by Alina at 1184 Crowley Line	Don Briand	Odour issue complaint received by email on September 11th in the morning to Don Briand.	Don responded to Complainant
9	September 12	September 12, Chris Sokoljuk, Dunk Contracting at 1557 Crowley Line	Don Briand	Odour from Compost facility in evening	Don could detect minor odour near site, but could not identify an issue. Don responded to Complainant
10	September 12	September 12, Odour complaint by Liz at 1540 Crowley Line	Don Briand	Odour from Compost facility in evening	Don could detect minor odour near site, but could not identify an issue. Don responded to Complainant
11	September 13	September 13, Odour complaint by Liz at 1540 Crowley Line	Don Briand	Odour from Compost facility in morning	Don could not detect odour from site. Odour is possibly caused by manure nearby. Don responded to Complainant
12	September 18	September 18, Odour complaint from Shanna Moroney (Juriga) at 1910 Base Line	Don Briand	Odour from Compost facility in evening	Odour is possibly caused by contractor moving large amount of material late in the day. Don responded to Complainant, and will follow up with contractor
13	September 20	September 20, Odour complaint from Shanna Moroney (Juriga) at 1910 Base Line	Don Briand	Odour from Compost facility in evening	
14-18	October 2	October 2, Odour complaint from Liz and Joe Crowley, Chris Sokolijuk, Paul McLeod, Sam Crowley, and Mike Taylor	Don Briand	Odour from Compost facility	Odour is possibly caused by contractor moving material that had not been property composted. Don responded to Complainants, and Barry worked with contactor to adjust procedures
19	October 17	October 17, Odour complaint from Elizabeth Crowley	Don Briand / Barry Campbell	Odour from Compost facility	Operational changes should help reduce odour, but heaps generated prior to changes that will cause odours until processed to completion. Staff responded to complainant
20	October 18	October 18, Odour complaint from Mike Brady at 1818 Keene Rd	Don Briand / Barry Campbell	Odour from Compost facility	Staff could not detect odour from site, and responded to Complainant
21	October 18	October 18, Odour complaint from Joe Crowley at 1540 Crowley Line	Barry Campbell	Odour from Compost facility in the Morning	Operational changes should help reduce odour. Barry could not identify source of odour, and responded to complainant

TABLE 3.2
2024 Landfill Complaints
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility and Peterborough Organics Facility

22	October 22	October 22, Odour complaint from Joe Crowley at 1540 Crowley Line	Barry Campbell	Odour from Compost facility in the Morning, and Tri Land Trucks using improper hauling route.	Barry could not detect odour from site. Odour is possibly caused by manure nearby. Tri Land trucks were stockpiling finished compost at a property on Crowley Line. Barry responded to Complainant
23	October 29	October 29, Odour complaint from Joe Crowley at 1540 Crowley Line	Barry Campbell	Odour from Compost facility in the morning by email	Barry could not detect odour from site. Odour possibly caused by activity related to compost sampling. Barry responded to Complainant
24	October 29	October 29, Odour complaint from Alina Stewart on Crowley Line	Barry Campbell	Odour from Compost facility	Barry could not detect odour from site. Odour possibly caused by activity related to compost sampling. Barry responded to Complainant
25	October 30	October 30, Odour complaint by Paul McLeod on Crowley Line	Barry Campbell	Odour from Compost facility	Barry could detect minor odour from site. Operational changes should mitigate odour in the future. Barry responded to Complainant
26	November 3	November 2, Odour Complaint by Leanne Rose (no address given)	Don Briand	Odour issue complaint received by email on November 3rd in the evening to Don Briand.	Electrical issues with flare. Don responded to Complainant
27	November 5	October 30, Odour complaint from Joe Crowley at 1540 Crowley Line	Barry Campbell	Odour from Compost facility in the morning	Barry could detect minor odour from site. Odour caused by moving batch of compost. Barry responded to Complainant
28-29	November 7	November 7, Odour complaint from Joe Crowley at 1540 Crowley Line and Liz Young	Barry Campbell	Odour from Compost facility in the evening	Barry responded to Complainant
30	November 7	November 7, Odour complaint from Kevin Stairs at 1820 Keene Rd.	Barry Campbell	Odour from Compost facility for a few weeks	Operational changes should mitigate odour in the future. Barry responded to Complainant
31	November 13	November 13, Odour complaint from Megan O'Gorman in evening	Barry Campbell and Don Briand	Odour from Compost facility in evening	Operational changes should mitigate odour in the future. Barry responded to Complainant following day
32	November 7	November 21, Odour complaint from Joe Crowley at Base Line	Barry Campbell	Odour from Compost facility all day	Operational changes should mitigate odour in the future. Barry responded to Complainant following day
33	November 27	November 7, Odour complaint from Kevin Stairs at 1820 Keene Rd.	Barry Campbell	Odour from Compost facility	Odour is possibly caused by manure nearby. Barry responded to Complainant
34	November 27	November 27, Odour complaint from Mike Brady at 1818 Keene Rd.	Barry Campbell	Odour from Compost facility	Barry responded to Complainant
35	December 3	December 3rd, Odour Complaint by Leanne Rose (no address	Barry Campbell	Odour issue complaint received by email on December 3rd in the evening to Barry Campbell.	Barry responded to Complainant
36	December 15	December 15, Odour complaint from Shanna Moroney (Juriga)	Don Briand forwarded to Barry Campbell	Odour from Compost facility	Followed up with site operator with reminder to include weather conditions when planning daily activities.

TABLE 4.1
Leachate / Groundwater Volume to Sanitary Sewer
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	SFA Lift Station - Leachate Pumped[(1)] (cubic metres)	NFA Lift Station - Leachate Pumped[(1)] (cubic metres)	Cumulative Volume (cubic metres)	2024 Monthly Leachate Flow to Sewer (cubic metres/month)
January	5,200	7,109	12,309	12,309
February	4,627	4,573	21,508	9,199
March	4,168	3,238	28,914	7,406
April	6,907	8,382	44,203	15,288
May	5,498	3,907	53,608	9,405
June	2,509	2,789	58,906	5,298
July	2,373	3,850	65,130	6,223
August	1,782	1,106	68,018	2,888
September	1,344	1,866	71,228	3,210
October	1,017	960	73,205	1,977
November	734	934	74,873	1,669
December	1,722	7,663	84,259	9,385
2024 Total	**37,881**	**46,378**		**84,259**

Notes:

1. Volumes provided by the City of Peterborough.

TABLE 4.2
Weekly Leachate/Groundwater Volume to Sanitary Sewer
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

From	To			
		SFA	NFA	TOTAL
1-Jan	7-Jan	817.4	323.6	1,141.0
8-Jan	14-Jan	1,400.0	2,524.8	3,924.8
15-Jan	21-Jan	1,571.7	718.8	2,290.5
22-Jan	28-Jan	968.1	1,411.3	2,379.4
29-Jan	4-Feb	986.9	3,338.4	4,325.2
5-Feb	11-Feb	1,830.5	2,176.7	4,007.2
12-Feb	18-Feb	1,150.8	383.3	1,534.2
19-Feb	25-Feb	803.2	443.0	1,246.2
26-Feb	3-Mar	635.6	577.3	1,212.9
4-Mar	10-Mar	912.3	726.7	1,639.0
11-Mar	17-Mar	1,129.5	1,301.9	2,431.3
18-Mar	24-Mar	1,000.2	742.5	1,742.6
25-Mar	31-Mar	896.9	239.0	1,135.9
1-Apr	7-Apr	1,256.5	533.6	1,790.1
8-Apr	14-Apr	1,903.5	1,500.5	3,404.0
15-Apr	21-Apr	1,877.3	3,491.5	5,368.8
22-Apr	28-Apr	1,368.6	2,406.2	3,774.9
29-Apr	5-May	1,754.4	2,582.0	4,336.3
6-May	12-May	1,595.6	858.8	2,454.4
13-May	19-May	1,160.2	393.6	1,553.8
20-May	26-May	1,013.6	285.9	1,299.5
27-May	2-Jun	332.3	331.3	663.6
3-Jun	9-Jun	983.3	427.6	1,410.9
10-Jun	16-Jun	560.8	228.4	789.2
17-Jun	23-Jun	524.4	1,095.8	1,620.2
24-Jun	30-Jun	244.1	982.9	1,227.0
1-Jul	7-Jul	736.7	524.8	1,261.4
8-Jul	14-Jul	400.2	1,158.5	1,558.7
15-Jul	21-Jul	685.8	1,508.0	2,193.9
22-Jul	28-Jul	486.7	555.1	1,041.8
29-Jul	4-Aug	539.6	266.0	805.6
5-Aug	11-Aug	283.3	327.4	610.7
12-Aug	18-Aug	468.6	249.5	718.1
19-Aug	25-Aug	364.3	196.7	561.0
26-Aug	1-Sep	411.0	209.5	620.5
2-Sep	8-Sep	283.2	315.0	598.2
9-Sep	15-Sep	304.0	316.3	620.3
16-Sep	22-Sep	434.9	170.7	605.7
23-Sep	29-Sep	186.8	369.2	556.0
30-Sep	6-Oct	326.0	753.4	1,079.4
7-Oct	13-Oct	193.2	350.8	543.9
14-Oct	20-Oct	256.5	182.7	439.2
21-Oct	27-Oct	249.1	182.8	431.9
28-Oct	3-Nov	200.8	204.0	404.8
4-Nov	10-Nov	188.5	196.8	385.3
11-Nov	17-Nov	234.5	213.4	447.9
18-Nov	24-Nov	164.3	246.0	410.3
25-Nov	1-Dec	43.0	223.2	266.1
2-Dec	8-Dec	26.4	342.1	368.5
9-Dec	15-Dec	327.8	659.8	987.5
16-Dec	22-Dec	632.4	1,729.4	2,361.9
23-Dec	29-Dec	288.2	1,254.5	1,542.7
30-Dec	31-Dec	383.3	475.3	858.6
	2024 TOTAL	**37,776.6**	**43,206.1**	**80,982.7**

Note:

1. Leachate totals vary from those found in Table 4.1 due to the time readings were obtained.

2. Leachate volumes in Table 4.2 are based on totalizer readings recorded in person during operational hours onsite.

TABLE 4.3
2024 Leachate Quality Summary - South Fill Area
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	BY-LAW [1]	TYPICAL LANDFILL LEACHATE	Holding Tank - SFA			MH6-94	Maintenance Hole (MH) 4	Refuse Well 23B	
				HISTORICAL RANGE [5]	26-Mar-24	22-Oct-24	22-Oct-24	9-Oct-24	HISTORICAL RANGE [5]	20-Mar-24
Alkalinity	mg/L		300 - 2,000[B]	1590 - 4290		2060	2190	398	446 - 3120	996
Aluminum	mg/L	50	<0.1 - 2[B]	<0.02 - 3.51	0.035	0.216			<0.025 - 0.52	
Ammonia (as N)	mg/L		5 - 100[B]	53 - 290			284	12.8	18.2 - 500	78.4
Arsenic	mg/L	1	0.01 - 0.04[B]	<0.005 - 0.03	<0.005	<0.005			0.0006 - 0.007	0.005
Barium	mg/L		0.1 - 2[B]	0.285 - 0.569					0.396 - 0.713	
Beryllium	mg/L		<0.0005[B]	<0.0002 - <0.001					<0.0001 - <0.001	
Biological Oxygen Demand	mg/L	300			25.6	17				
Boron	mg/L		0.5 - 10[B]	2.31 - 6.84					1.05 - 1.91	
Cadmium	mg/L	0.7	<0.01[B]	0.0003 - 0.004	<0.001	<0.001			<0.0001 - 0.005	
Calcium	mg/L		100 - 1,000[B]	164 - 210					101 - 187	137
Chemical Oxygen Demand	mg/L		150 - 6,000[B]	120 - 1070	270	360			40 - 426	90
Chloride	mg/L	1500	20 - 2,500[B]	230 - 1120	302	556	461	179	58.9 - 645	129
Chromium	mg/L	3	<0.010 - 0.5[B]	0.004 - 0.059	0.016	0.024			0.001 - 0.012	
Cobalt	mg/L	5		<0.002 - 0.02	0.007	0.01			0.0022 - 0.01	
Conductivity - field	µS/cm			2820 - 9340	3970	5280	5320	1490	1050 - 7040	2050
Copper	mg/L	2	<0.008 - 1[B]	0.002 - 0.01	<0.005	<0.005			<0.0004 - 0.016	
Dissolved Organic Carbon	mg/L								4.4 - 108	26.5
Hardness	mg/L		400 - 2,000[B]						352 - 1020	539
Iron	mg/L	50	1 - 1,000[A]	3.21 - 73.4	10.7	16.3	20.9	1.18	3.02 - 30.3	13.2
Lead	mg/L	1	<5[A]	<0.0015 - 0.0603	<0.01	<0.01			<0.0005 - 0.05	
Magnesium	mg/L		100 - 1,500[A]	46 - 122					22.4 - 216	47.8
Manganese	mg/L	5	0.01 - 100[A]	0.282 - 0.922	0.526	0.348			0.072 - 0.48	0.212
Molybdenum	mg/L	5		<0.005 - 0.008	<0.005	<0.005			<0.0005 - 0.002	
Nickel	mg/L	3	0.01 - 1[A]	0.014 - 0.08	0.024	0.035			0.014 - 0.054	
pH	units	6.0-10.5		6.63 - 7.63	6.94	7			6.44 - 7.23	6.87
pH - field	units			6.25 - 7.42	6.7	6.86	7.27	6.89	6.27 - 7.2	6.38
Phenols	µg/L						0.005	<1	0.033 - 25	0.003
Phosphate	mg/L		1 - 10[B]						<0.02 - 0.82	
Phosphorus	mg/L	10		0.3 - 3.37	1	1.88			0.04 - 0.84	0.13
Potassium	mg/L		200 - 1,000[A]	97.2 - 337		149	164	17	21.5 - 239	49.4
Sodium	mg/L		200 - 1,200[A]	3 - 877		451	392	119	50.5 - 386	82.8
Sulphate	mg/L	1500	<1 - 300[B]	9.9 - 98.4	8.8	12.9			<0.3 - 37.7	8.5
Total Dissolved Solids	mg/L								580 - 2240	990
Total Kjeldahl Nitrogen	mg/L	100	1 - 100[B]	68 - 670	**224**	**320**	**318**	15.4	31.6 - 508	85.4
Zinc	mg/L	2	0.1 - 100[A]	<0.01 - 0.15	<0.01	0.1			0.0017 - 0.09	
1,1,2,2-Tetrachlorethane	µg/L			0 - 0	<0.5	<0.5				
1,1,2-Trichlorethane	µg/L			0 - 0	<0.5	<0.5				
1,1-Dichloroethane	µg/L			<0.5 - 2	<0.5	<0.5				
1,1-Dichloroethylene	µg/L	2		0 - 0	<0.5	<0.5				
1,2-Dichlorobenzene	µg/L			0 - 0	<0.5	<0.5				
1,2-Dichloroethane	µg/L			<0.5 - 0.8	<0.5	<0.5				
1,2-Dichloropropane	µg/L			0 - 0	<0.5	<0.5				
1,3-Dichlorobenzene	µg/L			0 - 0	<0.5	<0.5				
1,3-Dichloropropene	µg/L			<0.5 - 15	<0.5	<0.5				
1,3-Dichloropropene	µg/L			0 - 0	<0.5	<0.5				
1,4-Dichlorobenzene	µg/L	80		<2 - 11	4.9	6.1				
Benzene	µg/L	10		<0.5 - 11	3.1	1.1				
Bromodichloromethane	µg/L			0 - 0	<0.5	<0.5				
Bromoform	µg/L			0 - 0	<0.5	<0.5				
Bromomethane	µg/L			0 - 0	<0.5	<0.5				
Carbon Tetrachloride	µg/L			0 - 0	<0.2	<0.2				
Chlorobenzene	µg/L			<0.5 - 15.3	8	6.7				
Chloroethane	µg/L			0 - 0	<5	<5				
Chloroform	µg/L	40		<0.2 - 2	<0.5	<0.5				
Chloromethane	µg/L			0 - 0	<5	<5				
cis-1,2-Dichloroethylene	µg/L	4000		<0.5	<0.5	<0.5				
Dibromochloromethane	µg/L			0 - 0	<0.5	<0.5				
Dichloromethane	µg/L	1000		<0.5 - <200	<0.5	<0.5				
Ethyl Benzene	µg/L	160		<0.5 - 150	<0.5	<0.5				
Ethylene dibromide	µg/L			0 - 0	<0.2	<0.2				
m/p-Xylenes	µg/L			<0.5 - 160	5.2	2.9				
nonyl-Phenol ethoxylates	µg/L	10		0 - 0	<10	<10				
o-Xylene	µg/L			<0.5 - 54	2.5	1.8				
Phenols - total	µg/L	1000		3 - 92	<2	<2				
Styrene	µg/L			<0.5	<0.5	<0.5				
Tetrachloroethylene	µg/L	16		<0.5 - <200	<0.5	<0.5				
Toluene	µg/L	400		<0.5 - 100	0.5	<0.5				
trans-1,2-Dichloroethylene	µg/L	2		<0.5 - 0.6	<0.5	<0.5				
Trichloroethylene	µg/L	400		<0.5 - <200	<0.5	<0.5				
Trichlorofluoromethane	µg/L			<1 - <200	<5	<5				
Vinyl Chloride	µg/L	2		<0.2 - 3	<0.2	<0.2				
Xylenes - total	µg/L	1400		<0.5 - 380	7.7	4.7				

NOTES:
1) By-law criteria is based on City of Peterborough By-law 15-075 to regulate discharge.
2) [A] - Typical leachate characteristics data from Freeze and Cherry (1979).
3) [B] - Typical leachate characteristics data from Ministry of the Environment (1993).
4) Blank indicates parameter not analyzed.
5) Historical range of parameter concentrations dating back to 2006, based upon available data.

TABLE 4.4
2024 Leachate Quality Summary - North Fill Area
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	BY-LAW [1]	TYPICAL LANDFILL LEACHATE	Holding Tank - NFA		
				HISTORICAL RANGE [5]	26-Mar-24	22-Oct-24
Alkalinity	mg/L		300 - 2,000[B]	852 - 2900		1760
Aluminum	mg/L	50	<0.1 - 2[B]	<0.02 - 3.01	0.171	0.514
Ammonia (as N)	mg/L		5 - 100[B]			
Arsenic	mg/L	1	0.01 - 0.04[B]	0.006 - 0.047	0.009	0.02
Barium	mg/L		0.1 - 2[B]	0.117 - 0.228		
Beryllium	mg/L		<0.0005[B]	<0.0002 - <0.001		
Biological Oxygen Demand	mg/L	300			65.8	**1340**
Boron	mg/L		0.5 - 10[B]	0.68 - 1.74		
Cadmium	mg/L	0.7	<0.01[B]	<0.0003 - 0.0004	<0.001	<0.001
Calcium	mg/L		100 - 1,000[B]	284 - 284		
Chemical Oxygen Demand	mg/L		150 - 6,000[B]	50 - 1510	480	2440
Chloride	mg/L	1500	20 - 2,500[B]	9.7 - 1430	537	634
Chromium	mg/L	3	<0.010 - 0.5[B]	0.006 - 0.181	0.055	0.077
Cobalt	mg/L	5		0.0009 - 0.024	0.011	0.013
Conductivity - field	µS/cm			1680 - 10600	4290	5790
Copper	mg/L	2	<0.008 - 1[B]	0.0021 - 0.022	0.009	0.016
Dissolved Organic Carbon	mg/L					
Hardness	mg/L		400 - 2,000[B]			
Iron	mg/L	50	1 - 1,000[A]	0.35 - 7.27	0.96	2.1
Lead	mg/L	1	<5[A]	<0.0015 - 0.0366	<0.01	<0.01
Magnesium	mg/L		100 - 1,500[A]	45.4 - 57.4		
Manganese	mg/L	5	0.01 - 100[A]	0.115 - 1.27	0.25	0.428
Molybdenum	mg/L	5		<0.005 - 0.018	<0.005	<0.005
Nickel	mg/L	3	0.01 - 1[A]	0.01 - 0.139	0.053	0.061
pH	units	6.0-10.5		6.48 - 8.15	7.82	7.43
pH - field	units			6.43 - 7.99	7.45	7.31
Phenols	µg/L					
Phosphate	mg/L		1 - 10[B]			
Phosphorus - Dissolved	mg/L					
Phosphorus	mg/L	10		0.25 - 3.16	1.78	6.67
Potassium	mg/L		200 - 1,000[A]	38 - 392		282
Sodium	mg/L		200 - 1,200[A]	6 - 1130		555
Sulphate	mg/L	1500	<1 - 300[B]	18.4 - 581	356	156
Temperature - field	°C			11.1 - 25.2	17.1	19.5
Total Dissolved Solids	mg/L					
Total Kjeldahl Nitrogen	mg/L	100	1 - 100[B]	20.8 - 467	**126**	**256**
Zinc	mg/L	2	0.1 - 100[A]	<0.02 - 0.26	0.04	0.2
1,1,1,2-Tetrachlorethane	µg/L			0 - 0		
1,1,1-Trichloroethane	µg/L			<0.25 - 0.55		
1,1,2,2-Tetrachlorethane	µg/L			0 - 0	<0.5	<0.5
1,1,2-Trichlorethane	µg/L			0 - 0	<0.5	<0.5
1,1-Dichloroethane	µg/L			<0.25 - 5	<0.5	<0.5
1,1-Dichloroethylene	µg/L	2		0 - 0	<0.5	<0.5
1,2-Dichlorobenzene	µg/L			0 - 0	<0.5	<0.5
1,2-Dichloroethane	µg/L			<0.4 - 11	1.2	<0.5
1,2-Dichloropropane	µg/L			0 - 0	<0.5	<0.5
1,3-Dichlorobenzene	µg/L			0 - 0	<0.5	<0.5
1,3-Dichloropropene	µg/L			<0.4 - <5	<0.5	<0.5
1,3-Dichloropropene	µg/L			0 - 0	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	80		<0.5 - 0.9	<0.5	<0.5
Benzene	µg/L	10		<0.2 - 1.8	<0.5	<0.5
Bromodichloromethane	µg/L			0 - 0	<0.5	<0.5
Bromoform	µg/L			0 - 0	<0.5	<0.5
Bromomethane	µg/L			0 - 0	<0.5	<0.5
Carbon Tetrachloride	µg/L			0 - 0	<0.2	<0.2
Chlorobenzene	µg/L			<0.2 - <5	<0.5	<0.5
Chloroethane	µg/L			0 - 0	<5	<5
Chloroform	µg/L	40		<0.2 - 0.27	<0.5	<0.5
Chloromethane	µg/L			0 - 0	<5	<5
cis-1,2-Dichloroethylene	µg/L	4000		<0.5	<0.5	<0.5
Dibromochloromethane	µg/L			0 - 0	<0.5	<0.5
Dichloromethane	µg/L	1000		<0.5 - 7.7	1.3	<0.5
Ethyl Benzene	µg/L	160		<0.2 - 5.5	<0.5	<0.5
Ethylene dibromide	µg/L			0 - 0	<0.2	<0.2
m/p-Xylenes	µg/L			<0.25 - 18	0.6	<0.5
nonyl-Phenol ethoxylates	µg/L	10		0 - 0	<10	<10
nonyl-Phenols	µg/L	1		<1 - 6	<4	<1
o-Xylene	µg/L			<0.2 - 4	<0.5	<0.5
Phenols - total	µg/L	1000		1 - 828	24	440
Styrene	µg/L			<0.5	<0.5	<0.5
Tetrachloroethylene	µg/L	16		<0.25 - 0.6	<0.5	<0.5
Toluene	µg/L	400		<0.5 - 90	<0.5	<0.5
trans-1,2-Dichloroethylene	µg/L	2		<0.2 - <5	<0.5	<0.5
Trichloroethylene	µg/L	400		<0.25 - 4	<0.5	<0.5
Trichlorofluoromethane	µg/L			0.42 - 2.2	<5	<5
Vinyl Chloride	µg/L	2		<0.2 - <10	<0.2	<0.2
Xylenes - total	µg/L	1400		<0.25 - 22	0.9	<0.5

NOTES:
1) By-law criteria is based on City of Peterborough By-law 15-075 to regulate discharge.
2) [A] - Typical leachate characteristics data from Freeze and Cherry (1979).
3) [B] - Typical leachate characteristics data from Ministry of the Environment (1993).
4) Blank indicates parameter not analyzed.
5) Historical range of parameter concentrations dating back to 2006, based upon available data.

TABLE 4.5
2024 Leafate Quality Summary - Peterborough Organics Facility
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	BY-LAW[1]	TYPICAL LANDFILL LEACHATE	TYPICAL COMPOST LEAFATE[4]	BENSSOLCH			
					RANGE (2024)	24-Apr-24	17-Jun-24	29-Oct-24
Alkalinity	mg/L		300 - 2,000[B]		66.9 - 699	607	66.9	699
Aluminum	mg/L	50	<0.1 - 2[B]					
Ammonia (as N)	mg/L		5 - 100[B]		8 - 142	8	41.5	121
Arsenic	mg/L	1	0.01 - 0.04[B]		<0.0005			
Barium	mg/L		0.1 - 2[B]		0.084 - 0.443	0.114	0.443	0.084
Biological Oxygen Demand	mg/L	300		20-52,800	1080 - 3470	**1080**	**1360**	**3470**
Beryllium	mg/L		<0.0005[B]					
Boron	mg/L		0.5 - 10[B]		0.1 - 0.18	0.1	0.138	0.18
Cadmium	mg/L	0.7	<0.01[B]	0.01-0.98	<0.001 - 0.001	<0.001	0.001	<0.001
Calcium	mg/L		100 - 1,000[B]		142 - 311	142	254	311
Chemical Oxygen Demand	mg/L		150 - 6,000[B]	530-31,800	780 - 4350	1640	3020	4200
Chloride	mg/L	1500	20 - 2,500[B]	780-5,254	79.5 - 160	154	79.5	79.5
Chromium	mg/L	3	<0.010 - 0.5[B]					
Cobalt	mg/L	5						
Conductivity - field	µS/cm			2,900-16,900	1090 - 3430	2300	1090	3430
Copper	mg/L	2	<0.008 - 1[B]	<0.01-0.38	0.01 - 0.199	0.042	0.199	0.068
Dissolved Organic Carbon	mg/L				565 1710	565		1260
Hardness	mg/L		400 - 2,000[B]					
Iron	mg/L	50	1 - 1,000[A]		1.36 - 25.8	1.36	25.8	5.63
Lead	mg/L	1	<5[A]	0.004-0.81	<0.01 - 0.0881	<0.01	0.0881	0.01
Magnesium	mg/L		100 - 1,500[A]		25.2 - 45.4	29.8	25.2	45.4
Manganese	mg/L	5	0.01 - 100[A]					
Molybdenum	mg/L	5						
Nickel	mg/L	3	0.01 - 1[A]	0.041-0.38	0.007 - 0.041	0.017	0.041	0.032
Nitrate	mg/L		<1 - 0.50[B]		<0.05 - <0.5	<0.05	<0.05	<0.5
Nitrite	mg/L		<1[B]					
pH	units	6.0-10.5		4.7-8.8	5.42 - 7.65	7.65	6.66	7.68
pH - field	units				6.09 - 7.84	7.84	7.21	6.09
Phenols	µg/L							
Phosphate	mg/L		1 - 10[B]	15-119				
Phosphorus - Dissolved	mg/L							
Phosphorus	mg/L	10		1.5-372	1.52 - 17.8	3.06	**14**	**17.8**
Potassium	mg/L		200 - 1,000[A]					
Sodium	mg/L		200 - 1,200[A]			134	74.8	172
Sulphate	mg/L	1500	<1 - 300[B]		43.2 - 75.1	75.1	51.3	43.2
Temperature - field	°C					6.9	18.7	11.9
Total Dissolved Solids	mg/L				1740 - 3640	1780	1740	3640
Total Suspended Solids	mg/L		0	80-2,460				
Total Kjeldahl Nitrogen	mg/L	100	1 - 100[B]	40-1,105	37.1 - 200			**200**
Zinc	mg/L	2	0.1 - 100[A]	<0.01-3.37	0.04 - 1.6	0.04		1.6

NOTES: 1) By-law criteria is based on City of Peterborough By-law 15-075 to regulate discharge.
2) [A] - Typical leachate characteristics data from Freeze and Cherry (1979).
3) [B] - Typical leachate characteristics data from Ministry of the Environment (1993).
4) Typical leafate range from Roy *et al*. 2018 (yard and green waste ranges)
5) Blank indicates parameter not analyzed.

Peterborough Waste Management Facility

Leachate Collection System Inspection & Cleaning Checklist

Date Started: September 2024

Date Completed: October 2024 **Completed By:**

NORTH FILL AREA									
DATE	**PIPE REFERENCE**	**DESCRIPTION**	**PIPE SIZE**	**GAS ALARM**	**MANHOLE VACUUM**	**FLUSHED DISTANCE (m)**	**VIDEO DISTANCE (m)**	**PIPE CONDITION**	**COMMENTS**
2024-10-23	308080	MHL1 (S. Inv.) - PS (Holding Tank)	Diameter = 200mm Length = ±40m	Yes No	Yes No	0.0	0.0	Poor Good	N/A Valve
2024-09-03	308090	MHL1 (NE. Inv.) - MHL5 East Line	Diameter = 200mm Length = ±222m	Yes No	Yes (No)	81.0	57.7	Poor (Good)	Clean Weepers Good
2024-09-03	308088	MHL1 (N. Inv.) - MHL5 Central Line	Diameter = 200mm Length = ±185m	Yes No	Yes (No)	136.0	109.3	Poor (Good)	Clean Weepers Good
2024-09-16	308086	MHL1 (NW. Inv.) - MHL5 West Line	Diameter = 200mm Length = ±184m	Yes No	Yes (No)	115.0	122.0	Poor (Good)	Clean Weepers Good
2024-09-16	308092	MHL1 (SW. Inv.) - MHL2	Diameter = 200mm Length = ±57m	Yes No	Yes No	48.0	55.5	Poor Good	Clean Pipe Good
2024-09-17	308090	MHL5 (E. Inv.) - MHL1 East Line	Diameter = 200mm Length = ±222m	Yes No	Yes (No)	111.0	147.1	Poor Good	Clean Pipe Good
2024-09-19	308088	MHL5 (SE. Inv.) - MHL1 Central Line	Diameter = 200mm Length = ±185m	Yes No	Yes (No)	129.0	133.7	Poor Good	Clean Pipe Good
2024-09-19	308086	MHL5 (S. Inv.) - MHL1 West Line	Diameter = 200mm Length = ±184m	Yes No	Yes (No)	0.0	0.0	(Poor) Good	N/A Tray Missing
-	No Pipe Reference	MHL5 (W. Inv.) - MHL6	Diameter = 200mm Length = ±50m	Yes No	Yes No	-	-	Poor Good	
2024-10-01	308084	MHL2 (N. Inv.) - MHL6 East Line	Diameter = 200mm Length = ±213m	Yes No	Yes (No)	182.0	105.4	Poor Good	Clean Pipe Good
2024-10-01	308082	MHL2 (NW. Inv.) - MHL6 West Line	Diameter = 200mm Length = ±208m	Yes No	Yes (No)	175.0	114.2	Poor Good	Clean Pipe Good
2024-10-01	308096	MHL2 (SW. Inv.) - MHL3	Diameter = 200mm Length = ±53m	Yes No	Yes (No)	177.0	54.1	Poor Good	Clean Pipe Good
2024-09-19	308084	MHL6 (SE. Inv.) - MHL2 East Line	Diameter = 200mm Length = ±213m	Yes No	Yes (No)	138.0	156.6	Poor Good	Clean Pipe Good
2024-09-19	308082	MHL6 (S. Inv.) - MHL2 West Line	Diameter = 200mm Length = ±208m	Yes No	Yes (No)	150.0	160.5	Poor Good	Clean Pipe Good
2024-09-17	308298	MHL3 (N. Inv.) - MHL7 East Line	Diameter = 200mm Length = ±274m	Yes No	Yes (No)	96.0	106.8	Poor Good	Clean Pipe Good
2024-09-16	308296	MHL3 (N. Inv.) - MHL7 East Central Line	Diameter = 200mm Length = ±244m	Yes No	Yes (No)	142.0	141.0	Poor Good	Clean Pipe Good
2024-09-16	308292	MHL3 (NE. Inv.) - MHL7 West Central Line	Diameter = 200mm Length = ±240m	Yes No	Yes (No)	96.0	113.9	Poor Good	Clean Pipe Good
2024-09-17	308288	MHL3 (NE. Inv.) - MHL7 West Line	Diameter = 200mm Length = ±264m	Yes No	Yes (No)	127.0	107.7	Poor Good	Clean Pipe Good
2024-09-16	316530	MHL3 (W. Inv.) - Capped End	Diameter = 200mm Length = ±88m	Yes No	Yes (No)	76.0	99.9	Poor Good	
2024-10-23	308298	MHL7 (E. Inv.) - MHL3 East Line	Diameter = 200mm Length = ±274m	Yes No	Yes No	91.4	82.0	Poor (Good)	Clean Pipe Good
2024-10-23	308296	MHL7 (SE. Inv.) - MHL3 East Central Line	Diameter = 200mm Length = ±244m	Yes No	Yes No	78.0	60.0	Poor (Good)	Clean Pipe Good
2024-10-23	308292	MHL7 (SE. Inv.) - MHL3 West Central Line	Diameter = 200mm Length = ±240m	Yes No	Yes No	76.2	90.4	Poor (Good)	Clean Pipe Good
2024-09-17	316526			Yes No	Yes (No)	165.0	50.5	Poor Good	
2024-10-23	308288	MHL7 (S. Inv.) - MHL3 West Line	Diameter = 200mm Length = ±264m	Yes No	Yes No	91.4	72.8	Poor (Good)	Clean Pipe Good

Note: Please provide comments if pipe condition is found to be "Poor".

TABLE 4.6
Leachate Collection System Inspection Checklist
2024 ANNUAL MONITORING REPORT
Peterborough Waste Management Facility
The County and The City of Peterborough

NORTH FILL AREA

DATE	PIPE REFERENCE	DESCRIPTION	PIPE SIZE	GAS ALARM	MANHOLE VACUUM	FLUSHED DISTANCE (m)	VIDEO DISTANCE (m)	PIPE CONDITION	COMMENTS
2024-10-22	Cell 4 - P4	MHL4 (N. Inv.) - MHL8 East Line	Diameter = 200mm Length = ±290m	Yes No	Yes No	76.2	73.1	Poor Good	
2024-10-22	Cell 4 - P3	MHL4 (NW. Inv) - MHL8 East Central Line	Diameter = 200mm Length = ±265m	Yes No	Yes No	73.2	71.3	Poor Good	
2024-10-22	Cell 4 - P2	MHL4 (NW. Inv) - MHL8 West Central Line	Diameter = 200mm Length = ±265m	Yes No	Yes No	76.2	35.5	Poor Good	
2024-10-22	Cell 4 - P1	MHL4 (W. Inv.) - MHL8 West Line	Diameter = 200mm Length = ±300m	Yes No	Yes No	77.7	83.0	Poor Good	
-	316530	MHL4 (E. Inv.) - MHL3	Diameter = 200mm Length = ±98m	Yes No	Yes No	-	-	Poor Good	
2024-10-22	Cell 4 - P4	MHL8 (E. Inv.) - MHL4 East Line	Diameter = 200mm Length = ±290m	Yes (No)	Yes No	73.3	85.7	Poor Good	
2024-10-22	Cell 4 - P3	MHL8 (SE. Inv.) - MHL4 East Central Line	Diameter = 200mm Length = ±265m	Yes (No)	Yes No	77.1	88.5	Poor Good	
2024-10-22	Cell 4 - P2	MHL8 (SE. Inv.) - MHL4 West Central Line	Diameter = 200mm Length = ±265m	Yes (No)	Yes No	76.2	99.1	Poor Good	
2024-10-22	Cell 4 - P1	MHL8 (S. Inv) - MHL4 West Line	Diameter = 200mm Length = ±300m	Yes (No)	Yes No	83.8	98.2	Poor Good	

Note: Please provide comments if pipe condition is found to be "Poor".

TABLE 4.6
Leachate Collection System Inspection Checklist
2024 ANNUAL MONITORING REPORT
Peterborough Waste Management Facility
The County and The City of Peterborough

SOUTH FILL AREA									
DATE	**PIPE REFERENCE**	**DESCRIPTION**	**PIPE SIZE**	**GAS ALARM**	**MANHOLE VACCUM**	**FLUSHED DISTANCE (m)**	**VIDEO DISTANCE (m)**	**PIPE CONDITION**	**COMMENTS**
2024-10-22	179538	MHT10-07 - South Invert Underdrain	Diameter = 150mm Length = ±157m	Yes (No)	Yes (No)	85.0	-	Poor Good	
2024-10-22	179540	MHT10-07 - MHT9-94 Gravity Drain	Diameter = 200mm Length = ±89m	Yes No	Yes No	85.0	-	Poor Good	
2024-10-22	179543	MHT9-94 - South Invert Underdrain	Diameter = 150mm Length = ±95m	Yes (No)	Yes (No)	94.0	-	Poor Good	
2024-10-22	179544	MHT9-94 - MHT8-94 Gravity Drain	Diameter = 200mm Length = ±39m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179547	MHT8-94 - South Invert Underdrain	Diameter = 150mm Length = ±116m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179548	MHT7-94 - MHT8-94 Gravity Drain	Diameter = 200mm Length = ±40m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179551	MHT7-94 - South Invert Underdrain	Diameter = 150mm Length = ±172m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179552	MHT7-94 - MHT6-94 Gravity Drain	Diameter = 200mm Length = ±61m	Yes (No)	Yes (No)	75.0	-	Poor Good	Valve Downstream
2024-10-22	179554	MH-T5 - MHT6-94 Gravity Drain	Diameter = 200mm Length = ±86m	Yes (No)	Yes (No)	72.0	-	Poor Good	
2024-10-22	179580	MH-T5 - MH-G Gravity Drain	Diameter = 200mm Length = ±11m	Yes (No)	Yes (No)	11.0	-	Poor Good	
2024-10-22	179574	MH-G - East Cleanout Toe Drain	Diameter = 150mm Length = ±34m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179578	MH-G - West Cleanout Toe Drain	Diameter = 150mm Length = ±51m	Yes No	Yes No	-	-	Poor Good	Not Accessible
2024-10-22	179567 179561	MH-G - South Invert Toe Drain	Diameter = 150mm Length = ±80m	Yes No	Yes No	-	-	Poor Good	Do Not Attempt Flushing
2024-10-22	179581	MH-T4 - MH-T5 Gravity Drain	Diameter = 250mm Length = ±118m	Yes (No)	Yes (No)	117.0	-	Poor Good	Inspect Upstream No Invert
2024-10-22	179583	MH-T3 - MH-T4 Gravity Drain	Diameter = 250mm Length = ±118m	Yes (No)	Yes (No)	108.0	-	Poor Good	
2024-10-22	179585	MH-T2 - MH-T3 Gravity Drain	Diameter = 250mm Length = ±87m	Yes (No)	Yes (No)	88.0	-	Poor Good	Wait for J3 to Pump Down
2024-10-22	179587	MH-T1 - MH-T2 Gravity Drain	Diameter = 250mm Length = ±66m	Yes (No)	Yes (No)	65.0	-	Poor Good	
2024-10-22	179597 179595	MH-I2 - MH-I1 Underdrain	Diameter = 200mm Length = ±155m	Yes (No)	Yes (No)	145.0	-	Poor Good	2 Runs in One Use WTR (Tracks)
2024-10-22	179599	MH-I2 - MH-I3 Gravity Drain	Diameter = 200mm Length = ±27m	Yes (No)	Yes (No)	27.0	-	Poor Good	
2024-10-22	179602	MH-I3 - West Invert Underdrain	Diameter = 150mm Length = ±170m	Yes (No)	Yes (No)	30.0	-	Poor Good	
2024-10-22	179603	MH-I3 - MH-I4 Gravity Drain	Diameter = 200mm Length = ±31m	Yes (No)	Yes (No)	31.0	-	Poor Good	
2024-10-22	179606	MH-I4 - West Invert Underdrain	Diameter = 150mm Length = ±135m	Yes No	Yes No	-	-	Poor Good	Cound Not Find Outlet
2024-10-22	179607	MH-I4 - MH-I5 Gravity Drain	Diameter = 200mm Length = ±30m	Yes (No)	Yes (No)	30.0	-	Poor Good	

Note: Please provide comments if pipe condition is found to be "Poor".

TABLE 4.6
Leachate Collection System Inspection Checklist
2024 ANNUAL MONITORING REPORT
Peterborough Waste Management Facility
The County and The City of Peterborough

2024-10-22	179610	MH-I5 - West Invert Underdrain	Diameter = 150mm Length = ±122m	Yes **No**	Yes **No**	30.0	-	Poor Good	Minicam. Almost got stuck so Abandoned.
2024-10-29	179611	MH-I5 - MH-J1 Gravity Drain	Diameter = 200mm Length = ±30m	Yes No	Yes No	30.0	-	Poor Good	Minicam.
2024-10-29	179614	MH-J1 - West Invert Underdrain	Diameter = 150mm Length = ±114m	Yes No	Yes No	60.0	-	Poor Good	Minicam.
2024-10-29	179589	MH-J2 - MH-T1 Gravity Drain	Diameter = 200mm Length = ±9m	Yes No	Yes No	10.0	-	Poor Good	
2024-10-29	179615	MH-J2 - MH-J1 Gravity Drain	Diameter = 200mm Length = ±30m	Yes No	Yes No	30.0	-	Poor Good	
2024-10-29	179711	MH-J2 - West Invert Underdrain	Diameter = 150mm Length = ±94m	Yes No	Yes No	76.0	-	Poor Good	Minicam.
-	179591	MH-J2 - MH-J3 Gravity Drain	Diameter = 200mm Length = ±30m	Yes No	Yes No	-	-	Poor Good	
2024-10-29	179710	MH-J3 - West Invert Underdrain	Diameter = 150mm Length = ±103m	Yes No	Yes No	50.0	-	Poor Good	Minicam.
2024-10-29	179593	MH-D2 - MH-J3 Gravity Drain	Diameter = 200mm Length = ±34m	Yes No	Yes No	20.0	-	Poor Good	Has to be done Upstream. Pump dumps in at J3.
2024-10-29	179534, 179526, 179518, 179514, 179510	MH-D2 - West Invert Underdrain	Diameter = 150mm Length = ±174m	Yes No	Yes No	35.0	-	Poor Good	Minicam.
2024-10-29	179536	MH-D2 - PS (Holding Tank)	Diameter = 200mm Length = ±117m	Yes No	Yes No	35.0	-	Poor Good	
2024-10-22	179655	MH-5 - MH-6 Intercept Drain	Diameter = 200mm Length = ±62m	Yes **No**	Yes **No**	63.0	-	Poor Good	
2024-10-22	179656	MH-4 - MH-5 Intercept Drain	Diameter = 200mm Length = ±69m	Yes **No**	Yes **No**	69.0	-	Poor Good	
-	179657	MH-4 - PS (Holding Tank) 179536	Diameter = 75mm Length = ±37m	Yes No	Yes No	-	-	Poor Good	Flushing Not Required
2024-10-29	179654	MH-4 - MH-3 Intercept Drain	Diameter = 300mm Length = ±91m	Yes No	Yes No	87.0	-	Poor Good	Pump Down Required (all day).
2024-10-29	179653	MH-3 - MH-2 Intercept Drain	Diameter = 300mm Length = ±108m	Yes No	Yes No	107.0	-	Poor Good	
2024-10-29	179652	MH-2 - MH-1 Intercept Drain	Diameter = 250mm Length = ±86m	Yes No	Yes No	91.0	-	Poor Good	Inspect Upstream.
-	No Pipe Reference	TDCO-A1 - North Invert Toe Drain	Diameter = 150mm Length = ±360m	Yes No	Yes No	-	-	Poor Good	
-	179428	TDCO-A1 - TDCO-A2 Toe Drain	Diameter = 150mm Length = ±56m	Yes No	Yes No	-	-	Poor Good	
-	179431	TDCO-A2 - TDCO-A3 Toe Drain	Diameter = 150mm Length = ±60m	Yes No	Yes No	-	-	Poor Good	
-	179433	TDCO-A3 - MH-A1 Toe Drain	Diameter = 150mm Length = ±48m	Yes No	Yes No	-	-	Poor Good	
-	179435	MH-A1 - TDCO-A4 Toe Drain	Diameter = 150mm Length = ±58m	Yes No	Yes No	-	-	Poor Good	

Note: Please provide comments if pipe condition is found to be "Poor".

TABLE 4.6
Leachate Collection System Inspection Checklist
2024 ANNUAL MONITORING REPORT
Peterborough Waste Management Facility
The County and The City of Peterborough

-	179437	MH-B1 - TDCO-A4 Toe Drain	Diameter = 150mm Length = ±46m	Yes No	Yes No	-	-	Poor Good	
-	179463	MH-B1 - LCO3-94 Transfer Piping	Diameter = 150mm Length = ±42m	Yes No	Yes No	-	-	Poor Good	Too Steep will damage camera.
-	179439	MH-C1 - MH-B1 Toe Drain	Diameter = 200mm Length = ±104m	Yes No	Yes No	-	-	Poor Good	
-	179541	MH-C1 - PS (Holding Tank)	Diameter = 200mm Length = ±101m	Yes No	Yes No	-	-	Poor Good	
-	179503	MH-C1 - LCO5-94 Transfer Piping	Diameter = 150mm Length = ±37m	Yes No	Yes No	-	-	Poor Good	Too Steep will damage camera.
2024-10-22	179443	HCO1-94 - HCO2-94 Phase 1 Header	Diameter = 150mm Length = ±78m	Yes (No)	Yes (No)	50.0	-	Poor Good	Minicam.
-	179445, 179451, 179457, 179464, 179470, 179472	HCO2-94 (North Invert) - HCO3-94 Phase 1 Header	Diameter = 150mm Length = ±190m	Yes No	Yes No	-	-	Poor Good	
-	179472, 179470, 179464, 179457, 179451, 179445	HCO3-94 (South Invert) - HCO2-94 Phase 1 Header	Diameter = 150mm Length = ±190m	Yes No	Yes No	-	-	Poor Good	
2024-10-22	179476, 179500, 179496, 179490, 179483, 179482	HCO4-95 (North Invert) - HCO5-95 Phase 1 Header	Diameter = 150mm Length = ±202m	Yes (No)	Yes (No)	60.0	-	Poor Good	Minicam.
2024-10-22	179482, 179483, 179490, 179496, 179500, 179476	HCO5-95 (South Invert) - HCO4-95 Phase 1 Header	Diameter = 150mm Length = ±202m	Yes (No)	Yes (No)	15.0	-	Poor Good	Minicam.
-	179529	HCO91-1 - South Invert Cell J Header	Diameter = 150mm Length = ±75m	Yes No	Yes No	-	-	Poor Good	Not Accessable
2024-10-22	179447 179449	LCO1-94 - VC1-94 Underdrain	Diameter = 150mm Length = ±101m	Yes (No)	Yes (No)	55.0	-	Poor Good	Minicam.
2024-10-22	179456 179454	LCO2-94 - VC2-94 Underdrain	Diameter = 150mm Length = ±118m	Yes (No)	Yes (No)	73.0	-	Poor Good	Minicam.
2024-10-22	179461 179460	LCO3-94 - VC3-94 Underdrain	Diameter = 150mm Length = ±133m	Yes (No)	Yes (No)	13.0	-	Poor Good	Minicam.
2024-10-22	179469 179467	LCO4-94 - VC4-94 Underdrain	Diameter = 150mm Length = ±138m	Yes (No)	Yes (No)	55.0	-	Poor Good	Minicam.
2024-10-22	179501 179499	LCO5-94 - VC5-94 Underdrain	Diameter = 150mm Length = ±152m	Yes (No)	Yes (No)	35.0	-	Poor Good	Minicam.
2024-10-22	179492 179495	LCO6-94 - VC6-94 Underdrain	Diameter = 150mm Length = ±160m	Yes (No)	Yes (No)	65.0	-	Poor Good	Minicam.
2024-10-22	179485 179489	LCO7-94 - VC7-94 Underdrain	Diameter = 150mm Length = ±168m	Yes (No)	Yes (No)	14.0	-	Poor Good	Minicam.

Note: Please provide comments if pipe condition is found to be "Poor".

TABLE 5.1
2024 Groundwater Elevations
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Well	Well Location (NFA/SFA /POF)	T.O.P. ELEVATION (mASL)	Measured Groundwater Level							
			24-Mar-07		3-Jun-24		1-Sep-24		27-Nov-24	
			(mbTOP)	(mASL)	(mbTOP)	(mASL)	(mbTOP)	(mASL)	(mbTOP)	(mASL)
5-IV	SFA	196.30	6.068	190.23			6.152	190.15		
5-V	SFA	187.98	2.734	185.25			4.462	183.52		
5-VI	SFA	194.05	2.372	191.68			4.644	189.41		
16A	SFA	196.64	4.559	192.08			5.340	191.30		
18A	SFA	190.00	0.060	Flowing			0.983	189.02		
18B	SFA	189.71	1.406	188.30			2.008	187.70		
19A	SFA	193.87	4.396	189.47			5.485	188.39		
19B	SFA	193.84	4.085	189.76			5.142	188.70		
20A	SFA	190.95	1.070	189.88			2.005	188.95		
20B	SFA	190.79	1.181	189.61			2.300	188.49		
23B	SFA	207.41	8.710	198.70			9.633	197.77		
33-II	SFA	197.16	0.675	196.49			1.534	195.63		
33-III	SFA	197.10	1.370	195.73			1.655	195.45		
40-II	SFA	196.24	1.203	195.04			1.014	195.23		
41-I	SFA	198.19	0.836	197.35			1.075	197.12		
41-II	SFA	198.19	0.090	198.10			1.330	196.86		
44-I	SFA	197.64	2.210	195.43			4.598	193.04		
44-II	SFA	197.73	Flowing	Flowing			0.293	197.44		
44-III	SFA	197.73	1.223	196.51			1.502	196.23		
46-I	SFA	194.71	5.741	188.97			8.428	186.28		
46-II	SFA	194.86	1.008	193.85			1.912	192.95		
46-III	SFA	194.89	1.763	193.13			2.461	192.43		
48	SFA	196.59	4.125	192.47			4.900	191.69		
50-I	SFA	194.58	2.558	192.02			4.030	190.55		
50-II	SFA	194.74	2.922	191.82			4.313	190.43		
50-III	SFA	194.48	2.594	191.89			4.206	190.27		
52-I	SFA	189.95	1.019	188.93			1.193	188.76		
52-II	SFA	190.31	0.478	189.83			1.720	188.59		
53-I	SFA	196.73	4.154	192.58			5.364	191.37		
54-II	SFA	196.05	2.963	193.09			4.508	191.54		
61-I	SFA	195.60	2.284	193.32			3.159	192.44		
61-II	SFA	195.76	2.126	193.63			2.816	192.94		
61-III	SFA	195.66	2.329	193.33			2.722	192.94		
62-IR	SFA	191.95	5.225	186.73			6.091	185.86		
62-II	SFA	192.01	0.986	191.02			2.843	189.17		
63-I	SFA	193.29	1.468	191.82			2.505	190.79		
63-II	SFA	193.28	1.680	191.60			2.779	190.50		
63-III	SFA	192.98	1.406	191.57			2.560	190.42		
64-I	SFA	190.10	0.987	189.11			1.123	188.98		
64-II	SFA	190.16	1.239	188.92			1.884	188.28		
66-I	SFA	199.06	2.909	196.15			3.823	195.24		
66-II	SFA	199.13	2.443	196.69			3.272	195.86		
66-III	SFA	198.92	1.882	197.04			2.572	196.35		
74-II	NFA	195.91	1.456	194.45			2.329	193.58		
74-III	NFA	195.99	0.932	195.06			1.865	194.13		
75-I	SFA	191.18	9.080	182.10			8.986	182.19		
75-II	SFA	191.23	1.235	190.00			2.050	189.18		
76-I	SFA	190.49	6.307	184.18			6.685	183.81		
77-I	SFA	195.36	0.543	194.82			1.227	194.13		
81-I	SFA	199.85	7.577	192.27			7.815	192.04		
81-II	SFA	199.90	5.869	194.03			6.356	193.54		
81-III	SFA	200.00	4.530	195.47			5.927	194.07		
84-I	NFA	202.17	3.862	198.31	3.591	198.58	4.074	198.10	4.594	197.58
84-II	NFA	202.12	3.577	198.54	3.610	198.51	4.072	198.05	4.582	197.54
85-I	NFA	198.80	0.363	198.44	0.541	198.26	0.989	197.81	0.675	198.13
85-II	NFA	198.75	0.659	198.09	1.072	197.68	1.453	197.30	1.231	197.52
86-I	NFA	195.73	0.071	195.66	0.032	195.70	0.585	195.15	0.450	195.28
86-II	NFA	195.69	0.649	195.04	0.817	194.87	1.135	194.56	0.690	195.00
86-III	NFA	195.75	0.917	194.83	1.096	194.65	1.436	194.31	0.945	194.81
87-I	NFA	200.35	1.978	198.37	2.230	198.12	3.013	197.34	2.385	197.97
87-II	NFA	200.31	1.896	198.41	2.151	198.16	2.872	197.44	2.260	198.05
87-III	NFA	200.39	1.671	198.72	1.859	198.53	2.306	198.08	1.866	198.52
88-I	NFA	207.52	1.300	206.22	1.654	205.87	2.312	205.21	2.711	204.81
88-II	NFA	207.52	1.103	206.42	1.475	206.05	2.117	205.40	2.270	205.25
88-III	NFA	207.37	0.807	206.56	1.220	206.15	1.885	205.49	1.756	205.61
89-I	NFA	202.77	3.334	199.44	3.352	199.42	4.033	198.74	4.582	198.19
89-II	NFA	203.14	3.722	199.42	3.958	199.18	3.778	199.36	5.394	197.75
89-III	NFA	203.22	3.139	200.08	3.427	199.79	4.465	198.76	5.280	197.94
91-I	NFA	206.55	6.975	199.58	7.137	199.41	7.497	199.05	7.505	199.05
91-II	NFA	206.56	7.620	198.94	7.725	198.84	8.073	198.49	8.101	198.46
91-III	NFA	206.69	3.640	203.05	4.861	201.83	6.098	200.59	6.113	200.58

TABLE 5.1
2024 Groundwater Elevations
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Well	Well Location (NFA/SFA /POF)	T.O.P. ELEVATION (mASL)	Measured Groundwater Level							
			24-Mar-07		3-Jun-24		1-Sep-24		27-Nov-24	
			(mbTOP)	(mASL)	(mbTOP)	(mASL)	(mbTOP)	(mASL)	(mbTOP)	(mASL)
92-I	NFA	200.46	1.330	199.13	1.530	198.93	3.270	197.19	1.719	198.74
92-II	NFA	200.47	2.229	198.24	2.431	198.04	2.875	197.60	2.691	197.78
92-III	NFA	200.43	1.848	198.58	2.322	198.11	2.742	197.69	2.604	197.83
93-I	NFA	197.67	0.881	196.79	1.152	196.52	1.599	196.07	1.401	196.27
93-II	NFA	197.76	1.187	196.57	1.286	196.47	2.095	195.67	1.665	196.10
94-I	NFA	196.80	0.723	196.08	1.006	195.79	1.406	195.39	1.267	195.53
94-II	NFA	196.88	1.557	195.32	1.903	194.98	2.405	194.48	1.934	194.95
95-I	NFA	195.51	0.124	Flowing	0.000	195.51	0.093	195.42	Flowing	195.51
95-II	NFA	195.49	0.862	194.63	0.999	194.49	1.297	194.19	0.925	194.57
101-I	SFA	219.70	13.775	205.93			14.482	205.22		
101-II	SFA	219.64	6.392	213.25			7.450	212.19		
101-III	SFA	219.51	3.126	216.38			4.302	215.21		
104-I	NFA	205.53	2.432	203.10	2.692	202.84	2.848	202.68	4.153	201.38
104-II	NFA	205.58	1.495	204.09	1.620	203.96	2.045	203.54	2.204	203.38
104-III	NFA	205.53	1.704	203.83	1.878	203.65	2.169	203.36	2.103	203.43
106-I	NFA	199.80	1.633	198.17	1.884	197.92	2.584	197.22	2.026	197.77
106-II	NFA	199.75	1.631	198.12	1.812	197.94	2.152	197.60	1.799	197.95
106-III	NFA	199.71	1.645	198.07	1.764	197.95	2.078	197.63	1.740	197.97
107-I	NFA	195.99	Flowing	Flowing	Flowing	195.99	Flowing	Flowing	Flowing	195.99
107-II	NFA	196.09	Flowing	Flowing	Flowing	196.09	Flowing	Flowing	Flowing	196.09
107-III	NFA	196.08	0.880	195.20	1.030	195.05	1.335	194.75	0.932	195.15
108-I	NFA	206.32	4.896	201.43	5.124	201.20	5.540	200.78	5.414	200.91
108-II	NFA	206.13	2.809	203.32	2.993	203.14	3.221	202.91	3.199	202.93
108-III	NFA	205.91	1.110	204.80	1.337	204.57	1.651	204.26	1.113	204.80
109-I	NFA	199.19	3.066	196.13	3.342	195.85	3.682	195.51	3.648	195.54
109-II	NFA	200.10	3.955	196.14	4.251	195.84	4.591	195.50	4.571	195.52
109-III	NFA	199.04	2.421	196.61	3.007	196.03	3.454	195.58	3.501	195.53
110-I	NFA	202.55	3.676	198.87	3.836	198.71	4.189	198.36	4.182	198.36
110-II	NFA	202.73	4.068	198.66	4.231	198.49	4.589	198.14	4.588	198.14
110-III	NFA	202.55	2.473	200.07	2.995	199.55	3.518	199.03	4.198	198.35
111-I	NFA	200.28	3.746	196.54	4.038	196.25	4.273	196.01	4.408	195.88
111-II	NFA	200.29	4.438	195.85	4.620	195.67	4.915	195.38	4.994	195.30
111-III	NFA	200.41	3.295	197.11	3.529	196.88	3.876	196.53	4.069	196.34
112-I	NFA	208.59	3.758	204.83	3.954	204.64	4.671	203.92	5.075	203.52
112-II	NFA	208.59	2.865	205.72	3.135	205.45	4.028	204.56	4.721	203.87
112-III	NFA	208.60	1.900	206.70	2.031	206.57	3.057	205.54	3.920	204.68
113-I	SFA	195.34	Flowing	Flowing			0.465	194.88		
113-II	NFA	195.31	Flowing	Flowing			0.600	194.71		
113-III	NFA	195.25	0.620	194.63			1.195	194.06		
114-I	NFA	209.74	4.816	204.92	5.129	204.61	5.756	203.98	6.023	203.72
114-II	NFA	209.86	3.929	205.93	4.247	205.61	4.965	204.90	5.673	204.19
114-III	NFA	209.94	3.812	206.13	4.093	205.85	4.636	205.30	5.058	204.88
115-I	NFA	206.68	5.143	201.54	5.784	200.90	6.231	200.45	6.649	200.03
115-II	NFA	206.72	5.751	200.97	5.893	200.83	6.305	200.42	6.905	199.82
115-III	NFA	206.85	2.647	204.20	3.375	203.48	4.196	202.65	5.017	201.83
MW20-30	POF	208.60	1.526	207.07			2.891	205.71		
MW20-28A	POF	212.13	7.872	204.26			8.772	203.36		
MW20-01	POF	209.26	1.210	208.05			3.140	206.12		
MW20-19	POF	204.28	Damaged	Damaged			-	-		
MW20-19R	POF	206.40	-	-			7.130	199.27		
MW20-22	POF	202.54	2.731	199.81			3.447	199.09		
T-1	SFA	192.24	2.050	190.19			3.403	188.84		
T-2	SFA	191.55	1.040	190.51			2.670	188.88		
T-3I	SFA	191.59	1.575	190.02			2.726	188.86		
T-3II	SFA	191.49	1.046	190.44			2.735	188.76		
T-4	SFA	191.19	1.350	189.84			3.042	188.15		
T-5I	SFA	191.25	1.129	190.12			2.144	189.11		
T-5II	SFA	191.25	1.466	189.78			2.459	188.79		

Notes:

T.O.P. - Top of Pipe
mbTOP - metres below Top of Pipe
mASL - metres Above Sea Level
Blank indicates water level not measured.

TABLE 5.2
Vertical Hydraulic Gradients
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility/Organics Facility - 2024 Monitoring Program

WELL PAIRING	STRATIGRAPHY	LOCATION	CALCULATED VERTICAL HYDRAULIC GRADIENT	
			Mar-24	Sep-24
18B / 18A	Overburden -> Shallow Bedrock	Cell 1 - South	-0.47 *	-0.71 *
19B / 19A	Overburden -> Shallow Bedrock	Cell 1 - South	0.09	0.11
20B / 20A	Overburden -> Shallow Bedrock	Cell 1 - South	-0.06	-0.12
41-II / 41-I	Shallow Bedrock -> Deep Bedrock	Cell 1 - South	0.00	0.00
44-III / 44-II	Overburden -> Shallow Bedrock	Cell 1 - South	-0.09 *	-0.11 *
44-II / 44-I	Shallow Bedrock -> Deep Bedrock	Cell 1 - South	0.48 *	0.98 *
52-II / 52-I	Overburden -> Shallow Bedrock	Cell 1 - South	0.16	-0.03
62-II / 62-I	Overburden -> Deep Bedrock	Cell 1 - South	1.28	1.31
64-II / 64-I	Overburden -> Deep Bedrock	Cell 1 - South	-0.05	-0.19
46-III / 46-I	Overburden -> Shallow Bedrock	Cell 1 - North	0.24	0.37
50-III / 50-I	Overburden -> Shallow Bedrock	Cell 1 - North	-0.02	-0.05
61-III / 61-I	Overburden -> Shallow Bedrock	Cell 1 - North	0.001	0.03
63-III / 63-I	Overburden -> Deep Bedrock	Cell 1 - North	-0.014	-0.02
66-III / 66-I	Overburden -> Deep Bedrock	Cell 1 - North	0.08	0.11
75-II / 75-I	Overburden -> Shallow Bedrock	Cell 1 - North	1.24	1.17
81-III / 81-I	Overburden -> Shallow Bedrock	Cell 1 - North	0.30	0.21
101-III / 101-I	Overburden -> Shallow Bedrock	Cell 1 - North	0.36	0.35
113-III / 113-I	Overburden -> Shallow Bedrock	Cell 1 - North	-0.04 *	-0.08 *
86-III / 86-I	Overburden -> Shallow Bedrock	North Fill Area	-0.06	-0.06
87-III / 87-I	Overburden -> Shallow Bedrock	North Fill Area	0.03	0.06
88-III / 88-I	Overburden -> Shallow Bedrock	North Fill Area	0.02	0.02
89-III / 89-I	Overburden -> Shallow Bedrock	North Fill Area	0.04	0.001
91-III / 91-I	Overburden -> Shallow Bedrock	North Fill Area	0.34	0.17
92-III / 92-I	Overburden -> Shallow Bedrock	North Fill Area	-0.05	0.05
104-III / 104-I	Overburden -> Shallow Bedrock	North Fill Area	0.04	0.04
106-III / 106-I	Overburden -> Shallow Bedrock	North Fill Area	-0.007	0.03

Notes: 1) positive gradient values indicates downward flow
2) negative gradient values indicates upward flow
3) * denotes the gradient was calculated using the top of pipe elevation for at least one well, as well was flowing.

TABLE 5.3
Groundwater Monitor Location Summary
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

RELATIVE LOCATION		OVERBURDEN					SHALLOW BEDROCK				DEEP BEDROCK	
CELL 1 - SOUTH	Downgradient of refuse, before interceptor	5-VI	17B	19B	59-I	59-II	5-V	17A	19A		5-IV	17-I
		18B	20B	21B	21C		18A	20A	21A		62-I	64-I
		62-II	64-II									
	Beyond central water course	15A	15B	16C	30-II	52-II	16A	30-I	52-I	53-I	54-I	
		53-II	54-II									
CELL 1 - NORTH East Side	Adjacent to landfill service roads	45	47	48	49	65-I	74-I	81-I				
		74-II	74-III	81-II	81-III							
	Buffer zone on east side of Bensfort Road	46-II	46-III	50-II	50-III	61-II	46-I	50-I	61-I			
		61-III										
	Further east in buffer lands	31-II	75-II	63-II	63-III	76-III	31-I	75-I	76-II		63-I	
		76-IV									76-I	
CELL 1 - NORTH North side	Flow is towards central wetland	8-II	8-III	33-II	33-III	66-II	8-I	71-I	72-I	113-I	33-I	66-I
		66-III	71-II	71-III	72-II	72-III						
		77-I	78-I	113-II	113-III							
CELL 1 - NORTH North and West side Flow is towards Central wetland	Vicinity of former Phase 2	38-II	38-III	42-I	42-II	42-III	100-I	101-I			38-I	
		100-II	100-III	101-II	101-III							
	Further away in wetland to northwest	37-II	40-II	41-III	44-III		37-I	40-I	41-II	44-II	41-I	44-I
NFA	Southerly flow toward central wetland	82-I	83-I	84-I	84-II	85-I	86-I	87-I	88-I	89-I		
		85-II	86-II	86-III	87-II	87-III	91-I	92-I	104-I	106-I		
		88-II	88-III	89-II	89-III	91-II	107-I					
		91-III	92-II	92-III	93-I	93-II						
		94-I	94-II	95-I	95-II	104-II						
		104-III	106-II	106-III	107-II	107-III						
		108-I	108-II	108-III	109-I	109-II						
		109-III	110-I	110-II	110-III	111-I						
		111-II	111-III	112-I	112-II	112-III						
		114-I	114-II	114-III	115-I	115-II						
		115-III										
POF	South East flow towards Bensfort Road	MW-20-30	MW20-28A	MW20-01	MW20-19R	MW20-22						

TABLE 5.4
2024 Groundwater ODWQS Exceedances
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

		Parameter	Alkalinity	Aluminum	Arsenic	Barium	Chloride	DOC	Hardness	Iron	Manganese	Nitrate	Sodium	TDS	Benzene	1,4-DCB	Ethylbenzene
		Units	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
		ODWQS	30-500	100	10	1000	250	5	80-100	300	50	10	200	500	1	1 / 5	1.6 / 140
		Guideline Type	OG	OG	MAC	MAC	AO	AO	OG	AO	AO	MAC	AO	AO	MAC	AO / MAC	AO / MAC
Hydrogeologic Unit	**Site Area**	**Sampling Location**	**Date**														
Overburden	SFA - Cell 1 South	BH-5-VI	02-Apr-2024	299		<0.5		1.6	1.7	**310**	8	1.9	<0.05	1.9	340			
		BH-17B	17-Sep-2024	423		4.2		85.7	**7.4**	**448**	**4060**	**424**	<0.05	40.8	**600**			
		BH-17B	20-Mar-2024	**648**	<25	0.6	599	136	**17.1**	**615**	**403**	**1020**	2.33	94.4	**900**	**1.8**	<0.5	<0.5
		BH-17B	20-Mar-2024	**821**	<25	0.6	607	194	**17.5**	**680**	**441**	**1190**	1.49	106	**1150**	**1.7**	<0.5	<0.5
		BH-18B	18-Mar-2024	399	**103**	<0.5	70	85.5	3.9	**430**	**531**	**110**	<0.05	26.7	**540**	<0.5	<0.5	<0.5
		BH-18B	23-Sep-2024	477		0.6		97	4.3	**537**	**2280**	**261**	<0.05	43.1	**700**			
		BH-19B	20-Mar-2024	**628**	<25	0.6	**2090**	**1160**	**11.5**	**980**	**19300**	**433**	<0.5	**387**	**2580**	1.0	0.6	<0.5
		BH-19B	23-Sep-2024	**821**		<5		**505**	**21.7**	**888**	**27400**	**263**	<0.5	**259**	**1730**			
		BH-20B	19-Mar-2024	279	<25	<0.5	24	7.5	2.6	**272**	6	0.8	<0.05	8.6	300	<0.5	<0.5	<0.5
		BH-20B	23-Sep-2024	318		<0.5		8.3	2.7	**327**	<5	15.1	0.13	11.5	400			
		BH-62-II	20-Mar-2024	344		<0.5		38.7	4.7	**374**	20	25.9	0.12	25.6	490			
		BH-62-II	23-Sep-2024	435		<0.5		33.6	4.6	**504**	6	0.8	0.08	32	**610**			
		BH-52-II	10-Apr-2024	335		<0.5		**690**	1.6	**1130**	30	**320**	0.1	76	**1855**			
		BH-54-II	04-Apr-2024	274		<0.5		18.6	3.2	**278**	14	2	<0.05	13.1	340			
	SFA - Cell 1 Northeast	BH-46-II	02-Apr-2024	285		1.3		28.8	1.5	**336**	195	19	<0.05	8.8	420			
		BH-46-III	02-Apr-2024	263		<0.5		18.3	2.7	**301**	14	2	9.89	6.1	440			
		BH-48	09-Oct-2024	**712**		2.3		107	**7.7**		**23000**	**770**	<0.05	93.4	**900**			
		BH-48	20-Mar-2024	406	<25	0.8	183	22.5	**5.8**	**517**	250	**732**	0.88	27.9	**810**	<0.5	<0.5	<0.5
		BH-50-II	09-Apr-2024	309		0.9		203	2.2	**431**	**1060**	25.8	<0.05	94.1	**740**			
		BH-50-III	09-Apr-2024	237		<0.5		89.9	4.8	**274**	6	1.6	0.13	42.3	460			
		BH-61-II	02-Apr-2024	183		1.8		48.2	<1.0	**169**	<5	<0.5	0.45	45.7	300			
		BH-61-III	02-Apr-2024	246		<0.5		179	1.2	**429**	21	4.3	0.26	17.8	**730**			
		BH-63-II	18-Sep-2024	214		3.9		9.5	1.4	**253**	**354**	12.7	<0.05	6.8	310			
		BH-63-II	25-Mar-2024	218	<25	3.4	101	9.5	1.4	**230**	271	15.7	0.15	6.2	320	<0.5	<0.5	<0.5
		BH-63-III	18-Sep-2024	200		<0.5		29.9	1.5	**372**	<5	<0.5	**31.9**	3.4	**660**			
		BH-63-III	25-Mar-2024	202	**118**	<0.5	36	16	1.6	**300**	90	1.9	**33.8**	2.9	**560**	<0.5	<0.5	<0.5
		BH-63-III	25-Mar-2024	201	**103**	<0.5	37	16.1	1.6	**310**	69	1.2	**33.9**	3	**530**	<0.5	<0.5	<0.5
		BH-64-II	02-Apr-2024	295		<0.5		2.7	1.5	**301**	13	39.3	<0.05	2.3	370			
		BH-74-II	25-Mar-2024	183		0.7		22	1.3	**177**	<5	1.1	0.11	24.6	292			
		BH-74-III	25-Mar-2024	293		<0.5		3	2	**276**	173	31	<0.05	4.2	360			
		BH-75-II	23-Sep-2024	290		<0.5		71.9	1.9	**349**	12	1.4	0.11	35.3	470			
		BH-75-II	25-Mar-2024	275	**149**	<0.5	38	42.3	2.5	**346**	229	22.1	<0.05	18.7	420	<0.5	<0.5	<0.5
		BH-81-II	17-Sep-2024	**827**		4.5		59.2	**5.5**	**810**	**12500**	**66.3**	<0.05	52.2	**940**			
		BH-81-II	19-Mar-2024	**837**	<25	2	149	30.1	**5.2**	**761**	**3230**	**62.7**	<0.05	50.4	**880**	<0.5	<0.5	<0.5
		BH-81-III	19-Mar-2024	**672**	<25	0.6	135	12.5	**6.8**	**630**	**16900**	**766**	<0.05	6.2	**690**	**3.8**	**9.8**	<0.5
	SFA - Cell 1 North	BH-33-II	25-Mar-2024	374		<0.5		34.4	4.5	**342**	84	8.2	0.55	51.1	**580**			
		BH-33-III	25-Mar-2024	384		<0.5		27	4	**421**	<5	22.8	0.74	37.5	**570**			
		BH-66-II	25-Mar-2024	**1070**		6.2		156	**27.1**	**642**	**10000**	**163**	<0.05	131	**1330**			
		BH-66-III	17-Sep-2024	**1110**		**77.2**		154	**33.5**	**817**	**35400**	**463**	<0.05	158	**1350**			
		BH-66-III	19-Mar-2024	445	<25	7.2	129	41.1	**9**	**437**	**17600**	**471**	<0.05	39.7	**570**	**1.2**	<0.5	<0.5
		BH-77-I	10-Apr-2024	222		0.8		94.4	1	**361**	**678**	27.2	<0.05	10.8	**524**			
	SFA - Cell 1 Northwest	BH-40-II	26-Mar-2024	255		<0.5		4.9	1.7	**279**	8	36.7	<0.05	8.4	350			
		BH-44-III	04-Apr-2024	263		<0.5		9.9	1.4	**322**	<5	2.4	2.21	4.5	380			
		BH-101-III	26-Mar-2024	408		<0.5		0.9	<1.0	**399**	<5	<0.5	<0.05	8.2	470			
Shallow Bedrock	SFA - Cell 1 South	BH-5-V	02-Apr-2024	230		<0.5		8.7	<1.0	**228**	39	0.6	<0.05	9.3	400			
		BH-5-V	23-Sep-2024	219		<0.5		8.9	<1.0	**228**	153	10.7	<0.05	8.9	280			
		BH-16A	02-Apr-2024	263		<0.5		101	1	**350**	<5	3.5	1.3	39.6	500			
		BH-16A	02-Apr-2024	274		<0.5		95.2	<1.0	**348**	<5	3.7	1.66	37.2	460			
		BH-17A	17-Sep-2024	340		<0.5		84.1	4.3	**372**	**1570**	48.4	<0.05	31.6	500			
		BH-17A	20-Mar-2024	344	<25	<0.5	489	68.5	3.9	**350**	**1500**	45.9	<0.05	22.4	460	<0.5	<0.5	<0.5
		BH-18A	18-Mar-2024	448	<25	<0.5	439	191	**6.2**	**476**	**4600**	**113**	<0.05	79.9	**770**	<0.5	<0.5	<0.5
		BH-18A	23-Sep-2024	252		<0.5		120	1	**347**	253	11.4	<0.05	52.1	**540**			
		BH-18A	23-Sep-2024	249		<0.5		118	1	**345**	263	12.2	<0.05	52	**550**			

TABLE 5.4
2024 Groundwater ODWQS Exceedances
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

			Parameter	Alkalinity	Aluminum	Arsenic	Barium	Chloride	DOC	Hardness	Iron	Manganese	Nitrate	Sodium	TDS	Benzene	1,4-DCB	Ethylbenzene
			Units	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
			ODWQS	30-500	100	10	1000	250	5	80-100	300	50	10	200	500	1	1 / 5	1.6 / 140
			Guideline Type	OG	OG	MAC	MAC	AO	AO	OG	AO	AO	MAC	AO	AO	MAC	AO / MAC	AO / MAC
Hydrogeologic Unit	**Site Area**	**Sampling Location**	**Date**															
		BH-19A	20-Mar-2024	**571**	<25	<0.5	**3750**	**1820**	**15.6**	**1220**	**11900**	**175**	<0.5	**626**	**3940**	<0.5	<0.5	<0.5
		BH-19A	23-Sep-2024	**596**		<5		**2230**	**17.7**	**1540**	**20200**	**119**	<0.5	**888**	**5280**			
		BH-20A	20-Mar-2024	314		<0.5		235	2.8	**381**	**1820**	**88.5**	<0.05	102	**690**			
		BH-52-I	09-Apr-2024	245		<0.5		**1620**	<1.0	**1020**	**947**	**93**	<0.5	**582**	**2590**			
		BH-53-I	09-Apr-2024	340		0.9		1.6	2.1	**357**	**927**	19.9	<0.05	5.1	410			
		BH-53-I	09-Apr-2024	336		0.9		1.5	2.5	**358**	**969**	20.6	<0.05	5.2	430			
	SFA - Cell 1 Northeast	BH-46-I	02-Apr-2024	308		<5		**1260**	<1.0	**478**	**900**	33	<0.5	**557**	**2400**			
		BH-50-I	09-Apr-2024	219		<0.5		97.7	5	**265**	143	32.3	<0.05	50.9	460			
		BH-61-I	02-Apr-2024	171		<0.5		17.5	1.2	**137**	<5	2.4	0.1	37.4	280			
		BH-75-I	23-Sep-2024	462		0.7		99.6	2	**153**	28	4	<0.05	**247**	**760**			
		BH-81-I	17-Sep-2024	**510**		0.5		116	3.6	**590**	139	15.8	<0.05	41.5	**720**			
		BH-81-I	19-Mar-2024	**646**	<25	0.9	**1380**	118	3.6	**566**	173	14.2	<0.05	39	**700**	<0.5	<0.5	<0.5
	SFA - Cell 1 North	BH-41-II	26-Mar-2024	271		<0.5		4	<1.0	**309**	**345**	8.8	<0.05	5.7	440			
		BH-44-II	04-Apr-2024	207		<0.5		22	1.3	**212**	**574**	9.5	<0.05	17.2	311			
Deep Bedrock	SFA - Cell 1 South	BH-5-IV	02-Apr-2024	224		<5		**10100**	4.6	**4860**	**3660**	**57**	<0.5	**3330**	**19900**			
		BH-17-I	09-Oct-2024	352		<5		**1590**	2.6		**1120**	45	<0.5	**384**	**3290**			
		BH-17-I	09-Oct-2024	353		<5		**1580**	2.8		**1090**	45	<0.5	**373**	**3320**			
		BH-17-I	20-Mar-2024	462	<25	1.5	**1930**	**3840**	1.9	**3600**	**5240**	**161**	<0.5	**2198**	**6810**	**30.6**	<0.5	**2.7**
		BH-62-IR	20-Mar-2024	279		<0.5		**2580**	<1.0	**1080**	213	25.2	<0.5	**903**	**4530**			
		BH-64-I	02-Apr-2024	235		<0.5		76.4	<1.0	**249**	13	<0.5	0.76	65.6	470			
	SFA - Cell 1 Northeast	BH-63-I	18-Sep-2024	287		<0.5		62.4	2.7	**23.5**	20	1.7	0.31	175	500			
		BH-63-I	25-Mar-2024	289	<25	<0.5	82	63.3	1.6	**21.4**	<5	<0.5	0.23	150	470	<0.5	<0.5	<0.5
		BH-76-I	25-Mar-2024	184		<5		**22100**	1.2	**12500**	**6330**	**151**	<5.0	**6760**	**40200**			
	SFA - Cell 1 North	BH-66-I	25-Mar-2024	**673**		4		111	**10.7**	**471**	**6260**	**76.9**	0.07	96.7	**950**			
	SFA - Cell 1 Northwest	BH-41-I	26-Mar-2024	200		<5		**5230**	<1.0	**2180**	**1240**	23	<0.05	**1480**	**11600**			
		BH-44-I	04-Apr-2024	143		<5		**17900**	<1.0	**9860**	210	**88**	<5.0	**5830**	**28300**			
Overburden	NFA	BH-84-I	13-Mar-2024	134	72	0.5	86	135	3.2	**105**	207	22	<0.05	101	370	<0.5	<0.5	<0.5
		BH-84-I	16-Sep-2024	134		0.7		139	2.2	97.8	**309**	19.1	<0.05	94.5	370			
		BH-84-II	13-Mar-2024	276	<25	1	147	10.3	2.1	**302**	103	27.9	1.87	5.2	390	<0.5	<0.5	<0.5
		BH-84-II	16-Sep-2024	263		1.2		10.4	1.1	**295**	17	25.9	0.24	6	380			
		BH-85-I	03-Sep-2024	226		<0.5		**641**	1.4	**747**	11	9.6	3.3	154	**2190**			
		BH-85-I	11-Mar-2024	420	<25	<0.5	286	**432**	1.7	**728**	18	14.6	3.24	121	**1330**	<0.5	<0.5	<0.5
		BH-85-II	03-Sep-2024	222		<0.5		**644**	1.6	**829**	**446**	**239**	0.96	93.8	**2260**			
		BH-85-II	11-Mar-2024	338	<25	<0.5	94	**299**	4.6	**726**	158	**269**	0.85	134	**1250**	<0.5	<0.5	<0.5
		BH-86-II	03-Sep-2024	194		2.4		17.8	1.3	**186**	140	2.7	<0.5	15.6	280			
		BH-86-II	04-Mar-2024	195	<25	2.2	241	16	<1.0	**185**	14	<0.5	0.06	16.1	250	<0.5	<0.5	<0.5
		BH-86-III	03-Sep-2024	275		1.4		132	1.7	**303**	**542**	45.5	<0.5	56.6	**610**			
		BH-86-III	03-Sep-2024	271		1.3		125	1.8	**306**	**562**	47.6	<0.5	57.8	**570**			
		BH-86-III	04-Mar-2024	283	<25	<0.5	340	157	1.1	**361**	<5	2.5	<0.05	78.3	**620**	<0.5	<0.5	<0.5
		BH-87-II	03-Sep-2024	264		0.6		10.9	1.6	**314**	**578**	18	<0.5	6.5	390			
		BH-87-II	04-Mar-2024	247	<25	0.7	117	9.3	1.5	**297**	**380**	17.5	<0.05	7.1	360	<0.5	<0.5	<0.5
		BH-87-III	03-Sep-2024	430		0.5		9.7	3.1	**461**	51	35.5	0.53	9.2	**540**			
		BH-87-III	04-Mar-2024	375	<25	<0.5	88	10.2	2.9	**423**	183	**53.3**	0.7	7.9	450	<0.5	<0.5	<0.5
		BH-88-II	10-Sep-2024	235		0.7		6.7	1.5	**333**	**1100**	33.6	<0.05	11	420			
		BH-88-II	18-Mar-2024	241	<25	0.7	52	6.2	1.9	**345**	**1140**	23.4	<0.05	10.5	450	<0.5	<0.5	<0.5
		BH-88-III	10-Sep-2024	243		0.7		18.8	2.1	**605**	91	2.9	0.47	11.5	**800**			
		BH-88-III	18-Mar-2024	236	<25	<0.5	32	13.9	2.1	**585**	12	0.6	0.16	9.1	**640**	<0.5	<0.5	<0.5
		BH-89-II	09-Sep-2024	103		2.9		9	1.6	**37.7**	46	2.4	<0.05	35.5	140			
		BH-89-II	18-Mar-2024	102	<25	2.2	38	8.5	1.6	**40.7**	9	<0.5	<0.05	35.6	130	<0.5	<0.5	<0.5
		BH-89-III	09-Sep-2024	309		<0.5		11	1.7	**342**	62	3.8	6.99	4	380			
		BH-89-III	18-Mar-2024	345	<25	<0.5	37	14.6	2.5	**393**	<5	<0.5	2.64	4.3	390	<0.5	<0.5	<0.5
		BH-91-II	05-Mar-2024	437	<25	0.8	111	40.8	2.8	**481**	100	**476**	<0.05	19.2	**630**	<0.5	<0.5	<0.5
		BH-91-II	16-Sep-2024	427		0.7		30.2	2.9	**456**	126	**437**	<0.05	16.5	**590**			

TABLE 5.4
2024 Groundwater ODWQS Exceedances
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

		Parameter	Alkalinity	Aluminum	Arsenic	Barium	Chloride	DOC	Hardness	Iron	Manganese	Nitrate	Sodium	TDS	Benzene	1,4-DCB	Ethylbenzene
		Units	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
		ODWQS	30-500	100	10	1000	250	5	80-100	300	50	10	200	500	1	1 / 5	1.6 / 140
		Guideline Type	OG	OG	MAC	MAC	AO	AO	OG	AO	AO	MAC	AO	AO	MAC	AO / MAC	AO / MAC
Hydrogeologic Unit	**Site Area**	**Sampling Location**	**Date**														
		BH-91-III	05-Mar-2024	245	<25	<0.5	32	5.1	1.3	**239**	13	<0.5	<0.05	2.8	290	<0.5	<0.5	<0.5
		BH-92-II	09-Sep-2024	214		2.8		18.4	1	**231**	186	18.8	<0.05	17.1	300			
		BH-92-II	12-Mar-2024	217	<25	1.5	125	18.2	1.6	**229**	107	3.2	<0.05	19.2	310	<0.5	<0.5	<0.5
		BH-92-III	09-Sep-2024	428		2.8		110	**11.3**	**544**	**2290**	**604**	<0.05	79.8	**880**			
		BH-92-III	12-Mar-2024	424	<25	<0.5	100	118	**12**	**654**	**303**	**321**	8.04	79.8	**1020**	<0.5	<0.5	<0.5
		BH-93-I	11-Mar-2024	200	<25	0.8	220	10.3	1.8	**236**	**423**	15.9	<0.05	8.2	300	<0.5	<0.5	<0.5
		BH-93-I	16-Sep-2024	195		0.9		9.7	1.1	**221**	**676**	12.6	<0.05	7.7	300			
		BH-93-II	11-Mar-2024	244	<25	<0.5	63	30.7	4.1	**395**	<5	<0.5	1.63	5	430	<0.5	<0.5	<0.5
		BH-93-II	16-Sep-2024	417		<0.5		63	**6.5**	**511**	14	1	1.39	6.4	**680**			
		BH-94-I	09-Sep-2024	189		2.4		13.3	1.4	**259**	**513**	11.6	<0.05	8.4	330			
		BH-94-I	11-Mar-2024	202	<25	2	58	12.8	1.7	**249**	**413**	11.5	<0.05	8	300	<0.5	<0.5	<0.5
		BH-94-I	11-Mar-2024	196	<25	2	57	12.6	1.9	**251**	**412**	11.4	<0.05	7.9	300	<0.5	<0.5	<0.5
		BH-94-II	09-Sep-2024	325		<0.5		25.2	1.5	**409**	34	4.8	0.3	8.6	500			
		BH-94-II	11-Mar-2024	334	<25	<0.5	141	25	2.1	**421**	<5	2	0.66	8.5	490	<0.5	<0.5	<0.5
		BH-95-I	03-Sep-2024	231		<0.5		27.6	1.7	**310**	280	26.1	<0.5	5.8	440			
		BH-95-I	11-Mar-2024	211	<25	<0.5	59	19.5	1.8	**318**	**306**	22.3	<0.05	5.4	330	<0.5	<0.5	<0.5
		BH-95-II	03-Sep-2024	264		0.6		70.3	2.1	**362**	49	**84.1**	<0.5	8.9	**560**			
		BH-95-II	11-Mar-2024	293	<25	<0.5	118	82.9	3.6	**427**	74	**239**	<0.05	24.8	470	<0.5	<0.5	<0.5
Overburden	NFA	BH-104-II	05-Mar-2024	320	<25	<0.5	65	7.3	1.7	**404**	25	1.3	3.9	5.6	440	<0.5	<0.5	<0.5
		BH-104-II	11-Sep-2024	345		<0.5		8.4	1.2	**391**	<5	<0.5	3.35	4.6	460			
		BH-104-III	05-Mar-2024	357	<25	<0.5	107	11.5	**5.7**	**713**	137	19.6	<0.05	6.8	**880**	<0.5	<0.5	<0.5
		BH-104-III	11-Sep-2024	461		1.1		24	**9.1**	**696**	**1370**	**950**	<0.05	9	**920**			
		BH-106-II	03-Sep-2024	283		<0.5		**560**	1.6	**543**	**990**	26.4	<0.5	**238**	**1550**			
		BH-106-II	04-Mar-2024	290	<25	<0.5	110	**516**	1.6	**535**	**496**	25.1	<0.05	**242**	**1330**	<0.5	<0.5	<0.5
		BH-106-III	03-Sep-2024	274		<0.5		**776**	1.8	**624**	31	31.6	1.42	**276**	**2180**			
		BH-106-III	04-Mar-2024	277	29	<0.5	246	**630**	1.8	**640**	57	10.7	1.14	**281**	**1570**	<0.5	<0.5	<0.5
		BH-106-III	04-Mar-2024	262	29	<0.5	227	**642**	1.6	**594**	46	11.1	1.56	**286**	**1670**	<0.5	<0.5	<0.5
		BH-107-II	11-Mar-2024	300	<25	<0.5	93	55.4	2.2	**429**	<5	2.8	0.28	16.4	460	<0.5	<0.5	<0.5
		BH-107-II	16-Sep-2024	301		<0.5		64.6	1.6	**393**	<5	2.3	0.22	17.4	**520**			
		BH-107-II	16-Sep-2024	308		<0.5		68.4	1.3	**393**	<5	2.5	0.24	17.4	**510**			
		BH-107-III	11-Mar-2024	282	<25	<0.5	78	54.8	2.7	**407**	42	1.4	0.09	18.4	470	<0.5	<0.5	<0.5
		BH-107-III	16-Sep-2024	306		<0.5		61.2	2.1	**377**	**572**	13.3	<0.05	22.4	**510**			
		BH-108-I	05-Mar-2024	206	<25	1.8	112	8.2	1.4	**215**	91	5.1	0.09	11.9	270	<0.5	<0.5	<0.5
		BH-108-I	09-Sep-2024	203		2		7.3	1.3	**212**	111	5.4	<0.05	11.9	270			
		BH-108-II	05-Mar-2024	191	<25	<0.5	82	12.6	1.4	**198**	7	0.6	<0.05	20.6	280	<0.5	<0.5	<0.5
		BH-108-II	09-Sep-2024	188		<0.5		12.2	1.6	**218**	**309**	31.1	<0.05	20.8	290			
		BH-108-III	05-Mar-2024	492	<25	<0.5	130	18.7	3.4	**620**	<5	11.4	0.85	8.9	**620**	<0.5	<0.5	<0.5
		BH-108-III	09-Sep-2024	490		<0.5		24.5	2.7	**586**	<5	31.9	0.58	11.7	**730**			
		BH-108-III	09-Sep-2024	498		<0.5		25.4	2.6	**592**	<5	31.9	0.55	12	**720**			
		BH-109-I	10-Sep-2024	147		3.9		1.5	1.3	**131**	11	3	<0.05	19.6	190			
		BH-109-I	12-Mar-2024	151	<25	4.2	87	1.3	2.1	**128**	20	4	<0.05	19.4	210	<0.5	<0.5	<0.5
		BH-109-II	10-Sep-2024	234		<0.5		17.7	1.7	**328**	201	12.2	<0.05	7.9	410			
		BH-109-II	12-Mar-2024	241	<25	<0.5	80	18.6	2.3	**321**	99	11	<0.05	9.3	390	<0.5	<0.5	<0.5
		BH-109-III	10-Sep-2024	**504**		<0.5		71.7	**6.6**	**659**	**889**	**667**	0.64	60.6	**930**			
		BH-109-III	12-Mar-2024	**518**	<25	<0.5	139	95.9	**8.2**	**830**	**522**	**981**	0.88	62.2	**1140**	<0.5	<0.5	<0.5
		BH-110-I	04-Sep-2024	194		2.8		13.4	2.8	**246**	**416**	13.1	<0.05	8.9	360			
		BH-110-I	12-Mar-2024	196	<25	2.6	64	12.3	1.8	**247**	**405**	12.9	<0.05	9.2	350	<0.5	<0.5	<0.5
		BH-110-II	04-Sep-2024	249		<0.5		71.5	1.8	**390**	236	25.6	<0.05	10.3	**590**			
		BH-110-II	12-Mar-2024	247	85	0.6	50	74.8	2.2	**440**	**345**	**57**	<0.05	10.5	500	<0.5	<0.5	<0.5
		BH-110-III	04-Sep-2024	**521**		<0.5		116	**5.2**	**854**	11	0.5	2.65	73.8	**1330**			
		BH-110-III	12-Mar-2024	**506**	<25	<0.5	107	120	**5.3**	**849**	11	<0.5	1.42	63.9	**1180**	<0.5	<0.5	<0.5
		BH-111-I	04-Sep-2024	215		<0.5		42	2.1	**64.9**	13	3.9	<0.05	87	430			
		BH-111-I	05-Mar-2024	210	<25	<0.5	839	20.7	2.5	**59**	11	8.8	<0.05	79.9	290	<0.5	<0.5	<0.5

TABLE 5.4
2024 Groundwater ODWQS Exceedances
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

		Parameter	Alkalinity	Aluminum	Arsenic	Barium	Chloride	DOC	Hardness	Iron	Manganese	Nitrate	Sodium	TDS	Benzene	1,4-DCB	Ethylbenzene
		Units	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L
		ODWQS	30-500	100	10	1000	250	5	80-100	300	50	10	200	500	1	1 / 5	1.6 / 140
		Guideline Type	OG	OG	MAC	MAC	AO	AO	OG	AO	AO	MAC	AO	AO	MAC	AO / MAC	AO / MAC
Hydrogeologic Unit	**Site Area**	**Sampling Location**	**Date**														
		BH-111-II	04-Sep-2024	174		1.9		6.6	1.2	**160**	118	9.6	<0.05	17.9	260			
		BH-111-II	05-Mar-2024	177	<25	2.1	132	6.8	2.4	**159**	76	6.6	0.1	19.2	230	<0.5	<0.5	<0.5
		BH-111-III	04-Sep-2024	397		<0.5		26.4	2.1	**453**	<5	13.8	0.13	29.3	**590**			
		BH-111-III	05-Mar-2024	428	<25	<0.5	115	32.2	2.5	**501**	<5	4.6	0.24	33.2	450	<0.5	<0.5	<0.5
		BH-112-I	04-Mar-2024	219	<25	5.1	162	17.1	2.5	**278**	**418**	10.3	0.07	6.9	360	<0.5	<0.5	<0.5
		BH-112-I	10-Sep-2024	204		3.9		17.8	1.9	**273**	219	10.6	0.07	6.6	330			
		BH-112-II	04-Mar-2024	337	<25	<0.5	136	43.1	**7**	**539**	7	5.1	4.79	13.8	**640**	<0.5	<0.5	<0.5
		BH-112-II	10-Sep-2024	324		<0.5		42.5	**6.1**	**513**	<5	3.2	5.45	13.2	**650**			
		BH-112-III	04-Mar-2024	251	<25	<0.5	69	55.4	**5.5**	**442**	<5	2	<0.05	12.7	**520**	<0.5	<0.5	<0.5
		BH-112-III	10-Sep-2024	265		<0.5		52.2	4.5	**397**	<5	3	<0.05	12.3	**530**			
Overburden	NFA	BH-114-I	18-Mar-2024	110	<25	0.7	62	2.1	2	**77.9**	19	4.5	<0.05	30.9	150	<0.5	<0.5	<0.5
		BH-114-II	17-Sep-2024	187		0.9		1.2	1.2	**181**	<5	14.7	0.11	12.2	220			
		BH-114-II	18-Mar-2024	190	<25	0.8	64	1.7	1.6	**183**	<5	17.6	<0.05	11.4	230	<0.5	<0.5	<0.5
		BH-114-III	17-Sep-2024	335		2.5		20	2.7	**463**	44	**353**	<0.05	12.1	**550**			
		BH-114-III	18-Mar-2024	389	<25	<0.5	307	13.2	3.8	**513**	<5	**242**	1.55	10	**650**	0.8	<0.5	<0.5
		BH-114-III	18-Mar-2024	389	<25	<0.5	324	13	3.4	**522**	5	**256**	1.48	10.2	**660**	**1.2**	<0.5	<0.5
		BH-115-I	13-Mar-2024	139	<25	1	57	3.3	2.2	**110**	9	14.6	<0.05	19.9	200	<0.5	<0.5	<0.5
		BH-115-I	16-Sep-2024	141		1.2		1.7	1.1	**117**	38	17.8	<0.05	22.8	180			
		BH-115-II	13-Mar-2024	168	**293**	1.4	97	4.3	2.4	**167**	251	19.9	<0.05	16	210	<0.5	<0.5	<0.5
		BH-115-II	16-Sep-2024	161		1.6		3.8	1.5	**140**	44	10.3	<0.05	15.5	220			
		BH-115-III	13-Mar-2024	338	<25	<0.5	142	8.4	2	**353**	5	**90.9**	1.61	4	410	<0.5	<0.5	<0.5
		BH-115-III	16-Sep-2024	343		<0.5		9.1	1.6	**340**	<5	**65.4**	0.91	4	410			
Shallow Bedrock	NFA	BH-86-I	03-Sep-2024	261		<0.5		**464**	1.3	**389**	27	2.2	<0.5	**221**	**1080**			
		BH-86-I	04-Mar-2024	263	<25	<0.5	19	**430**	1.3	**399**	26	2.1	<0.05	**229**	**1020**	<0.5	<0.5	<0.5
		BH-87-I	03-Sep-2024	204		0.9		10.9	1.7	**232**	45	9	<0.5	11.1	320			
		BH-87-I	04-Mar-2024	368	<25	2.7	103	6.1	1.6	**158**	72	7.9	<0.05	68.9	280	<0.5	<0.5	<0.5
		BH-88-I	10-Sep-2024	216		<0.5		6	1.6	**221**	117	14.3	<0.05	13.7	260			
		BH-88-I	18-Mar-2024	217	<25	<0.5	160	5.8	1.9	**203**	**414**	11.4	0.19	19.4	260	<0.5	<0.5	<0.5
		BH-89-I	09-Sep-2024	300		1.7		229	4.2	**107**	95	7.9	<0.05	**223**	**710**			
		BH-89-I	18-Mar-2024	310	<25	1.6	69	243	4.5	95.9	97	7.8	<0.05	**230**	**700**	<0.5	<0.5	<0.5
		BH-91-I	05-Mar-2024	183	<25	0.7	82	14.9	1.4	**229**	96	1.8	<0.05	8.4	230	<0.5	<0.5	<0.5
		BH-91-I	16-Sep-2024	174		1.2		18.5	1	**222**	49	39.6	<0.05	8.9	320			
		BH-92-I	09-Sep-2024	214		2.1		9.4	1.5	**242**	44	**72.2**	<0.05	10.1	300			
		BH-92-I	12-Mar-2024	205	40	2.1	108	8.5	2	**219**	174	23	<0.05	9.5	280	<0.5	<0.5	<0.5
		BH-104-I	05-Mar-2024	277	<25	<0.5	221	13.6	3.1	**351**	173	6.9	0.12	20.1	490	<0.5	<0.5	<0.5
		BH-104-I	11-Sep-2024	268		<0.5		13.3	2.5	**356**	8	42.2	<0.05	21.2	480			
		BH-106-I	03-Sep-2024	240		<0.5		191	2.8	**455**	**583**	18.3	<0.5	53.8	**890**			
		BH-106-I	04-Mar-2024	160	<25	<0.5	48	25.1	1.1	**190**	90	6.6	<0.05	23.7	320	<0.5	<0.5	<0.5
		BH-107-I	11-Mar-2024	290	<25	<0.5	115	127	1.7	**358**	46	17.4	<0.05	80.2	**550**	<0.5	<0.5	<0.5
		BH-107-I	16-Sep-2024	297		<0.5		140	1.4	**290**	91	18.9	<0.05	91.7	**580**			
Overburden	POF	MW20-30	22-Apr-2024	311			72	6.7	2.2		<5		1.66	7.1	**650**	<0.5		<0.5

NOTES:

1) ODWQS - Ontario Drinking Water Quality Standard (June 2006)
2) MAC - maximum allowable concentration, AO - aesthetic objective, OG - operational guideline
3) mg/L - milligram per litre, µg/L - micrograms per litre
4) '<' - Result not detected above indicated reporting limit.
5) Blank indicates parameter was not analyzed.
6) Bold and shaded values exceed ODWQS.

TABLE 5.5
2024 Leachate Indicator Parameter Comparison - South Fill Area (Overburden, Fresh Bedrock, Brine and Concentrated brine)
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

	Parameter:	Alkalinity	Ammonia	Boron	COD	Chloride	Iron	Manganese	Phosphorus	Potassium	Sodium	TKN
	Units:	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
	Leachate Range - SFA (Holding Tank)	1590 - 4290	53 - 290	2300 - 6840	120 - 1070	179 - 1120	3210 - 73400	282 - 922	0.3 - 3.37	97.2 - 337	3 - 877	68 - 670
Overburden	**Background Quality Range: 44-III (1989 to 2024)**	**170 - 260**	**0.03 - 1.1**	**<10 - 30**	**0.34 - 41.6**	**3.71 - 43.3**	**5 - 900**	**<1 - 334**	**<0.002 - 0.5**	**0.54 - 3.7**	**4.39 - 56**	**<0.1 - 1.92**
	Cell 1 - South											
	5-VI	299	0.1		<10	1.6	8	1.9	<0.02	<0.5	1.9	<0.3
	18B	477	0.2		<10	97	2280	261	<0.02	1.6	43.1	<0.3
	19B	821	15.8		60	505	27400	263	<0.02	14.3	259	17.3
	20B	279	0.1	9	<10	7.5	6	0.8	<0.02	<0.5	8.6	2.2
	52-II	335	0.2		<10	690	30	320	<0.02	2.8	76	<0.3
	54-II	274	0.1		20	18.6	14	2	<0.02	0.6	13.1	<0.3
	62-II	435	<0.1		<10	33.6	6	0.8	<0.02	1.4	32	<0.3
	64-II	295	0.1		10	2.7	13	39.3	<0.02	<0.5	2.3	<0.3
	Cell 1 - North - East Side											
	48	406	1.1	18	40	22.5	250	732	0.04	1.6	27.9	1.8
	46-II	285	0.2		60	28.8	195	19	<0.02	3.2	8.8	<0.3
	46-III	263	0.1		10	18.3	14	2	<0.02	0.8	6.1	<0.3
	50-II	309	0.2		<10	203	1060	25.8	<0.02	3.2	94.1	<0.3
	50-III	237	0.2		20	89.9	6	1.6	<0.02	1.9	42.3	<0.3
	61-III	246	0.2		<10	179	21	4.3	<0.02	1.6	17.8	<0.3
	63-II	218	0.2	18	<10	9.5	271	15.7	<0.02	1.8	6.2	<0.3
	63-III	202	0.1	<5	<10	16	90	1.9	<0.02	<0.5	2.9	<0.3
	74-II	183	0.1		<10	22	<5	1.1	0.17	1.8	24.6	<0.3
	74-III	293	0.1		<10	3	173	31	<0.02	<0.5	4.2	<0.3
	75-II	290	<0.1		<10	71.9	12	1.4	<0.02	1.2	35.3	<0.3
	81-II	837	0.2	46	20	30.1	3230	62.7	<0.02	4.5	50.4	<0.3
	81-III	672	1.8	6	30	12.5	16900	766	0.04	1.3	6.2	2.4
	Cell 1 - North - North Side											
	33-II	374	0.2		<10	34.4	84	8.2	<0.02	1.3	51.1	<0.3
	33-III	384	0.2		<10	27	<5	22.8	<0.02	0.9	37.5	<0.3
	66-II	1070	36		80	156	10000	163	0.03	31.1	131	38
	66-III	445	3.3	180	40	41.1	17600	471	0.04	3.8	39.7	5.4
	77-I	222	0.1		<10	94.4	678	27.2	<0.02	1.6	10.8	<0.3
	70-II / 113-II	290	0.1		<10	101	1400	20.4	<0.02	2.4	37	<0.3
	70-III / 113-III	325	0.1		10	38.4	276	119	<0.02	1.3	16.6	<0.3
	Cell 1 - North - North and West Side											
	40-II	255	0.2		20	4.9	8	36.7	<0.02	1.6	8.4	<0.3
	101-II	138	0.2		10	9.6	<5	<0.5	0.04	1.5	47.4	0.3
	101-III	408	0.2		<10	0.9	<5	<0.5	<0.02	1.6	8.2	<0.3
Fresh Bedrock	**Background Quality Range: 101-I (1999-2004)**	**80 - 229**	**0.05 - 1.3**	**-**	**4 - 134**	**1.6 - 130**	**10 - 510**	**1 - 17**	**<0.01 - 0.09**	**1.69 - 6.93**	**30.1 - 69.9**	**<0.1 - 2.8**
	Cell 1 - South											
	5-V	230	0.1		10	8.7	39	0.6	<0.02	2.1	9.3	<0.3
	53-I	340	0.2		10	1.6	927	19.9	0.02	1.9	5.1	<0.3
	Cell 1 - North - East Side											
	63-I	289	0.1	630	<10	63.3	<5	<0.5	0.03	3.1	150	<0.3
	81-I	646	0.4	198	20	118	173	14.2	<0.02	5.7	39	<0.3
	Cell 1 - North - North Side											
	113-I	166	0.8		10	11.4	7	3.3	<0.02	5.2	43.3	2
	Cell 1 - North - North and West Side											
	41-II	271	0.2		<10	4	345	8.8	<0.02	1.8	5.7	<0.3
Brine	**Background Quality Range: 38-I (1989-2007)**	**152 - 280**	**0.14 - 7.3**	**5 - 543**	**0.5 - 62.6**		**5 - 5420**	**1 - 72**	**0.001 - 0.43**	**1.3 - 26.2**		**0.025 - 8.4**
	Cell 1 - South											
	5-IV	224	7.8		180		3660	57	0.06	68.9		8
	16A	263	0.2		10		<5	3.5	<0.02	1.8		<0.3
	18A	448	4.9	275	30		4600	113	<0.02	7.8		6.8
	19A	571	2	342	90		11900	175	0.05	11.5		4.5
	20A	314	1.4		20		1820	88.5	<0.02	6.4		1.2
	52-I	245	2.8		<10		947	93	<0.02	17.7		2.7
	62-I	279	5.3		90		213	25.2	<0.02	28.7		5.2
	64-I	235	0.1		<10		13	<0.5	<0.02	7.6		<0.3
	Cell 1 - North - East Side											
	46-I	308	4.8		140		900	33	0.17	18.8		6.2
	50-I	219	0.3		20		143	32.3	0.03	4.5		0.4
	61-I	235	0.1		<10		13	<0.5	<0.02	7.6		<0.3
	75-I	462	0.6		<10		28	4	0.06	8.8		0.7
	Cell 1 - North - North Side											
	66-I	673	0.9		40		6260	76.9	0.05	5.7		0.5
	Cell 1 - North - North and West Side											
	44-II	271	0.2		<10		345	8.8	<0.02	1.8		<0.3
Concentrated Brine	**Background Quality Range: 44-I (1989 - 2024)**	**52.4 - 207**	**11.1 - 27.8**				**0.06 - 23.9**	**<0.01 - 0.54**	**<0.002 - 0.99**			**1.5 - 69**
	Cell 1 - North - East Side											
	76-I	184	22.3				6330	151	0.05			22.4
	Cell 1 - North - North and West Side											
	41-I	200	7.5				1240	23	<0.02			7.8

NOTES: 1) Selected leachate indicator parameters are shown, most recent sample results used for comparison.
2) Leachate range from South Fill Area (SFA) Holding Tank (2006-2024)

TABLE 5.6
2024 Leachate Indicator Parameter Comparison - North Fill Area (Overburden, Fresh Bedrock, Brine)
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

	Parameter:	Alkalinity	Ammonia	Boron	COD	Chloride	Iron	Manganese	Phosphorus	Potassium	Sodium	TKN
	Units:	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L
	Leachate Range - NFA (Holding Tank)	716 - 2900	-	680 - 1740	50 - 1510	9.7 - 1430	350 - 7270	115 - 1270	0.25 - 3.16	38 - 392	6 - 1130	20.8 - 467
Overburden	Background Quality Range: 88-III (2006-2024)	184 - 257	<0.1 - 0.3	22.1 - 620	<10 - 50	2.8 - 13.2	8 - 1810	1.1 - 273	<0.02 - 0.05	1.77 - 3.0	2.57 - 12.6	<0.1 - 3.1
	84-I	134	0.2	480	20	135	207	22	<0.02	2.7	101	<0.3
	84-II	276	0.1	33	<10	10.3	103	27.9	<0.02	1.6	5.2	<0.3
	85-I	420	0.1	12	<10	432	18	14.6	<0.02	7.6	121	<0.3
	85-II	338	0.2	263	20	299	158	269	<0.02	6.6	134	0.4
	86-II	195	0.1	61	<10	16	14	<0.5	0.03	2.1	16.1	<0.3
	86-III	283	0.1	266	<10	157	<5	2.5	<0.02	2.2	78.3	<0.3
	87-II	247	0.2	28	<10	9.3	380	17.5	<0.02	1.7	7.1	<0.3
	87-III	375	0.1	10	<10	10.2	183	53.3	<0.02	0.6	7.9	<0.3
	88-II	241	0.2	266	<10	6.2	1140	23.4	<0.02	2.8	10.5	<0.3
	89-II	102	0.1	107	10	8.5	9	<0.5	<0.02	<0.5	35.6	<0.3
	89-III	345	0.1	5	10	14.6	<5	<0.5	<0.02	0.5	4.3	<0.3
	91-II	437	0.1	40	10	40.8	100	476	0.03	1.2	19.2	<0.3
	91-III	245	0.1	<5	<10	5.1	13	<0.5	<0.02	<0.5	2.8	<0.3
	92-II	214	0.1		<10	18.4	186	18.8	<0.02	2.4	17.1	<0.3
	92-III	428	0.5		30	110	2290	604	<0.02	21.2	79.8	1.3
	93-I	200	0.2	27	<10	10.3	423	15.9	<0.02	1.2	8.2	<0.3
	93-II	244	0.1	<5	<10	30.7	<5	<0.5	<0.02	1.3	5	<0.3
	94-I	202	0.1	30	<10	12.8	413	11.5	<0.02	1.4	8	<0.3
	94-II	334	0.1	14	20	25	<5	2	<0.02	1.1	8.5	<0.3
	95-I	211	0.1	10	<10	19.5	306	22.3	<0.02	1.8	5.4	<0.3
	95-II	293	0.1	11	<10	82.9	74	239	<0.02	1.4	24.8	<0.3
	104-II	320	<0.1	8	<10	7.3	25	1.3	<0.02	2.4	5.6	<0.3
	104-III	357	<0.1	27	20	11.5	137	19.6	<0.02	5.8	6.8	<0.3
	106-II	290	0.1	24	<10	516	496	25.1	<0.02	3.4	242	<0.3
	106-III	277	0.1	20	<10	630	57	10.7	<0.02	2.3	281	<0.3
	107-II	300	0.1	18	<10	55.4	<5	2.8	<0.02	1.5	16.4	<0.3
	107-III	282	0.1	16	<10	54.8	42	1.4	<0.02	0.9	18.4	<0.3
	108-I	206	0.1	74	20	8.2	91	5.1	<0.02	2.1	11.9	<0.3
	108-II	191	0.1	119	10	12.6	7	0.6	<0.02	2.1	20.6	<0.3
	108-III	492	0.1	14	20	18.7	<5	11.4	<0.02	1.1	8.9	<0.3
	109-I	151	0.2	82	<10	1.3	20	4	<0.02	1.3	19.4	<0.3
	109-II	241	<0.1	25	<10	18.6	99	11	<0.02	2	9.3	<0.3
	109-III	518	2.9	206	10	95.9	522	981	<0.02	4.8	62.2	3.3
	110-I	196	0.2	28	<10	12.3	405	12.9	<0.02	1.4	9.2	<0.3
	110-II	247	0.1	19	<10	74.8	345	57	<0.02	2.1	10.5	<0.3
	110-III	506	0.1	13	<10	120	11	<0.5	<0.02	2.4	63.9	<0.3
	111-I	210	0.1	414	20	20.7	11	8.8	<0.02	3.4	79.9	0.6
	111-II	177	0.1	82	<10	6.8	76	6.6	0.02	1.3	19.2	<0.3
	111-III	428	0.1	42	<10	32.2	<5	4.6	<0.02	1.2	33.2	<0.3
	112-I	219	0.1	22	<10	17.1	418	10.3	<0.02	2.6	6.9	<0.3
	112-II	337	<0.1	31	<10	43.1	7	5.1	<0.02	1.4	13.8	0.6
	112-III	251	<0.1	54	<10	55.4	<5	2	<0.02	2.8	12.7	<0.3
	BH-114-I	110	0.2	146	<10	2.1	19	4.5	<0.02	2.4	30.9	<0.3
	BH-114-II	190	0.2	69	<10	1.7	<5	17.6	<0.02	2.3	11.4	<0.3
	BH-114-III	389	0.2	70	40	13.2	<5	242	0.02	7.1	10	<0.3
	BH-115-I	139	0.1	112	<10	3.3	9	14.6	<0.02	2.2	19.9	<0.3
	BH-115-II	168	0.1	96	20	4.3	251	19.9	<0.02	4	16	<0.3
	BH-115-III	338	0.1	13	<10	8.4	5	90.9	<0.02	1.2	4	<0.3
Bedrock	Background Quality Range: 88-I (1999-2024)	178 - 237	<0.1 - 0.4	90 - 180	<10 - 50	0.7 - 4.7	<50 - 342	<1 - 21	<0.01 - 0.09	1.69 - 6.93	30.1 - 69.9	<0.1 - 2.8
	87-I	368	0.5	176	<10	6.1	72	7.9	<0.02	4.4	68.9	0.5
	91-I	183	0.1	21	<10	14.9	96	1.8	<0.02	1.7	8.4	<0.3
	92-I	205	0.1	41	<10	8.5	174	23	<0.02	2	9.5	<0.3
	104-I	277	<0.1	219	20	13.6	173	6.9	<0.02	4.2	20.1	<0.3
	106-I	160	0.1	59	<10	25.1	90	6.6	<0.02	1.7	23.7	<0.3
	107-I	290	1	570	<10	127	46	17.4	<0.02	5.4	80.2	0.9
Brine	Background Quality Range: 38-I (1989-2007)	152 - 280	0.14 - 7.3	5 - 543	0.5 - 62.6		5 - 5420	1 - 72	0.001 - 0.43	1.3 - 26.2		0.025 - 8.4
	86-I	263	1.8	422	<10		26	2.1	<0.02	9.6		1.8
	89-I	310	1	890	30		97	7.8	0.03	6.5		1.1

NOTES: 1) Selected leachate indicator parameters are shown, most recent sample results used for comparison.
2) Leachate range from North Fill Area (NFA) Holding Tank (2011-2024)

TABLE 5.7
2024 Leafate Indicator Parameter Comparison - Peterborough Organics Facility (Overburden)
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

	Parameter:	Alkalinity	Ammonia	Barium	Boron	Chloride	COD	Iron	Phosphorus	Sodium
	Units:	m/gL	mg/L	ug/L	ug/L	mg/L	mg/L	ug/L	mg/L	mg/L
	Leafate Range (2024)	67 - 699	8 - 121	84 - 443	100 - 180	80 - 160	1640 - 4200	1360 - 25800	3.06 - 17.8	75 - 172
Overburden	Reference Quality Range: MW20-28A (2024 Fall)	213	<0.1	99	33	3.6	<10	219	<0.02	9.1
Overburden	MW20-01	238	0.1	93	22	17.4	<10	144	<0.02	8.6
Overburden	MW20-19R	156	<0.1	46	65	6.6	<10	<5	<0.02	23.4
Overburden	MW20-22	233	<0.1	64	11	12.1	<10	<5	<0.02	5.9
Overburden	MW20-30	298	<0.1	84	14	9.9	20	<5	<0.02	7.9

TABLE 5.8
Ministry Guideline B-7 Criteria - South Fill Area
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	ODWQS	REFERENCE: 44-III		GUIDELINE B-7 CRITERIA	TRIGGER CRITERIA (80% of B-7)	South Fill Area														
						BH-46-II	BH-46-III	BH-48		BH-61-III	BH-63-II		BH-63-III		BH-64-II	BH-74-II	BH-74-III	BH-75-II		
		AVERAGE	n			02-Apr-24	02-Apr-24	20-Mar-24	09-Oct-24	02-Apr-24	25-Mar-24	18-Sep-24	25-Mar-24	18-Sep-24	02-Apr-24	25-Mar-24	25-Mar-24	25-Mar-24	23-Sep-24	
Health-Related ODWQS Parameters																				
Arsenic	0.01	0.0012	21	0.0034	0.0027	0.0013	<0.0005	0.0008	0.0023	<0.0005	**0.0034**	**0.0039**	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	
Barium	1	0.19	5	0.39	0.31			0.183			0.101		0.036					0.038		
Boron	5	0.011	5	1.3	1.0			0.018			0.018		<0.005					<0.005		
Cadmium	0.005	0.0013	5	0.0022	0.0018			<0.0001			<0.0001		<0.0001					<0.0001		
Chromium	0.05	0.0040	5	0.016	0.012			<0.0005			<0.0005		<0.0005					<0.0005		
Lead	0.01	0.0012	5	0.0034	0.0027			<0.0005			<0.0005		<0.0005					<0.0005		
Nitrate	10	0.83	30	3.1	2.5	<0.05	**9.89**	0.88	<0.05	0.26	0.15	<0.05	**33.8**	**31.9**	<0.05	0.11	<0.05	<0.05	0.11	
Nitrite	1	0.043	30	0.28	0.23	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Non-Health-Related ODWQS Parameters																				
Alkalinity	30-500	219	30	360	288	285	263	**406**	**712**	246	218	214	202	200	**295**	183	**293**	275	**290**	
Aluminum	0.1	0.016	5	0.058	0.046			<0.025			<0.025		**0.118**					**0.149**		
Chloride	250	12	30	131	105	28.8	18.3	22.5	**107**	**179**	9.5	9.5	16.0	29.9	2.7	22	3	42.3	71.9	
Copper	1	0.0026	5	0.50	0.40			0.0014			<0.0005		<0.0005					0.0006		
Dissolved Organic Carbon	5	1.1	20	3.0	2.4	1.5	**2.7**	**5.8**	**7.7**	1.2	1.4	1.4	1.6	1.5	1.5	1.3	2	**2.5**	1.9	
Iron	0.3	0.022	30	0.161	0.129	**0.195**	0.014	**0.25**	**23**	0.021	**0.271**	**0.354**	0.09	<0.005	0.013	<0.005	**0.173**	**0.229**	0.012	
Manganese	0.05	0.0039	21	0.027	0.022	0.019	0.002	**0.732**	**0.77**	0.0043	0.0157	0.0127	0.0019	<0.0005	**0.0393**	0.0011	**0.031**	**0.0221**	0.0014	
Sodium	200	8.9	30	104	84	8.8	6.1	27.9	**93.4**	17.8	6.2	6.8	2.9	3.4	2.3	24.6	4.2	18.7	35.3	
Sulphate	500	49	30	274	220	38.2	19.3	66.4	5.5	12.6	36.6	36.8	22.7	26.5	8.4	34.4	2	10.9	18.4	
Zinc	5	0.0078	5	2.5	2.0			<0.005			<0.005		<0.005					<0.005		

FRESH BEDROCK

PARAMETER	ODWQS	REFERENCE: 101-I		GUIDELINE B-7 CRITERIA	TRIGGER CRITERIA (80% of B-7)	South Fill Area		
						41-II	63-I	
		AVERAGE	n			26-Mar-24	25-Mar-24	18-Sep-24
Health-Related ODWQS Parameters								
Arsenic	0.01	0.002	25	0.0039	0.0031	<0.0005	<0.0005	<0.0005
Barium	1	0.052	9	0.29	0.23		0.082	
Boron	5	1.1	10	2.1	1.7		0.63	
Cadmium	0.005	0.0016	9	0.0025	0.0020		<0.0001	
Chromium	0.05	0.0050	9	0.016	0.013		<0.0005	
Lead	0.01	0.00065	9	0.0030	0.0024		<0.0005	
Nitrate	10	0.093	41	2.6	2.1	<0.05	0.23	0.31
Nitrite	1	0.038	40	0.28	0.22	<0.05	<0.05	<0.05
Non-Health-Related ODWQS Parameters								
Alkalinity	30-500	131	41	316	253	**271**	**289**	**287**
Aluminum	0.1	0.017	9	0.059	0.047		0.025	
Chloride	250	5.0	41	128	102	4	63.3	62.4
Copper	1	0.0026	9	0.50	0.40		<0.0005	
Dissolved Organic Carbon	5	2.6	21	3.8	3.0	**4**	1.6	2.7
Iron	0.3	0.032	41	0.17	0.13	**0.345**	<0.005	0.02
Manganese	0.05	0.0056	25	0.028	0.022	0.0088	<0.0005	0.0017
Sodium	200	56	40	128	103	5.7	**150**	**175**
Sulphate	500	60	41	280	224	38.8	23.7	21.7
Zinc	5	0.0062	9	2.5	2.0		<0.005	

NOTES:
1) ODWQS - Ontario Drinking Water Quality Standards (2006)
2) Reference average based on the geometric mean of historic concentrations for reference monitors.
   n - Indicates number of sample results included in the calculation of the reference average.
3) Blank indicates parameter not analysed.
4) **Bold values** exceed the trigger criteria (80% of Guideline B-7 criteria).
5) **Bold & shaded** values exceed Guideline B-7 Criteria.
6) All concentration values are in mg/L.

TABLE 5.9
Ministry Guideline B-7 Criteria - North Fill Area and Peterborough Organics Facility
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Peterborough County/City Waste Management Facility - 2024 Monitoring Program

OVERBURDEN

PARAMETER	ODWQS	REFERENCE: 88-III [7]		GUIDELINE B-7 CRITERIA	TRIGGER CRITERIA (80% of B-7)	North Fill Area															
						BH-86-II		BH-86-III		BH-87-II		BH-87-III		BH-89-II		BH-89-III		BH-104-II		BH-104-III	
		AVERAGE	n			04-Mar-24	03-Sep-24	04-Mar-24	03-Sep-24	04-Mar-24	03-Sep-24	04-Mar-24	03-Sep-24	18-Mar-24	09-Sep-24	18-Mar-24	09-Sep-24	05-Mar-24	11-Sep-24	05-Mar-24	11-Sep-24
Health-Related ODWQS Parameters																					
Arsenic	0.01	0.0020	28	0.0040	0.0032	0.0022	0.0024	<0.0005	0.0014	0.0007	0.0006	<0.0005	0.0005	0.0022	0.0029	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0011
Barium	1	0.060	16	0.30	0.24	**0.241**		**0.34**		0.117		0.088		0.038		0.037		0.065		0.107	
Boron	5	0.12	16	1.3	1.1	0.061		0.266		0.028		0.01		0.107		0.005		0.008		0.027	
Cadmium	0.005	0.00017	16	0.0014	0.0011	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001	
Chromium	0.05	0.001	16	0.013	0.011	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	
Lead	0.01	0.002	16	0.0040	0.0032	<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005		<0.0005	
Nitrate	10	0.050	30	2.5	2.0	0.06	<0.5	<0.05	<0.5	<0.05	<0.5	0.7	0.53	<0.05	<0.05	**2.64**	**6.99**	**3.9**	**3.35**	<0.05	<0.05
Nitrite	1	0.053	30	0.29	0.23	<0.05	<0.5	<0.05	<0.5	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Non-Health-Related ODWQS Parameters																					
Alkalinity	30-500	215	30	357	286	195	194	283	275	247	264	**375**	**430**	102	103	**345**	**309**	**320**	**345**	**357**	**461**
Aluminum	0.1	0.011	16	0.056	0.044	<0.025		<0.025		<0.025		<0.025		<0.025		<0.025		<0.025		<0.025	
Chloride	250	8.0	30	129	103	16	17.8	**157**	**132**	9.3	10.9	10.2	9.7	8.5	9	14.6	11	7.3	8.4	11.5	24
Copper	1	0.002	16	0.50	0.40	0.0012		<0.0005		<0.0005		<0.0005		0.001		0.0006		0.0009		0.0016	
Dissolved Organic Carbon	5	1.3	30	3.1	2.5	<1.0	1.3	1.1	1.7	1.5	1.6	**2.9**	**3.1**	1.6	1.6	2.5	1.7	1.7	1.2	**5.7**	**9.1**
Iron	0.3	0.176	30	0.24	0.19	0.014	0.14	<0.005	**0.542**	**0.38**	**0.578**	0.183	0.051	0.009	0.046	<0.005	0.062	0.025	<0.005	0.137	**1.37**
Manganese	0.05	0.012	30	0.031	0.025	<0.0005	0.0027	0.0025	**0.0455**	0.0175	0.018	**0.0533**	**0.0355**	<0.0005	0.0024	<0.0005	0.0038	0.0013	<0.0005	0.0196	**0.95**
Sodium	200	5.1	30	103	82	16.1	15.6	78.3	56.6	7.1	6.5	7.9	9.2	35.6	35.5	4.3	4	5.6	4.6	6.8	9
Sulphate	500	58.8	30	279	224	4.1	4.6	17.7	15.6	45.5	57.1	19.5	34.8	0.4	0.4	13.1	17.2	49.7	41.6	**311**	**250**
Zinc	5	0.004	16	2.5	2.0	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	

OVERBURDEN

PARAMETER	ODWQS	REFERENCE: 88-III [7]		GUIDELINE B-7 CRITERIA	TRIGGER CRITERIA (80% of B-7)	Peterborough Organics Facility								
						MW20-01		MW20-19R	MW20-22		MW20-28A		MW20-30	
		AVERAGE	n			22-Apr-24	24-Sep-24	24-Sep-24	22-Apr-24	24-Sep-24	22-Apr-24	24-Sep-24	22-Apr-24	24-Sep-24
Health-Related ODWQS Parameters														
Arsenic	0.01	0.0020	28	0.0040	0.0032									
Barium	1	0.060	16	0.30	0.24	0.116	0.093	0.046	0.053	0.064	0.096	0.099	0.072	0.084
Boron	5	0.12	16	1.34	1.1	0.021	0.022	0.065	0.01	0.011	0.047	0.033	0.01	0.014
Cadmium	0.005	0.00017	16	0.0014	0.0011									
Chromium	0.05	0.001	16	0.013	0.011									
Lead	0.01	0.002	16	0.0040	0.0032	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nitrate	10	0.050	30	2.5	2.0	<0.05	<0.05	0.2	0.64	0.76	0.27	<0.05	1.66	**5.22**
Nitrite	1	0.053	30	0.29	0.23									
Non-Health-Related ODWQS Parameters														
Alkalinity	30-500	215	30	357	286	234	238	156	230	233	196	213	**311**	**298**
Aluminum	0.1	0.011	16	0.056	0.044									
Chloride	250	8.0	30	129	103	17.4	17.4	6.6	11.8	12.1	3.8	3.6	6.7	9.9
Copper	1	0.002	16	0.50	0.40	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	0.0008	<0.0005
Dissolved Organic Carbon	5	1.3	30	3.1	2.5	<1.0	1.1	1.7	1.2	2	<1.0	<1.0	2.2	1
Iron	0.3	0.176	30	0.24	0.19	0.03	0.144	<0.005	<0.005	<0.005	**0.285**	**0.219**	<0.005	<0.005
Manganese	0.05	0.012	30	0.031	0.025									
Sodium	200	5.1	30	103	82	7.4	8.6	23.4	5.5	5.9	15.3	9.1	7.1	7.9
Sulphate	500	58.8	30	279	224	66	61.8	35	75.5	77	75.3	33.9	210	72.3
Zinc	5	0.004	16	2.5	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

FRESH BEDROCK

PARAMETER	ODWQS	REFERENCE: 88-I		GUIDELINE B-7 CRITERIA	TRIGGER CRITERIA (80% of B-7)	North Fill Area 87-I	
		AVERAGE	n			04-Mar-24	03-Sep-24
Health-Related ODWQS Parameters							
Arsenic	0.01	0.0011	33	0.0033	0.0027	**0.0027**	0.0009
Barium	1	0.13	18	0.35	0.28	0.103	
Boron	5	0.12	18	1.3	1.1	0.176	
Cadmium	0.005	0.00015	18	0.0014	0.0011	<0.0001	
Chromium	0.05	0.00050	18	0.013	0.010	<0.0005	
Lead	0.01	0.0014	18	0.0035	0.0028	<0.0005	
Nitrate	10	0.13	35	2.6	2.1	<0.05	<0.5
Nitrite	1	0.051	35	0.29	0.23	<0.05	<0.5
Non-Health-Related ODWQS Parameters							
Alkalinity	30-500	210	35	355	284	**368**	204
Aluminum	0.1	0.015	18	0.058	0.046	<0.025	
Chloride	250	1.7	35	126	101	6.1	10.9
Copper	1	0.00087	18	0.50	0.40	<0.0005	
Dissolved Organic Carbon	5	1.2	33	3.1	2.5	1.6	1.7
Iron	0.3	0.072	35	0.19	0.15	0.072	0.045
Manganese	0.05	0.0058	35	0.028	0.022	0.0079	0.009
Sodium	200	17	35	108	87	68.9	11.1
Sulphate	500	14	35	257	206	30.9	42.1
Zinc	5	0.0036	18	2.5	2.0	<0.005	

NOTES:
1) ODWQS - Ontario Drinking Water Quality Standards (2006)
2) Reference average based on the geometric mean of historic concentrations for reference monitors.
   n - Indicates number of sample results included in the calculation of the reference average.
3) Blank indicates parameter not analysed.
4) **Bold values** exceed the trigger criteria (80% of Guideline B-7 criteria).
5) **Bold & shaded** values exceed Guideline B-7 Criteria.
6) All concentration values are in mg/L.
7) Guideline B-7 criteria using 88-III as a reference are calculated using data from 2021 and earlier.

TABLE 6.1
2024 Surface Water Analytical Results and PWQO Exceedances
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	PWQO[1]	Central Watercourse (SFA)																	
			SW1			SW2			SW3			SW18			SW19 (upstream)		SW20 (upstream)		
			Feb-24	Apr-24	Jun-24	Feb-24	Apr-24	Jun-24	Feb-24	Apr-24	Jun-24	Feb-24	Apr-24	Jun-24	Apr-24	Jun-24	Feb-24	Apr-24	Jun-24
Alkalinity	mg/L		243	214	374	245	211	360	250	217	395	248	215	396	233	380	251	231	388
Ammonia	mg/L		0.1	0.2	0.3	0.1	0.2	0.1	0.1	0.2	0.3	0.2	0.2	1	0.1	0.1	0.1	0.3	0.1
Unionized Ammonia	mg/L	0.02	0.0003	0.0029	0.0024	0.0003	0.0040	0.0012	0.0003	0.0061	0.0041	0.0006	0.0048	0.0104	0.0008	0.0007	0.0002	0.0026	0.0007
Arsenic	µg/L	5	<0.5	<0.5	0.6	<0.5	<0.5	0.5	<0.5	<0.5	0.8	<0.5	<0.5	0.8	<0.5	0.5	<0.5	<0.5	0.5
Barium	µg/L		52	42	55	47	42	54	52	44	63	48	44	73	41	54	42	42	47
Biochemical Oxygen Demand	mg/L		<2.0	<2.0	<2.0	<2.0	<2.0	2	<2.0	<2.0	2.8	<2.0	<2.0	6.2	<2.0	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	200	12	24	19	10	20	20	15	24	31	9	20	40	9	14	6	9	13
Cadmium	µg/L	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/L		30	30	40	20	30	30	20	20	70	20	20	40	20	60	10	20	40
Chloride	mg/L		66.4	40.3	42.9	50.2	41.4	41.1	50.5	40.8	39.5	50.9	42.1	40.3	24.6	12.1	28.6	22.1	12.3
Chromium	µg/L	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Conductivity	µS/cm		747	569	759	700	569	764	708	576	816	700	581	867	570	707	652	567	706
Conductivity - field	µS/cm		614	541	755	557	541	751	576	547	800	526	541	844	544	692	623	529	704
Copper	µg/L	5	0.9	1.1	0.6	0.9	1	<0.5	1.3	1.1	1	0.9	1	0.7	1	1	0.9	1	0.6
Dissolved Oxygen - field	mg/L	*	16.7	8.25	**4.22**	14.6	9.28	**4.44**	16.1	8.12	6.34	14	8.21	6.54	9.76	**4.26**	19.1	6.68	**3.28**
Temperature - field	°C		0	11.8	12.9	0	13.1	15.7	0	14.4	12.9	0	14	14.2	10.6	12.6	0	10.2	12.5
Iron	µg/L	300	30	107	**880**	32	89	**745**	142	83	**859**	60	113	**1500**	16	**478**	14	27	**699**
Lead	µg/L	25**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate	mg/L		2.83	1.15	0.09	3.12	1.07	<0.05	3.08	1.16	0.58	3.24	1.05	0.26	2.77	<0.05	4.58	2.87	<0.05
Nitrite	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
pH	pH units	6.5–8.5	7.57	7.41	7.3	7.6	7.51	7.25	7.57	7.64	7.55	7.58	7.56	7.36	7.36	7.2	7.36	7.32	7.22
pH - field	pH units	6.5–8.5	7.58	7.84	7.54	7.55	7.94	7.61	7.55	8.08	7.77	7.59	7.99	7.61	7.64	7.48	7.38	7.66	7.49
Phenols	µg/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phosphorous	mg/L	0.03	<0.02	0.03	**0.14**	<0.02	0.02	**0.13**	<0.02	0.02	**0.13**	<0.02	0.02	**0.12**	<0.02	0.03	<0.02	<0.02	**0.05**
Sulphate	mg/L		31.5	20	4.4	28.3	20.6	4.2	27.5	20	4.2	28.3	20.7	3.6	18.1	3.1	25.4	17.7	2
Total Suspended Solids	mg/L		<2	3	6	<2	2	2	2	2	16	<2	<2	16	<2	4	<2	<2	3
Total Dissolved Solids	mg/L		470	350	500	410	320	480	420	360	520	410	350	540	260	440	390	340	450
Total Kjeldahl Nitrogen	mg/L		0.3	0.5	1.1	0.4	0.5	1	0.5	0.5	1	0.4	0.6	1.8	0.5	0.8	<0.3	0.5	0.9
Zinc	µg/L	20	<5	<5	<5	<5	<5	<5	17	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

PARAMETER	UNITS	PWQO[1]	Bensfort Road Ditch (SFA)										Western Watercourse (NFA)	
			SW17		SW23				SW21 (upstream)				SW24	
			Feb-24	Apr-24	Feb-24	Apr-24	Jun-24	Oct-24	Feb-24	Apr-24	Jun-24	Oct-24	Apr-24	Jun-24
Alkalinity	mg/L		235	195	233	198	317	324	232	199	323	360	246	377
Ammonia	mg/L		<0.1	0.1	0.1	0.2	0.1		0.2	0.1	0.2		0.2	0.1
Unionized Ammonia	mg/L	0.02	<0.0005	0.0012	0.0002	0.0018	0.0004		0.0002	0.0003	0.0004		0.0030	0.0017
Arsenic	µg/L	5	<0.5	<0.5	<0.5	<0.5	0.6		<0.5	<0.5	0.6		<0.5	1.1
Barium	µg/L		54	44	58	44	77		53	46	91		50	72
Biochemical Oxygen Demand	mg/L		<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	<2.0	<2.0		<2.0	2.4
Boron	µg/L	200	15	24	15	24	35		16	26	28		14	23
Cadmium	µg/L	0.2	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1		<0.1	<0.1
Chemical Oxygen Demand	mg/L		20	30	40	30	40		40	30	50		30	60
Chloride	mg/L		84.4	50.3	84.4	51.2	173		79.8	49.3	178		5.2	2.7
Chromium	µg/L	1	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5		<0.5	<0.5
Conductivity	µS/cm		790	587	788	586	1150		774	582	1140		512	667
Conductivity - field	µS/cm		715	548	756	548	1130	1510	759	543	1130	2120	479	646
Copper	µg/L	5	0.9	1	1.2	1.1	<0.5		0.9	1.1	1		0.6	0.5
Dissolved Oxygen - field	mg/L	*	17.3	7.75	19.8	6.76	**2.33**	**2.54**	23.3	8.67	6.84	8.1	**4.38**	5.3
Temperature - field	°C		0	12	0	11.8	13.8	6.1	0	11.8	12.4	6.5	16.2	16.6
Iron	µg/L	300	51	136	295	120	**890**		56	113	**536**		143	**814**
Lead	µg/L	25**	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5		<0.5	<0.5
Mercury	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1		<0.1	<0.1
Nitrate	mg/L		2.21	0.36	2.21	0.36	<0.05	<0.05	2.45	0.36	<0.05	0.16	<0.05	<0.05
Nitrite	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
pH	pH units	6.5–8.5	7.51	7.38	7.34	7.32	7.11	7.25	7.22	7.3	7.44	7.76	7.3	7.56
pH - field	pH units	6.5–8.5	7.81	7.75	7.37	7.63	7.24	7.58	6.97	7.2	6.95	7.44	7.71	7.74
Phenols	µg/L	1	<1	<1	<1	<1	<1		<1	<1	<1		<1	<1
Phosphorous	mg/L	0.03	<0.02	0.02	**0.05**	0.03	**0.07**		<0.02	0.03	**0.07**		0.03	**0.11**
Sulphate	mg/L		34.1	22.7	33.9	23	18.2	21	34.2	23	13.5	29.9	18.6	3
Total Suspended Solids	mg/L		<2	2	7	<2	4	5	2	<2	7	14	<2	27
Total Dissolved Solids	mg/L		460	340	500	340	710	850	500	350	700	1160	270	450
Total Kjeldahl Nitrogen	mg/L		<0.3	0.5	0.3	0.6	0.8		0.4	0.8	0.7		0.4	1
Zinc	µg/L	20	<5	<5	11	<5	<5		<5	<5	<5		<5	<5

NOTES:
1) PWQO - Provincial Water Quality Objectives (1999)
2) mg/L - milligrams per litre, µg/L - micrograms per litre, µS/cm - microSiemens per centimetre, °C - degrees Celsius
3) Bold and shaded values exceed the PWQO.
4) * - Dissolved oxygen PWQO is temperature dependent; based on warm water biota guidelines, ranging from 4–7 mg/L. Results less than the PWQO are considered exceedances.
5) ** - Lead PWQO based on alkalinity >80 mg/L.

TABLE 6.2
2024 NFA Stormwater Management Pond Inflow/Outflow Analytical Results and PEO Exceedances
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	PEO[1]	NFA SWMP OUT				NFA SWMP IN
			Jan-24	Apr-24	Jun-24	Jul-24	Apr-24
Inorganic							
Alkalinity	mg/L			188			573
Aluminum	µg/L			28			22,800
Ammonia	mg/L		0.8	0.2	0.8	0.2	1.3
Unionized Ammonia	mg/L	0.02	0.0003	0.0005	0.0024	0.0014	0.0047
Biological Oxygen Demand	mg/L			<2.0			5
Boron	µg/L	200		90			130
Cadmium	µg/L			<1			4
Calcium	mg/L			93.1			268
Chemical Oxygen Demand	mg/L			20			140
Chloride	mg/L			205			86.5
Chromium	µg/L			<1			26
Colour	TCU			16			22
Conductivity - field	µS/cm		700	1,100	674	688	582
Copper	µg/L			7			49
Dissolved Organic Carbon	mg/L			7.6			14.2
Dissolved Oxygen - field	mg/L		21	8.66	5.43	3.53	10.5
Hardness	mg/L			288			744
Iron	µg/L	300		160			21,100
Lead	µg/L			<10			40
Magnesium	mg/L			13.4			18.2
Manganese	µg/L			93			611
Mercury	µg/L			<0.1			<0.1
Nickel	µg/L			<5			25
Nitrate	mg/L			0.08			3.36
Nitrite	mg/L			<0.05			<0.05
Oil & Grease - Total	mg/L	15	<10	<10	<10	<10	10
pH	pH units	6.5–8.5	7.76	7.26	7.35	7.28	7.59
pH - field	pH units	6.5–8.5	6.59	7.27	6.95	7.17	7.42
Phenols	µg/L			<1			<1
Phosphorous	mg/L			<0.02			0.93
Potassium	mg/L			7.6			10.6
Selenium	µg/L			<20			<20
Silver	µg/L			<10			<10
Sodium	mg/L			111			56.8
Sulphate	mg/L			63.8			56.2
Suspended Solids	mg/L		23	<2	2	2	790
Temperature - field	°C		1	6.5	18	22.7	6.3
Total Kjeldahl Nitrogen	mg/L			0.9			1.5
Turbidity	NTU	25	**36.1**	2.3	3.7	3.7	2,560
Unionized Ammonia	mg/L		0.003	0.0005			0.0047
Vanadium	µg/L			<2			38
Zinc	µg/L			<10			210

NOTES: 1) PEO - Pond Effluent Objectives as described in OWRA ECA Condition 7; only applies to samples collected at the pond outflow.
2) mg/L - milligrams per litre, µg/L - micrograms per litre, µS/cm - microSiemens per centimetre, ºC - degrees Celsius, TCU - true colour unit
3) Bold and shaded values exceed the PEO.

TABLE 6.2
2024 NFA Stormwater Management Pond Inflow/Outflow Analytical Results and PEO Exceedances
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	PEO[1]	NFA SWMP OUT				NFA SWMP IN
			Jan-24	Apr-24	Jun-24	Jul-24	Apr-24
Organic							
Benzene	µg/L			<0.5			<0.5
Bromodichloromethane	µg/L			<0.5			<0.5
Bromoform	µg/L			<0.5			<0.5
Bromomethane	µg/L			<0.5			<0.5
Carbon tetrachloride	µg/L			<0.2			<0.2
Chlorobenzene	µg/L			<0.5			<0.5
Chloroethane	µg/L			<5			<5
Chloroform	µg/L			<0.5			<0.5
Chloromethane	µg/L			<5			<5
Dibromochloromethane	µg/L			<0.5			<0.5
Dibromoethane,1,2	µg/L			<0.2			<0.2
Dichlorobenzene,1,2	µg/L			<0.5			<0.5
Dichlorobenzene,1,3	µg/L			<0.5			<0.5
Dichlorobenzene,1,4	µg/L			<0.5			<0.5
Dichloroethane,1,1	µg/L			<0.5			<0.5
Dichloroethane,1,2	µg/L			<0.5			<0.5
Dichloroethene, trans-1,2	µg/L			<0.5			<0.5
Dichloroethene,1,1	µg/L			<0.5			<0.5
Dichloromethane	µg/L			<0.5			<0.5
Dichloropropane,1,2	µg/L			<0.5			<0.5
Dichloropropene,cis-1,3	µg/L			<0.5			<0.5
Ethylbenzene	µg/L			<0.5			<0.5
mp-Xylenes	µg/L			<0.5			<0.5
o-Xylene	µg/L			<0.5			<0.5
Styrene	µg/L			<0.5			<0.5
Tetrachloroethane,1,1,2,2	µg/L			<0.5			<0.5
Tetrachloroethene	µg/L			<0.5			<0.5
Toluene	µg/L			<0.5			<0.5
Trichlorethylene	µg/L			<0.5			<0.5
Trichloroethane,1,1,2	µg/L			<0.5			<0.5
Trichlorofluoromethane	µg/L			<5			<5
Vinyl chloride	µg/L			<0.2			<0.2
Xylenes, Total	µg/L			<0.5			<0.5

NOTES: 1) PEO - Pond Effluent Objectives as described in OWRA ECA Condition 7; only applies to samples collected at the pond outflow.

2) mg/L - milligrams per litre, µg/L - micrograms per litre, µS/cm - microSiemens per centimetre, ºC - degrees Celsius, TCU - true colour unit

3) Bold and shaded values exceed the PEO.

TABLE 7.1
Perimeter Landfill Gas Probe Monitoring
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

	GP1-96				GP2-19				GP3-19			
	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24
Combustible Gas (v/v)	0.1	0.3	0.3	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.1
Carbon Dioxide (v/v)	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Oxygen (v/v)	17.4	16.1	21.0	18.1	20.1	20.2	21.0	20.8	20.5	21.0	20.2	20.0
Water Elevation (mbgs)	1.3	1.7	1.3	1.4	3.5	3.7	3.7	3.7	3.9	4.0	4.2	4.0

	GP4-96				GP5-96				GP6-96			
	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24
Combustible Gas (v/v)	0.1	0.3	0.0	0.0	0.1	0.3	0.3	0.3	0.1	0.3	0.0	0.0
Carbon Dioxide (v/v)	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2
Oxygen (v/v)	20.7	21.0	20.7	20.1	20.9	21.0	21.0	20.6	20.6	21.0	20.7	20.8
Water Elevation (mbgs)	1.9	1.9	2.4	2.1	4.1	4.4	4.6	4.4	--	1.6	2.1	1.9

	GP7-13				GP8-13				GP9-13			
	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24	Feb-24	May-24	Jul-24	Oct-24
Combustible Gas (v/v)	0.0	0.2	0.3	0.0	0.0	0.3	0.3	0.1	0.1	0.3	0.3	0.2
Carbon Dioxide (v/v)	0.2	0.2	0.2	0.1	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0
Oxygen (v/v)	19.5	20.7	20.6	19.7	20.1	21.0	20.7	20.1	20.8	21.0	20.9	20.4
Water Elevation (mbgs)	1.9	2.1	2.0	1.8	2.0	2.4	1.9	1.9	1.9	2.7	1.6	1.7

	GP10-16			
	Feb-24	May-24	Jul-24	Oct-24
Combustible Gas (v/v)	0.0	0.3	0.3	0.1
Carbon Dioxide (v/v)	0.1	0.0	0.2	0.1
Oxygen (v/v)	20.3	21.0	21.4	20.4
Water Elevation (mbgs)	3.3	3.2	3.7	3.4

NOTES: 1) mbgs = metres below ground surface
2) v/v = percent by volume

TABLE 8.1
2024 Compost Leachate Quantity Summary
2024 Annual Monitoring Report
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

ECA A341508 Conditions	Annual Compost Facility Quantities Summary					
Annual amount of the Organic Waste received and processed at the Composting Facility, including the waste type, quantity and sources.	**Waste Type**	**Organics**	**Green Waste**	**Woodchips**	**C&D Transfer**	**Units[1]**
	Quantity	6,527	7,270	744	1,302	tonnes
	Source	Sources included residential drop-offs at the landfill , contractors direct delivery to POF and Public Works curbside pick-up	Sources included curbside collection, Village of Millbrook, schools, County Pilot Project and County transfer bins.			NA
Annual amount and quality of Compost transferred from the Site and its final destination.	Transferred amounts to landscapers and/or commercial customers		75			tonnes
	Transferred amounts to agricultural fields		4,363			tonnes
	Transferred amounts to Pickering Miller Compost[3]		231.5			tonnes
	Quality of compost transferred off-Site		Category AA compost[4]			NA
	Total Quantity Transferred off -Site		4,669.5			tonnes
Summary describing any Rejected Waste including quantity, waste type, reasons for rejection and origin of the Rejected Waste.	Small quantities of material are rejected or removed from the incoming SSO waste on a weekly basis. It is estimated that less than 0.5 t is removed weekly (less than 25 t/yr). The material removed tends to be garbage bags that end up on the wrong side of the truck divider. Once the material enters the truck it is difficult to recover the bags and place them in the correct side. The theory is that due to the light weight of the garbage bags sometimes they get tossed further than expected. No bulk loads were rejected in 2024.					
Annual amount of the Residual Waste transferred from the Site for final disposal and its destination. [2]	774					tonnes
Number of Composting and curing windrows and the status of processing at the end of the operating year.	Number of curing windrows at year end		4			
	Number of active bunkers at year end		5			
Amount of unprocessed Organic Waste temporarily stored at the Composting Facility at the end of the operating year.	2,667					tonnes
Amount of Compost temporarily stored at the Composting Facility at the end of the operating year.	366					tonnes

Notes

1 - NA indicates not applicable and t indicates tonnes
2 - Material consists of waste generated during screening activities of the finished compost, referred to as overs.
3 - Amount shown was transferred off-site for processing.
4 - Marginal exceedances for foreign material detected (plastic bag fragments), however are considered negligable since the screening process was capable of removing solid sharps to below the detection limit of 2.8 mm.

TABLE 8.2
2024 Compost Quality Summary - Harper Road
2024 Annual Monitoring Report
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Sample ID	Date	LIMS ID	Parameters	Arsenic	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Zinc
			Units[1]	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Criteria[2]	13	3	210	34	100	150	0.8	5	62	2	500
			Criteria[3]	13	3	210	34	400	150	0.8	5	62	2	700
HRCFC20240424	24-Apr-24	180392		4	<0.5	13	2.6	30	19	<0.1	<1	6	<2	80
HRCFC20240508	08-May-24	180797		3	<0.5	16.2	2.6	30	23	<0.1	<1	6	<2	90

NOTES: 1) Dry weight
2) Category AA Compost as outlined in ECA A341508
3) Category A Compost as outlined in ECA A341508
4) Shaded values exceed the criteria Feed for Category AA Compost as outlined in ECA A341508
5) Bolded values exceed the criteria Feed for Category AA Compost as outlined in ECA A341508

TABLE 8.3
2024 Compost Quality Summary - Finished Compost
2024 Annual Monitoring Report
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Sample ID	Date	LIMS ID	Parameters	Arsenic	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Zinc
			Units[1]	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Criteria[2]	13	3	210	34	100	150	0.8	5	62	2	500
			Criteria[3]	13	3	210	34	400	150	0.8	5	62	2	700
Finished Compost 20240527	27-May-24	-		1.5	<1.0	6.2	1.16	10.56	4.95	<0.10	<1.0	2.43	<1	56.54
Finished Compost 20240725	25-Jul-24	-		1.7	<1.0	5.65	<1.0	16.12	6.23	<0.10	<1.0	2.28	<1	77.61
Finished Compost 20240912	12-Sep-24	-		2.77	<1.0	12.06	1.36	12.9	7.51	<0.10	<1.0	2.92	<1	44.27
Finished Compost 20241010	10-Oct-24	-		2.58	<1.0	10.81	1.57	29.24	14.85	<0.10	1.2	3.56	<1	112.92

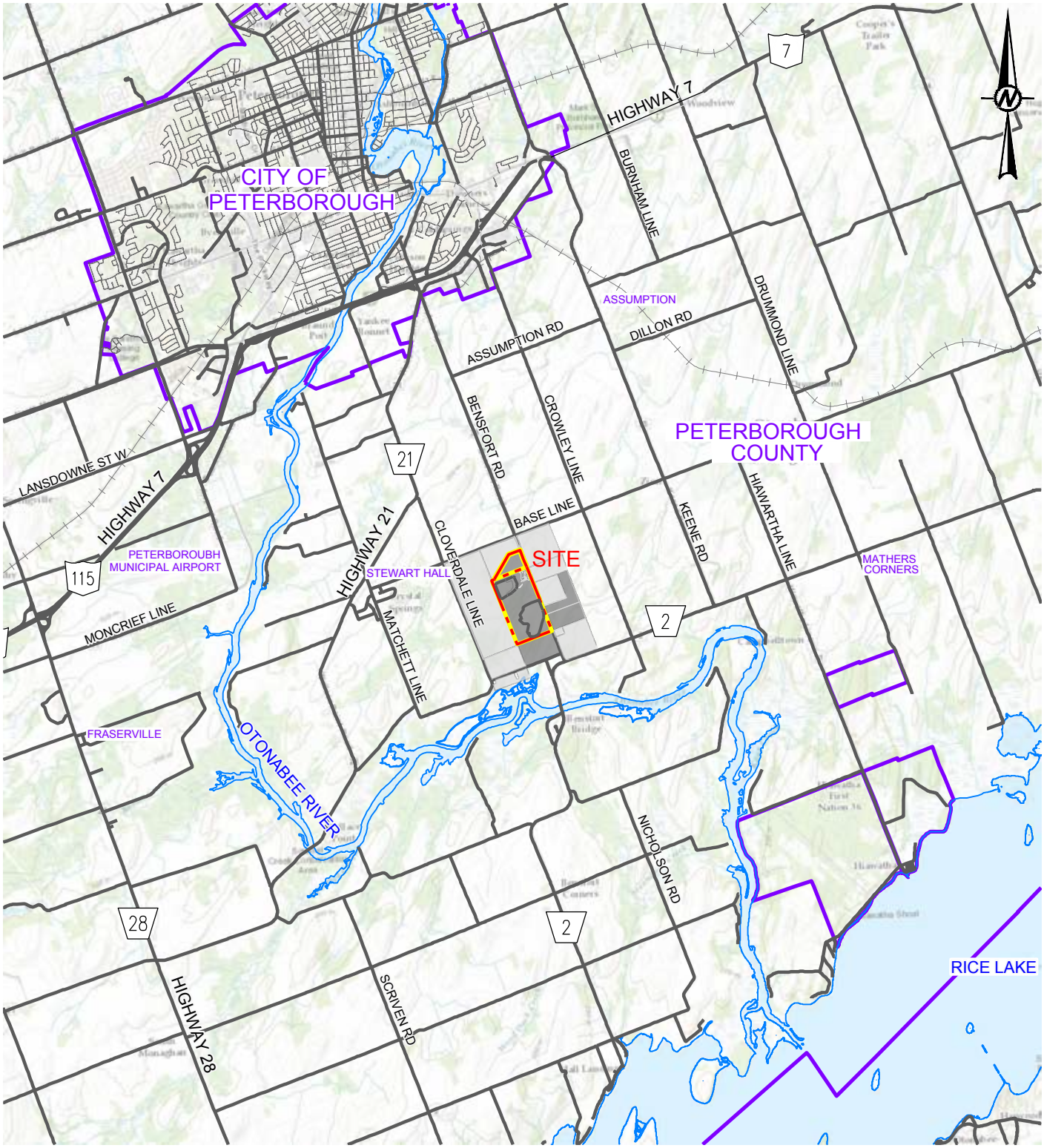
NOTES: 1) Dry weight
2) Category AA Compost as outlined in ECA A341508
3) Category A Compost as outlined in ECA A341508
4) Shaded values exceed the criteria Feed for Category AA Compost as outlined in ECA A341508
5) Bolded values exceed the criteria Feed for Category AA Compost as outlined in ECA A341508

TABLE 8.4
2024 Compost Quality Summary - Feedstock
2024 Annual Monitoring Report
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Sample ID	Date	LIMS ID	Parameters	Arsenic	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Zinc
			Units (dry weight)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Criteria	75	20	1,060	150	760	500	5	20	180	14	1,850
FeedstockHRC20240116	16-Jan-24	177681		<2	<0.5	19.8	2	20	16	<0.15	<1	5	<2	100
FeedstockBENS20240222	22-Feb-24	178650		3	<0.5	11.6	2.2	<20	11	<0.15	<1	5	<2	50
FeedstockBENS20240531	31-May-24	181471		9	<0.5	13.1	1.8	30	12	<0.1	2	6	<2	70
FeedstockBENS20240603	03-Jun-24	181544		3	<0.5	12.7	2.5	<20	20	<0.1	<1	6	<2	80
FeedstockBENS20240619	19-Jun-24	182083		2	<0.5	14.5	1.4	<20	17	<0.1	1	10	<2	80
FEEDSOCKBENSSO20240703	03-Jul-24	182431		<2	<0.5	17	1.2	<20	16	<0.1	2	8	<2	90
FeedstockBENS20240806	06-Aug-24	183355		2	<0.5	17.9	1.6	20	12	<0.1	<1	9	<2	90
FeedstockBENSSO20240918	18-Sep-24	184590		3	<0.5	12	2	<20	22	<0.1	<1	5	<2	80
FeedstockBEN20241009	09-Oct-24	185170		<2	<0.5	6.3	1.2	<20	19	-	<1	3	<2	70

NOTES:
1) Dry weight
2) Feed for Category AA Compost as outlined in ECA A341508
3) Shaded values exceed the criteria Feed for Category AA Compost as outlined in ECA A341508
4) "-" Indicates a parameter that was not analyzed

FIGURES



REFERENCES & DISCLAIMERS

ESRI GEOGRAPHY NETWORK, OBM, ON-LINE COUNTY MAPPING RESOURCES.

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COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

wsp

2025-03-20

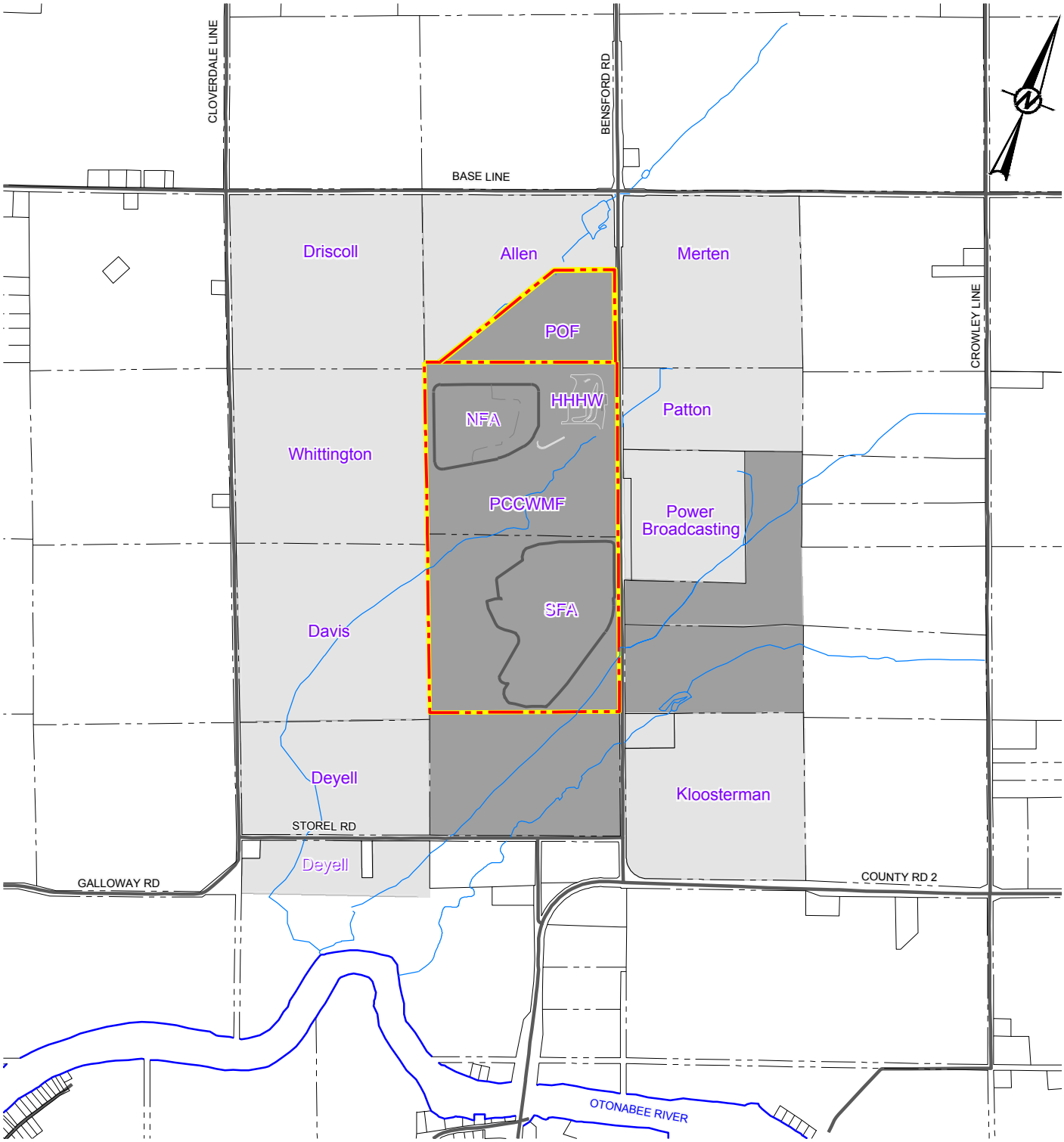
JPR

TLM

SITE LOCATION

CONTROL
CA0008825 0002 ---- FIGURE 1.1

25 mm
0



LEGEND

- PCCWMF SITE OPERATIONS BOUNDARY
- LANDFILL SITE & ATTENUATION LANDS
- CITY / COUNTY OWNED LANDS (ACQUIRED PARCEL ID)

WASTE FACILITY

- SFA - SOUTH FILL AREA
- NFA - NORTH FILL AREA
- POF - PETERBOROUGH ORGANICS FACILITY
- HHHW - HOUSE-HOLD HAZARDOUS WASTE

REFERENCES & DISCLAIMERS

ESRI GEOGRAPHY NETWORK, OBM,
CITY OF PETERBOROUGH, LAND INFORMATION SERVICES; COUNTY OF PETERBOROUGH 2010

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COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

wsp

2025-03-20

JPR

TLM

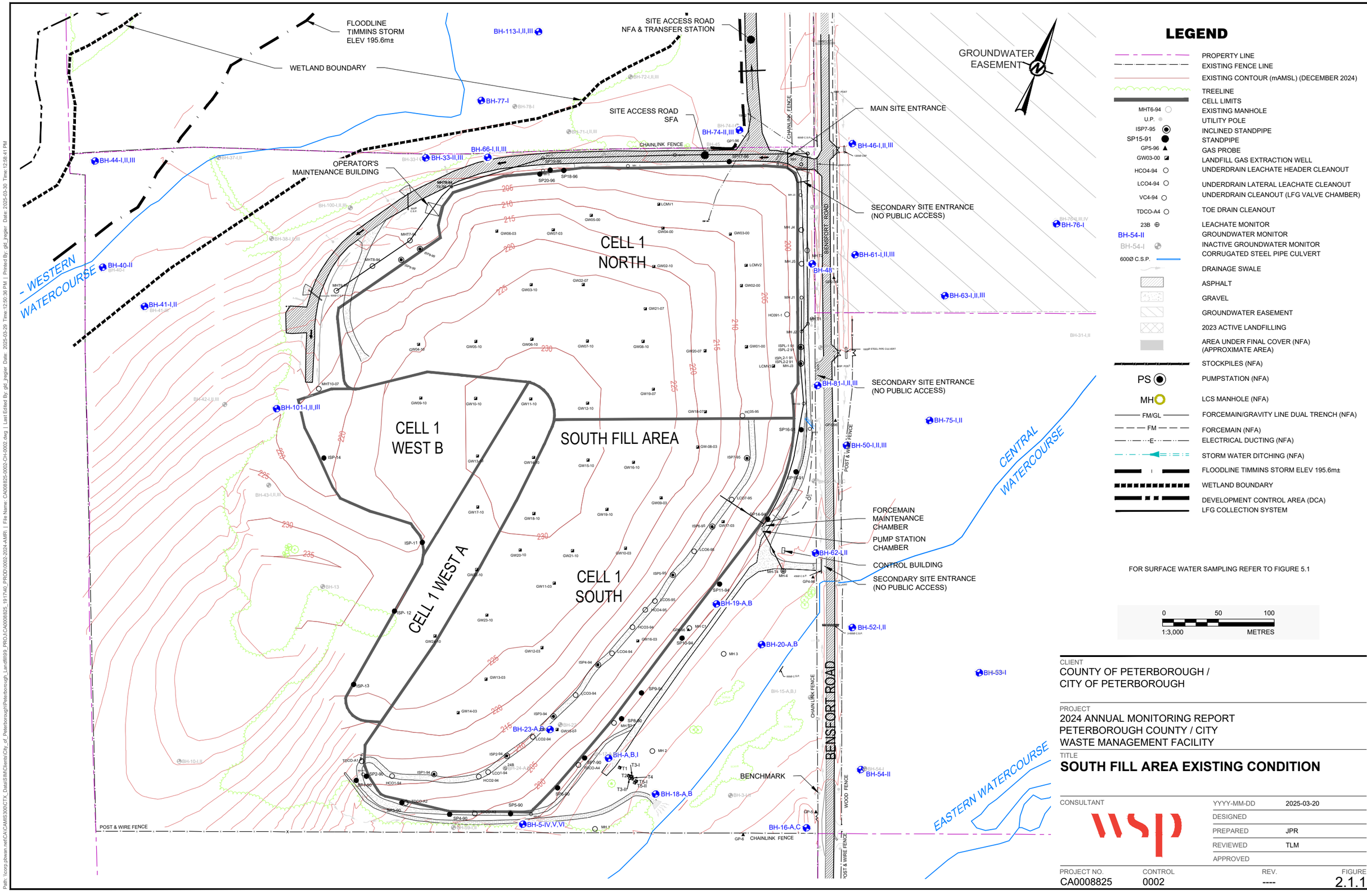
PROPERTY OWNERSHIP

CONTROL 0002

CA0008825

FIGURE 1.2

25 mm



LEGEND

- PROPERTY LINE
- EXISTING FENCE LINE
- EXISTING CONTOUR (mAMSL) (DECEMBER 2024)
- TREELINE
- CELL LIMITS
- MHT6-94 — EXISTING MANHOLE
- U.P. — UTILITY POLE
- ISP7-95 — INCLINED STANDPIPE
- SP15-91 — STANDPIPE
- GP5-96 — GAS PROBE
- GW03-00 — LANDFILL GAS EXTRACTION WELL
- HCO4-94 — UNDERDRAIN LEACHATE HEADER CLEANOUT
- LCO4-94 — UNDERDRAIN LATERAL LEACHATE CLEANOUT
- VC4-94 — UNDERDRAIN CLEANOUT (LFG VALVE CHAMBER)
- TDCO-A4 — TOE DRAIN CLEANOUT
- 23B — LEACHATE MONITOR
- BH-54-II — GROUNDWATER MONITOR
- BH-54-I — INACTIVE GROUNDWATER MONITOR
- 600Ø C.S.P. — CORRUGATED STEEL PIPE CULVERT
- DRAINAGE SWALE
- ASPHALT
- GRAVEL
- GROUNDWATER EASEMENT
- 2023 ACTIVE LANDFILLING
- AREA UNDER FINAL COVER (NFA) (APPROXIMATE AREA)
- STOCKPILES (NFA)
- PS — PUMPSTATION (NFA)
- MH — LCS MANHOLE (NFA)
- FM/GL — FORCEMAIN/GRAVITY LINE DUAL TRENCH (NFA)
- FM — FORCEMAIN (NFA)
- E — ELECTRICAL DUCTING (NFA)
- STORM WATER DITCHING (NFA)
- FLOODLINE TIMMINS STORM ELEV 195.6m±
- WETLAND BOUNDARY
- DEVELOPMENT CONTROL AREA (DCA)
- LFG COLLECTION SYSTEM

FOR SURFACE WATER SAMPLING REFER TO FIGURE 5.1

0 50 100
1:3,000 METRES

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SOUTH FILL AREA EXISTING CONDITION

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	2.1.1

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

0 25 mm

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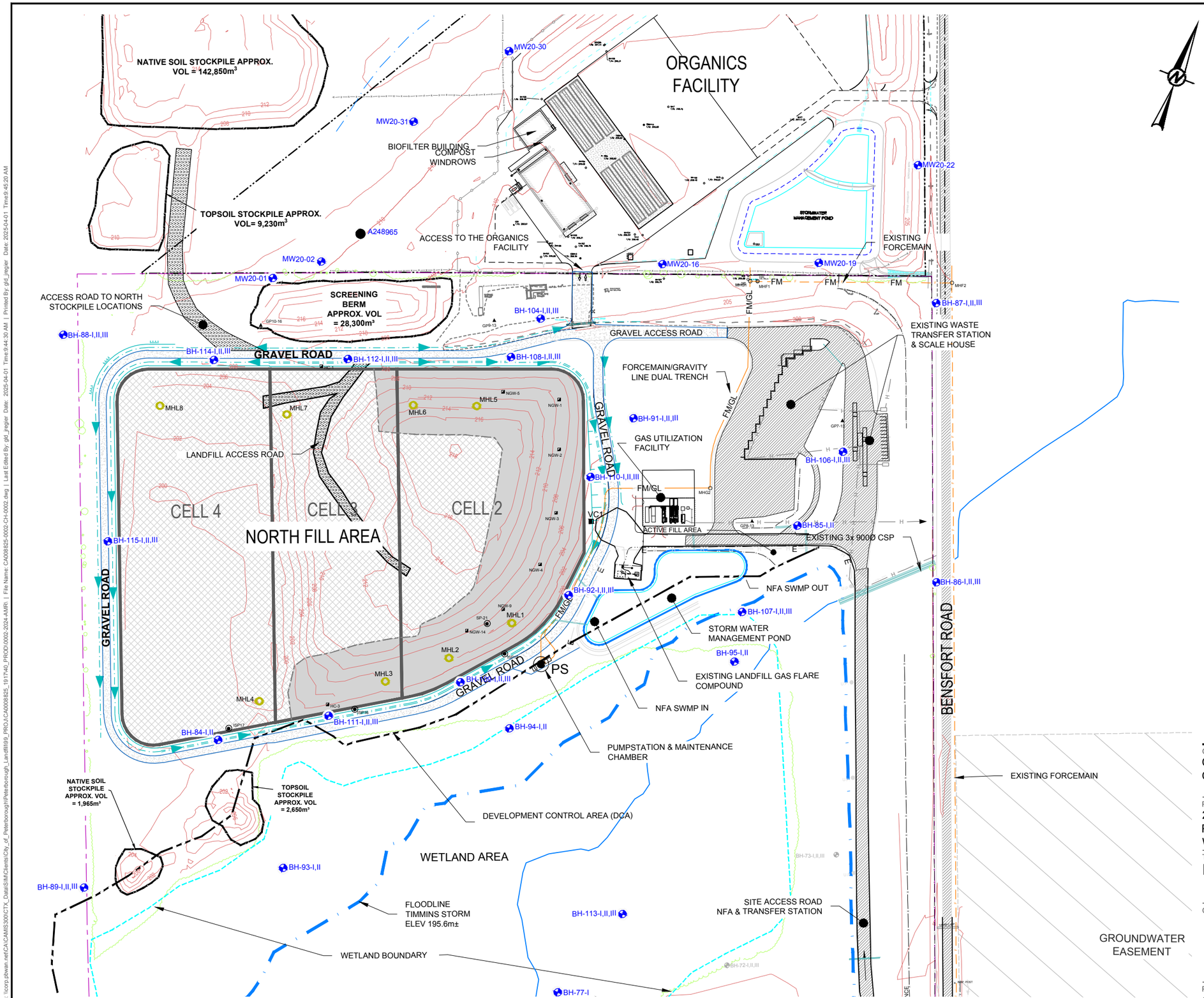

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- FLOODLINE TIMMINS STORM ELEV 195.6m±
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- DEVELOPMENT CONTROL AREA (DCA)
- LFG COLLECTION SYSTEM

FOR SURFACE WATER SAMPLING REFER TO FIGURE 5.1

0 50 100
1:3,000 METRES

CLIENT
COUNTY OF PETERBOROUGH / CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
NORTH FILL AREA EXISTING CONDITION

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	2.1.2

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

0 25 mm

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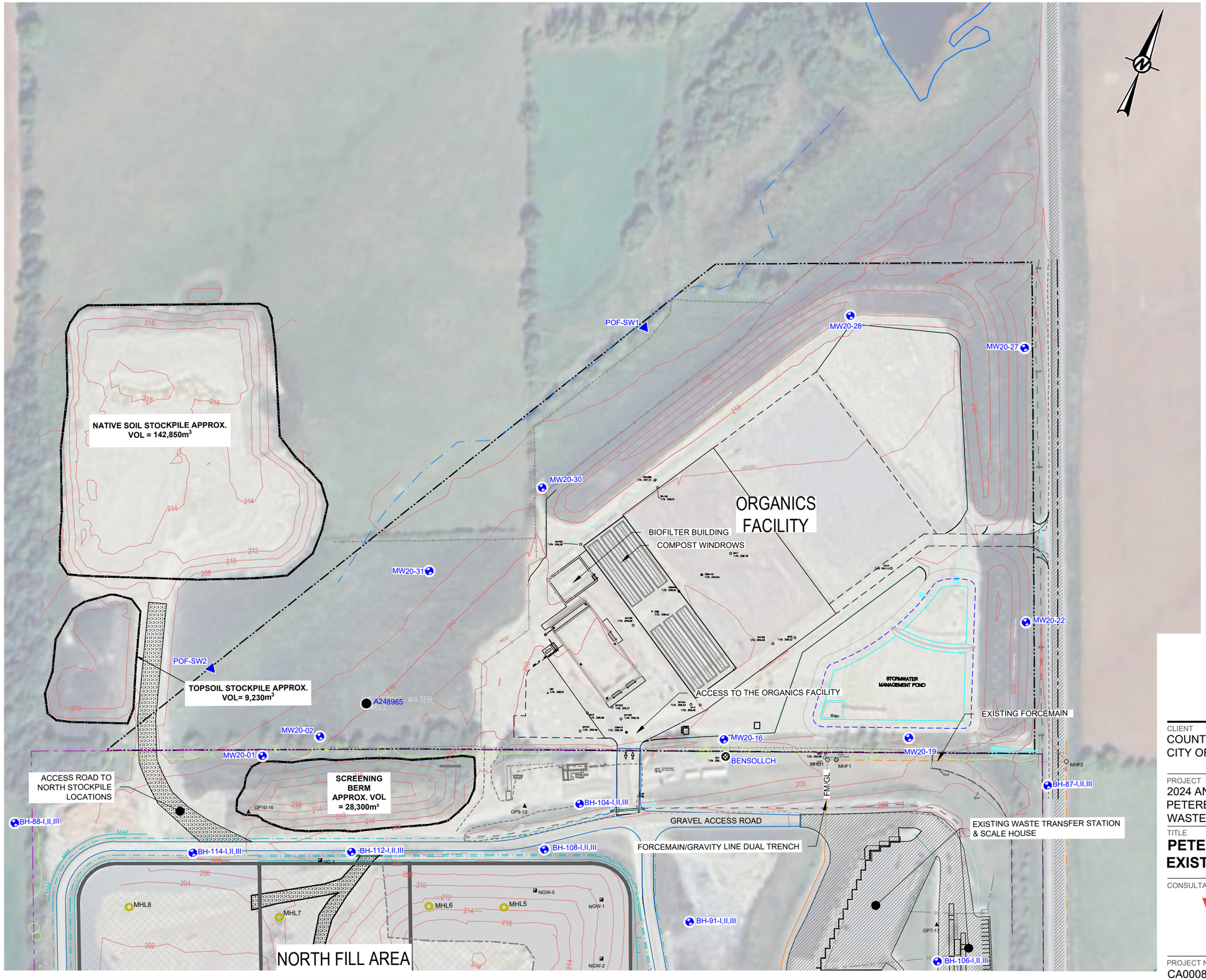

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- GRAVEL
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- 2023 ACTIVE LANDFILLING
- AREA UNDER FINAL COVER (NFA) (APPROXIMATE AREA)
- STOCKPILES (NFA)
- PS — PUMPSTATION (NFA)
- MH — LCS MANHOLE (NFA)
- FM/GL — FORCEMAIN/GRAVITY LINE DUAL TRENCH (NFA)
- FM — FORCEMAIN (NFA)
- E — ELECTRICAL DUCTING (NFA)
- STORM WATER DITCHING (NFA)
- FLOODLINE TIMMINS STORM ELEV 195.6m±
- WETLAND BOUNDARY
- DEVELOPMENT CONTROL AREA (DCA)
- LFG COLLECTION SYSTEM

FOR SURFACE WATER SAMPLING REFER TO FIGURE 5.1

0 50 100
1:2,500 METRES

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
PETERBOROUGH ORGANICS FACILITY EXISTING CONDITION

CONSULTANT

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	2.1.3

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

0 25mm

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NORTH FILL AREA

SOUTH FILL AREA

CELL 4

CELL 3

CELL 2

CELL 1 - NORTH

CELL 1 - WEST B

CELL 1 - WEST A

CELL 1 - SOUTH

EXISTING FORCEMAIN

EXISTING FORCEMAIN/GRAVITY LINE DUAL TRENCH

MHG1

MHF1

MHF2

EXISTING WASTE TRANSFER STATION & SCALE HOUSE

MHG2

GAS UTILIZATION FACILITY

STORM WATER MANAGEMENT POND

EXISTING LANDFILL GAS FLARE COMPOUND

PUMPSTATION & MAINTENANCE CHAMBER

FLOODLINE TIMMINS STORM ELEV. 195.6m±

DEVELOPMENT CONTROL AREA (DCA)

EXISTING 3x 900ø CSP

BENSFORT ROAD

WETLAND AREA

WETLAND BOUNDARY

SITE ACCESS ROAD NFA & TRANSFER STATION

TO LANDFILL GAS ODOUR CONTROL SYSTEM FLARE STATION

LFG COLLECTION TIE-IN MH 11

CHAINLINK FENCE

OPERATOR'S MAINTENANCE BUILDING

OPERATOR'S TRAILER

WESTERN WATERCOURSE

CENTRAL WATERCOURSE

MH3 PERIMETER LIFT STATION

MH4 PERIMETER LIFT STATION

18000ø STEEL PIPE CULVERT

POST & WIRE FENCE

WOOD FENCE

LEGEND

- PROPERTY LINE
- FENCE LINE
- 206 — EXISTING CONTOURS
- TREELINE
- LIMIT OF REFUSE
- CELL LIMITS
- SURFACE WATER COURSE
- U.P. — UTILITY POLE
- 600ø C.S.P. — CSP CULVERT
- DRAINAGE SWALE
- ASPHALT
- MHT6-94 — MANHOLE
- TDCO-A3 — TOE DRAIN CLEANOUT
- 232 — PROPOSED FINAL COVER CONTOUR
- AREA UNDER FINAL COVER (APPROXIMATE IN NFA)

0 100 200

1:4,000 METRES

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
APPROVED FINAL CONTOURS

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	2.2

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

25 mm

0

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CELL 4
CELL 3
CELL 2
NORTH FILL AREA
SOUTH FILL AREA
CELL 1 WEST B
CELL 1 WEST A
CELL F
CELL G
CELL 1 NORTH
CELL I
CELL H
CELL J
PHASE 2
CELL D
PHASE 1 (NORTH)
CELL C
CELL 1 SOUTH
PHASE 1
CELL B
PHASE 1 (SOUTH)
CELL A
MAIN SITE ENTRANCE
SECONDARY SITE ENTRANCE (NO PUBLIC ACCESS)
BENSFORT ROAD
GRAVEL DRIVE

0 100 200
1:4,000 METRES

LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- CELL A — HISTORICAL CELL DESIGNATIONS
- PHASE 1 — FORMER CELL DESIGNATIONS

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COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

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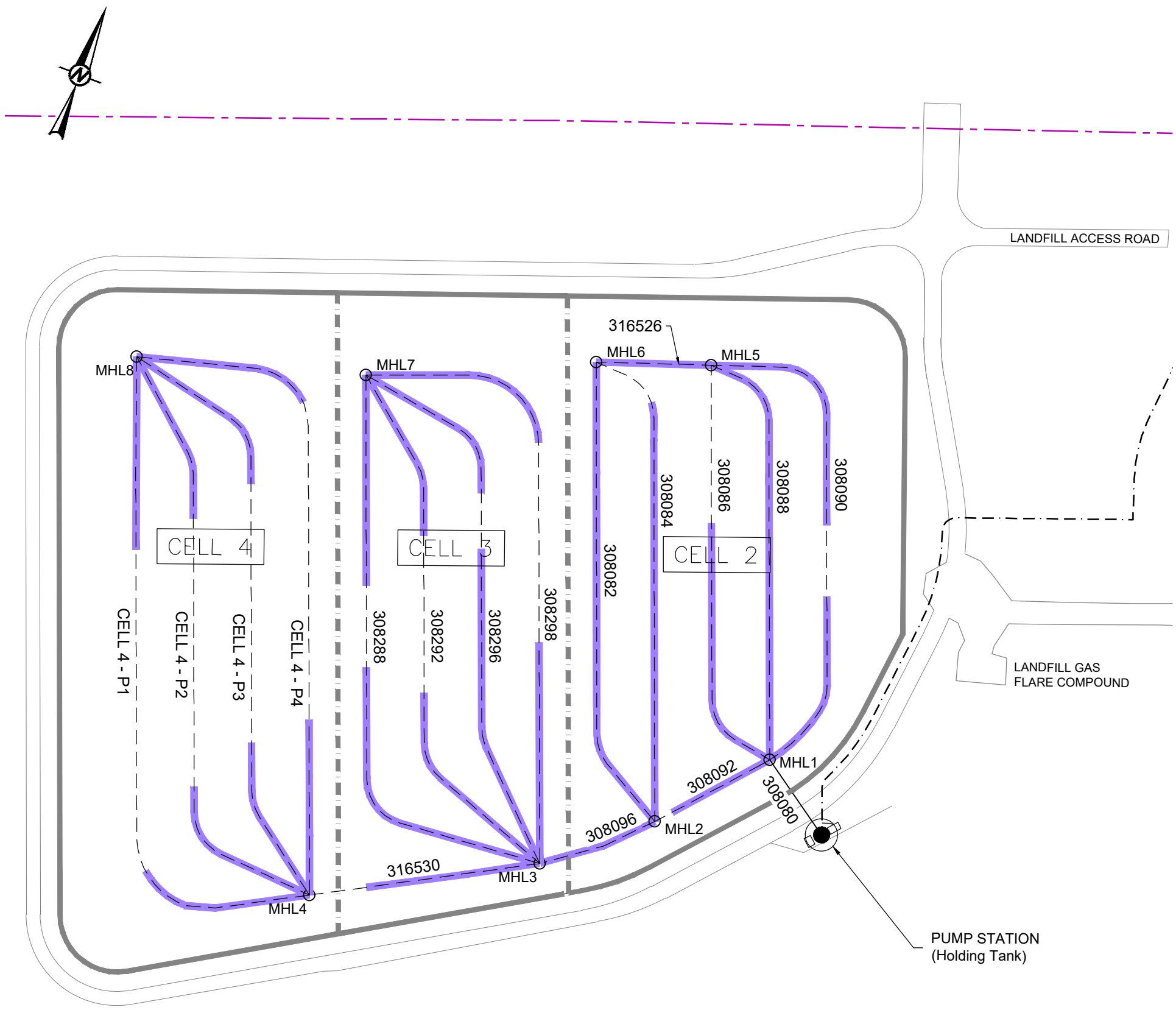
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
CURRENT AND HISTORICAL LANDFILL CELL DESIGNATIONS

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	2.3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0



LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- NON-PERF. PIPE
- PERFORATED PIPE
- MHL1 ○ LEACHATE COLLECTION SYSTEM MANHOLE
- LEACHATE FORCEMAIN
- FLUSHING EXTENT

0 50 100
1:2,000 METRES

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
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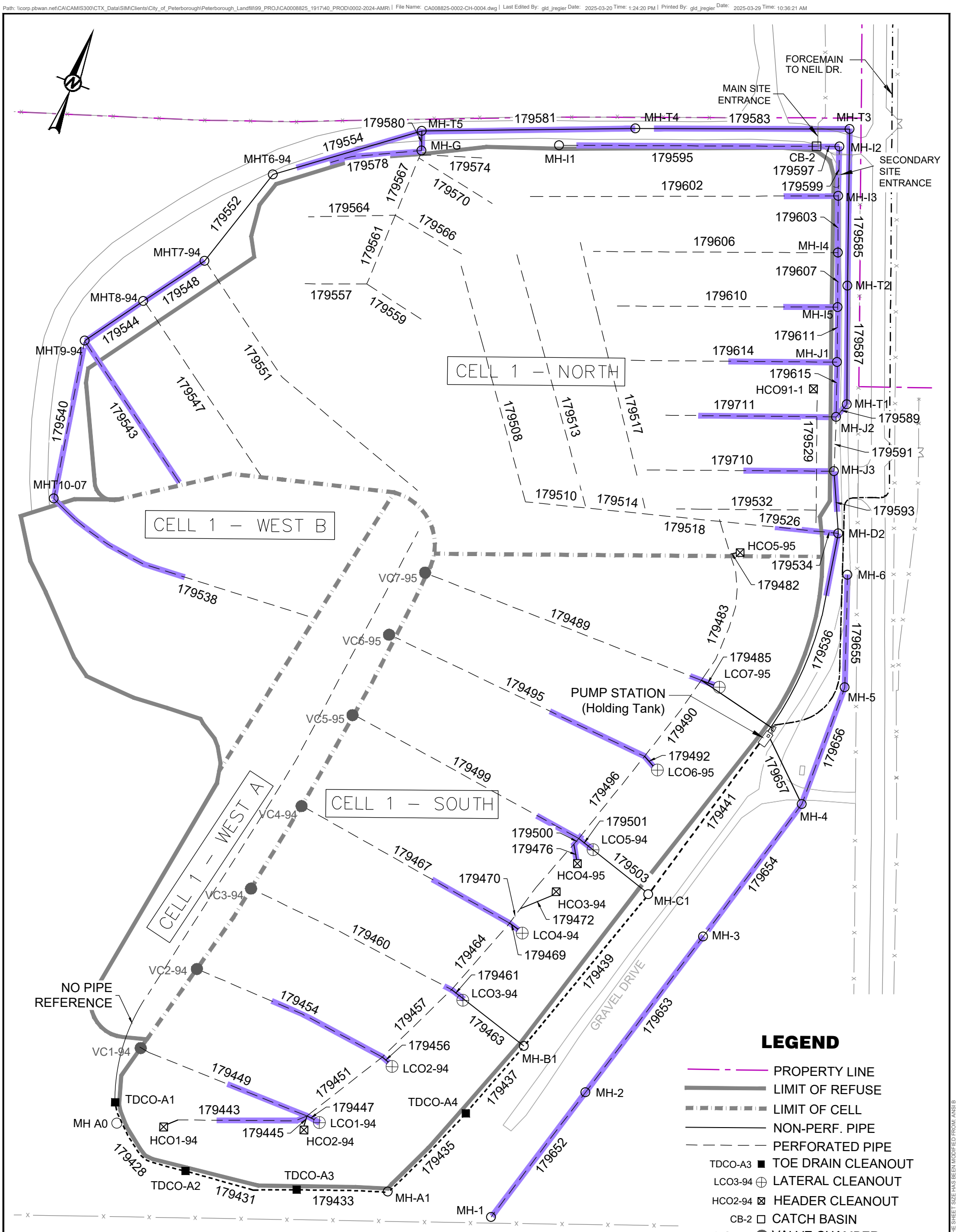
PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
LEACHATE COLLECTION SYSTEM FLUSHING NORTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	4.1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
0 25 mm



LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- NON-PERF. PIPE
- PERFORATED PIPE
- TDCO-A3 ■ TOE DRAIN CLEANOUT
- LCO3-94 ⊕ LATERAL CLEANOUT
- HCO2-94 ⊠ HEADER CLEANOUT
- CB-2 □ CATCH BASIN
- VC7-95 ● VALVE CHAMBER
- MH-D2 ○ LEACHATE COLLECTION SYSTEM TIE-IN
- TOE DRAIN PIPING
- LEACHATE FORCEMAIN
- FLUSHING EXTENT

CLIENT
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PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
LEACHATE COLLECTION SYSTEM FLUSHING SOUTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	4.2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0

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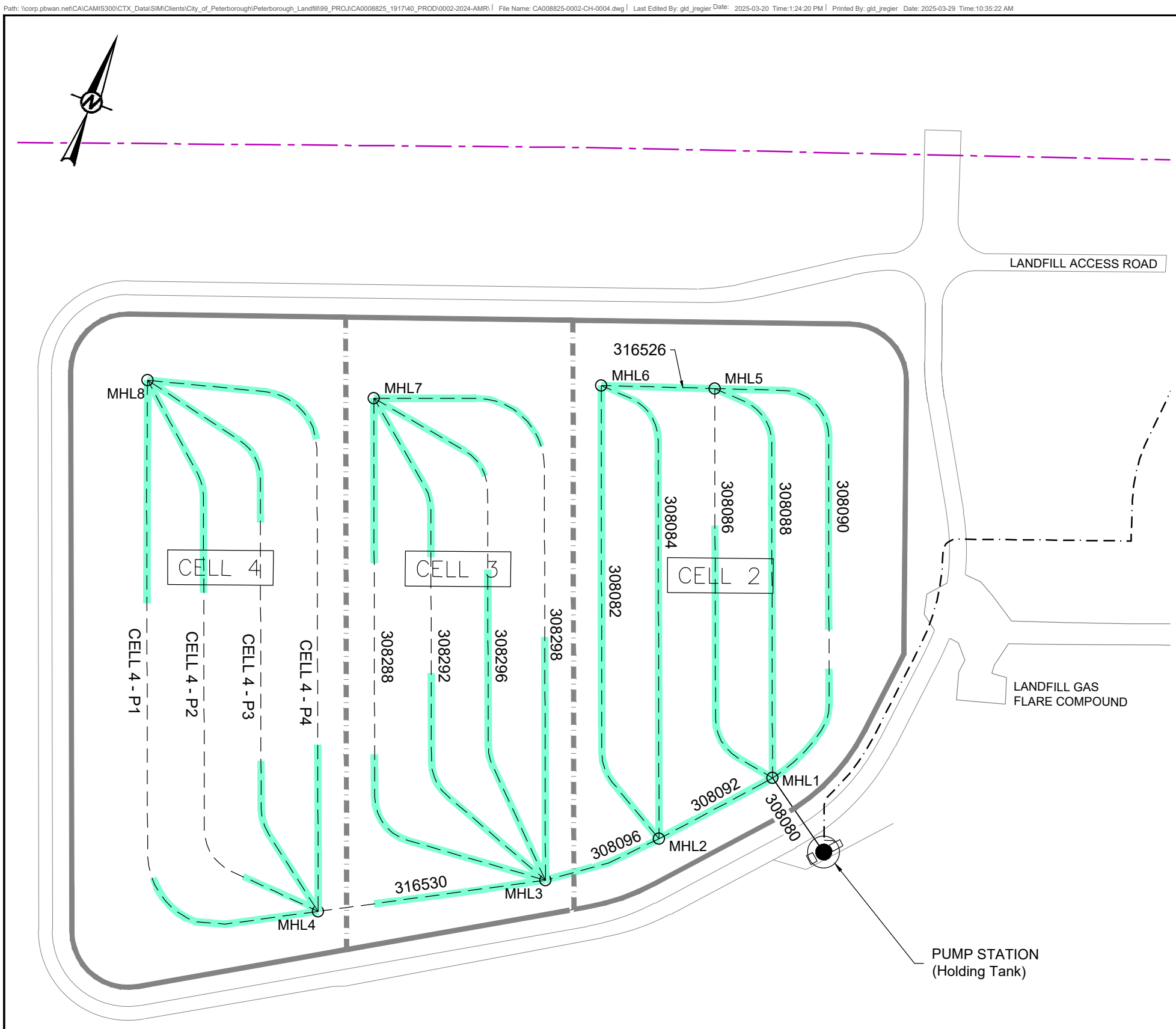

LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- NON-PERF. PIPE
- PERFORATED PIPE
- MHL1 ○ LEACHATE COLLECTION SYSTEM MANHOLE
- LEACHATE FORCEMAIN
- INSPECTION EXTENT

0 50 100
1:2,000 METRES

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COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
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PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
LEACHATE COLLECTION SYSTEM VIDEO INSPECTION
NORTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	4.3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
0 25 mm

FORCEMAIN TO NEIL DR.
MAIN SITE ENTRANCE
SECONDARY SITE ENTRANCE
179580
MH-T5
179581
MH-T4
179583
MH-T3
MH-I2
MH-G
MH-I1
179595
CB-2
179597
179599
MH-I3
179602
MHT6-94
179554
179578
179574
179567
179570
179564
179552
179603
179585
MH-I4
179606
MHT7-94
179566
179561
179607
MH-T2
MHT8-94
179548
179557
179559
179610
MH-I5
179544
179611
MHT9-94
179551
179614
MH-J1
179587
CELL 1 – NORTH
179615
HCO91-1
179711
MH-T1
179589
179540
179543
179547
179508
179513
179517
MH-J2
179591
179529
179710
MH-J3
MHT10-07
179510
179514
179532
179593
179518
179526
MH-D2
CELL 1 – WEST B
HCO5-95
179534
179482
MH-6
VC7-95
179538
179489
179483
179536
179655
VC6-95
179485
LCO7-95
179495
PUMP STATION (Holding Tank)
MH-5
VC5-95
179490
179656
179492
LCO6-95
179499
179496
179657
179441
CELL 1 – SOUTH
CELL 1 – WEST A
VC4-94
MH-4
179501
179500
LCO5-94
179476
179503
179467
179654
HCO4-95
179470
MH-C1
VC3-94
HCO3-94
179472
LCO4-94
MH-3
179460
179464
179469
VC2-94
179461
179439
LCO3-94
NO PIPE REFERENCE
179454
179457
179463
GRAVEL DRIVE
179653
179456
VC1-94
LCO2-94
MH-B1
179449
179451
179437
MH-2
TDCO-A1
179443
179447
TDCO-A4
MH A0
LCO1-94
179445
HCO1-94
HCO2-94
179428
179435
179652
TDCO-A2
179431
TDCO-A3
179433
MH-A1
MH-1

LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- NON-PERF. PIPE
- PERFORATED PIPE
- TDCO-A3 ■ TOE DRAIN CLEANOUT
- LCO3-94 ⊕ LATERAL CLEANOUT
- HCO2-94 ⊠ HEADER CLEANOUT
- CB-2 □ CATCH BASIN
- VC7-95 ● VALVE CHAMBER
- MH-D2 ○ LEACHATE COLLECTION SYSTEM TIE-IN
- TOE DRAIN PIPING
- LEACHATE FORCEMAIN
- INSPECTION EXTENT

NOTES

SFA WAS NOT SCHEDULED TO BE VIDEO INSPECTED IN 2024

0 50 100
1:2,000 METRES

CLIENT
COUNTY OF PETERBOROUGH / CITY OF PETERBOROUGH

CONSULTANT
wsp

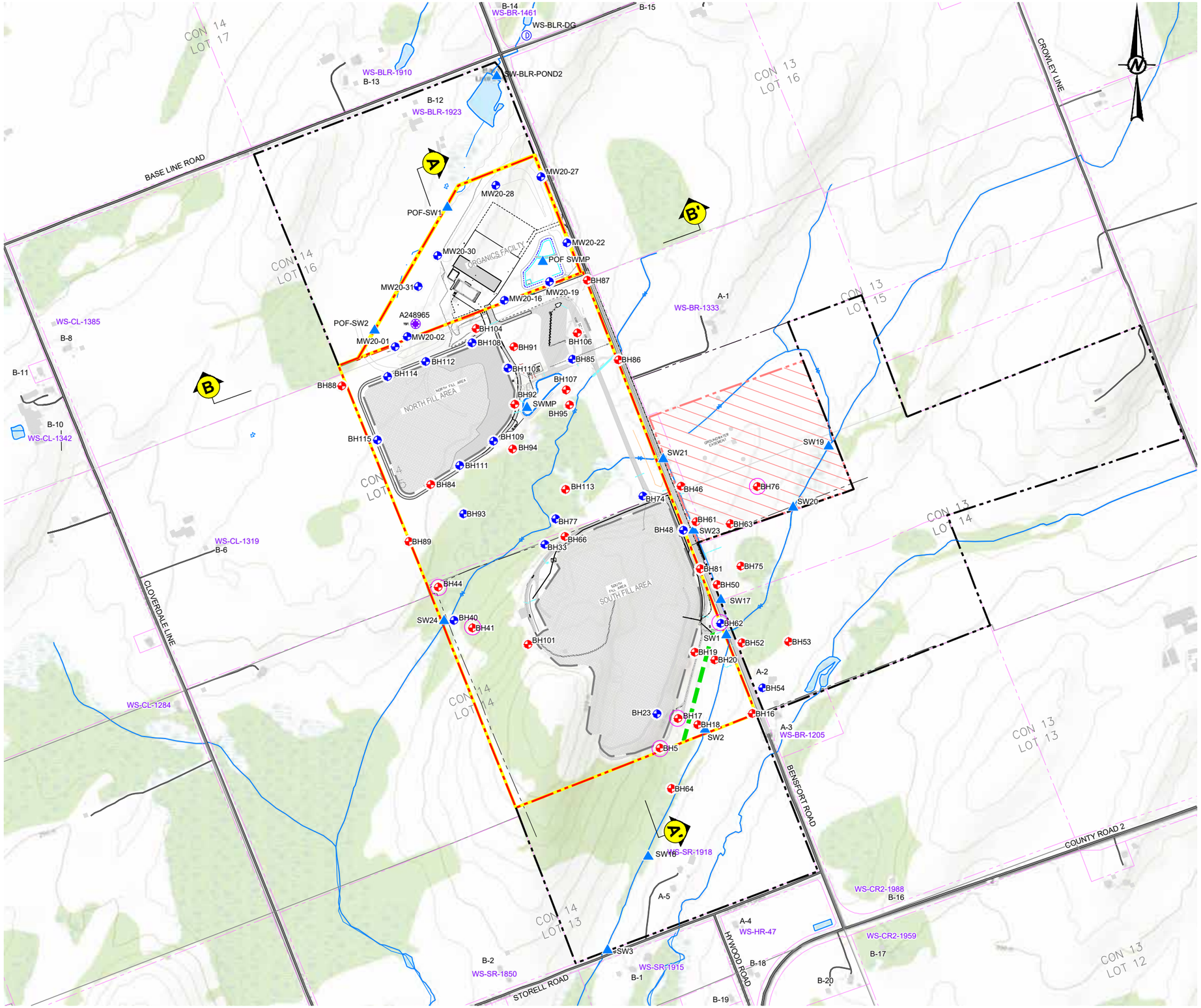
YYYY-MM-DD	2025-01-19
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

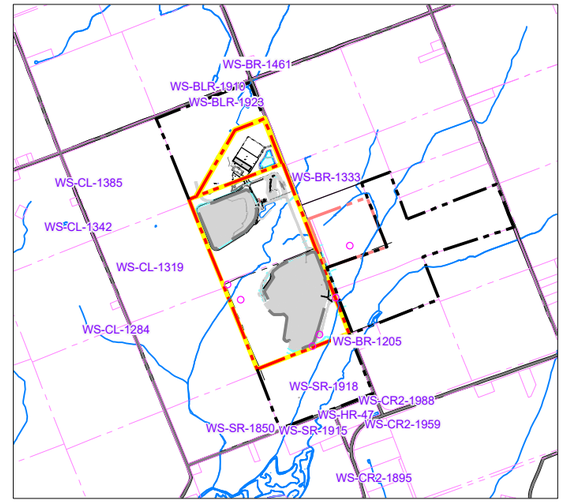
TITLE
LEACHATE COLLECTION SYSTEM VIDEO INSPECTION
SOUTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	4.4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0



OFFSITE MONITORED PRIVATE SUPPLY WELLS



PLAN LEGEND

- SITE LANDS
- SITE OWNED LANDS
- B-12 RESIDENT SURVEY (HISTORICAL)
- WS-BLR-12 MONITORED PRIVATE WATER SUPPLY
- (D) PRIVATE DUG OR BORED WATER SUPPLY WELL
- SITE OVERBURDEN MONITORING WELL
- SITE MONITORING WELL WITH NESTED BEDROCK MONITOR
- SURFACE WATER SAMPLING STATION
- A LINE OF SECTION

REFERENCES & DISCLAIMERS

MINISTRY OF ENVIRONMENT WATER WELL INFORMATION SYSTEM, KING'S PRINTER. LOCATION AND ELEVATIONS OF MAPPED WELLS ARE SUBJECT TO REVISION BASED ON DRILL RECORD OR FIELD VERIFICATION.

ALIGNMENT OF ORTHOGRAPHIC IMAGERY IS APPROXIMATED TO SELECT FEATURES ON DATUM. AWAY FROM POINTS OF ALIGNMENT THE ORTHOGRAPHIC IMAGE MAY BE DIMENSIONALLY SKEWED OR PROJECTED OFF THE MAP DATUM PLANE.

0 200 400 600 m

1:10000

PLOTTED 11X17" TABLOID PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
MONITORING LOCATION PLAN

CONSULTANT

wsp

YYYY-MM-DD	2025-03-20
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PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.1

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

0 25 mm

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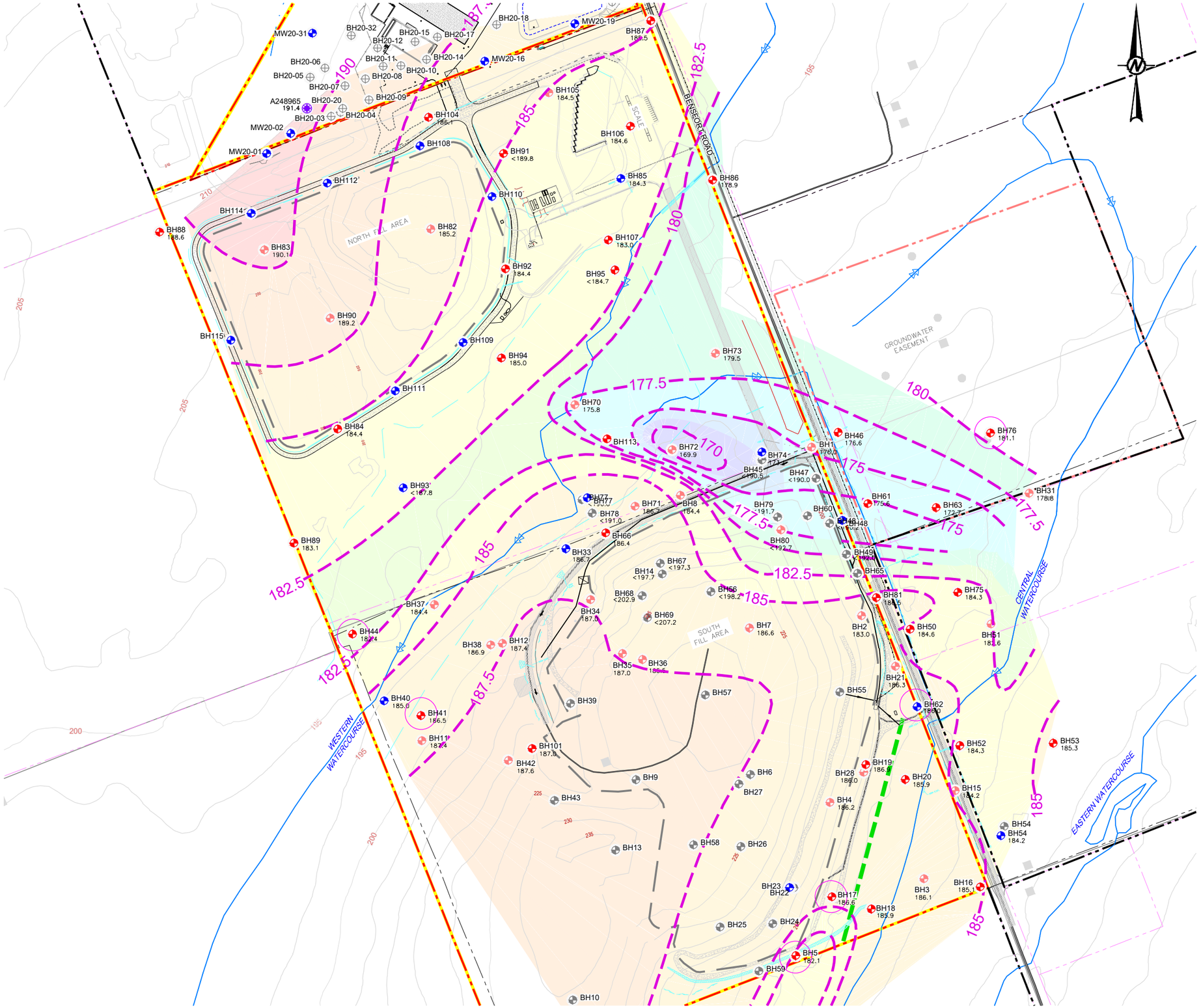

PLAN LEGEND

- PROPERTY LINE
- FACILITY (LANDFILL & ORGANIC)
- DRILLED OVERBURDEN WELL
- COMPOST FACILITY TESTHOLE (NO MONITOR)
- OVERBURDEN MONITORING WELL NEST
- LANDFILL SITE TESTHOLE / ABANDONED NEST
- MONITORING WELL WITH BEDROCK MONITOR
- BOREHOLE INTERSECTING BEDROCK (ABANDONED)
- 181.1 TOP OF BEDROCK ELEVATION (masl)
- BEDROCK CONTOUR (masl)

REFERENCES & DISCLAIMERS

COMPILATION OF REPORTED BEDROCK ELEVATIONS,
1) JAGGER HIMS LIMITED 2004 & 2008 INVESTIGATIONS
2) PRE 2000 GARTNER LEE / EARTH TECH INVESTIGATIONS AND REPORTING.

BEDROCK ELEVATIONS ARE KNOWN APPROXIMATE BOREHOLES INTERSECTING BEDROCK. AWAY FROM MEASURED LOCATIONS CONTOURING IS BASED ON INTERPOLATION, AND GEOMORPHIC FEATURES.

0 100 200 300 m

1:5000
PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17
masl - METRES ABOVE SEA LEVEL

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
BEDROCK SURFACE CONTOURS

CONSULTANT
wsp

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DESIGNED	TLM
PREPARED	JPR
REVIEWED	IH
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.2

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

25 mm

0

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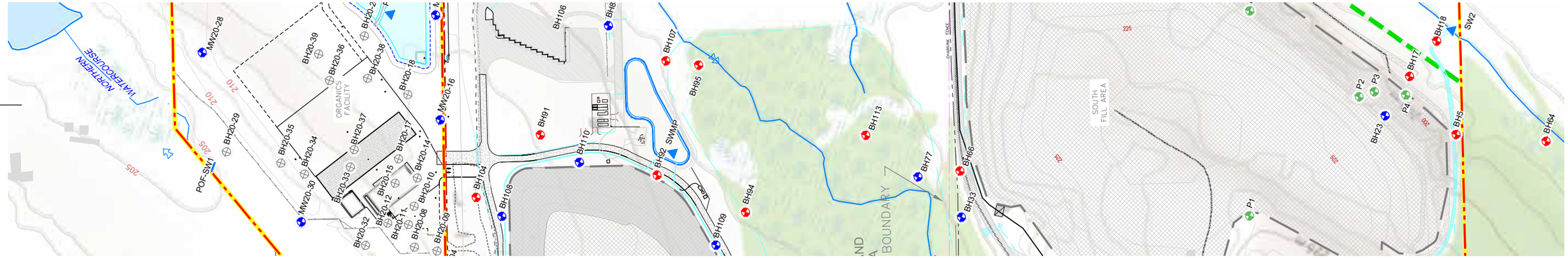

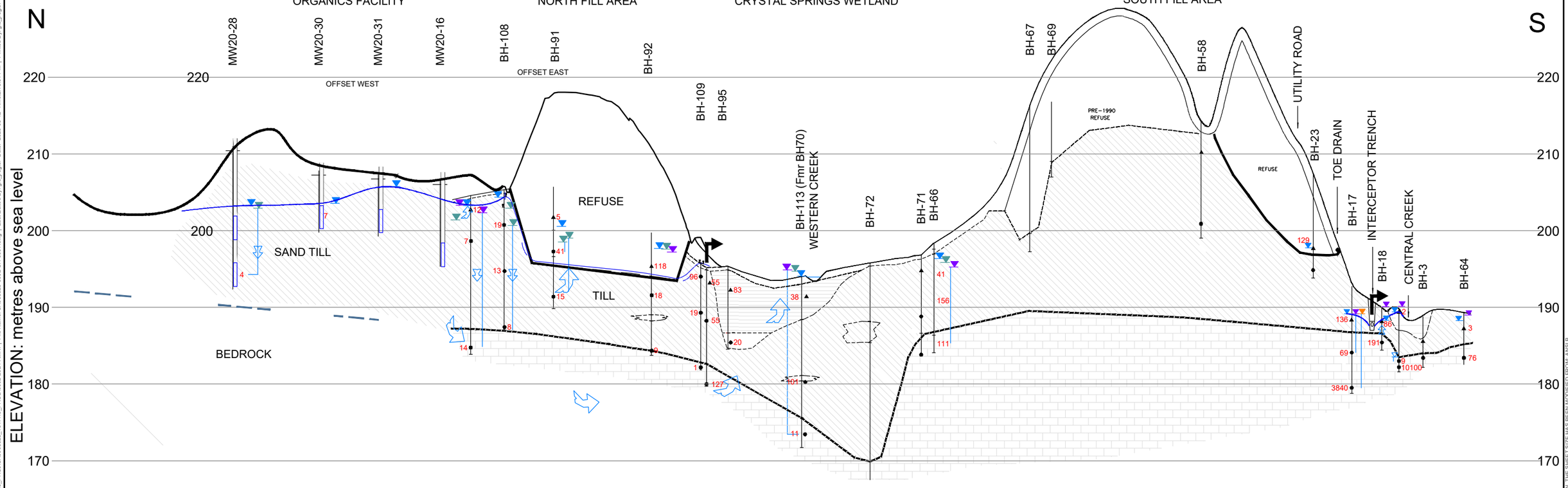

SECTION WELL SYMBOLS

- BH1 — BOREHOLE ID
- STATIC WATER LEVEL (2024 AMR)
  - OVERBURDEN / UPPER UNITS
  - DEEP OVERBURDEN / LOWER UNITS
  - BEDROCK
  - DEEP BEDROCK
- SCREEN
- LEACHATE COLLECTOR FLOW TANKED OFF-SITE TREATMENT
- FLOWING WELL
- 20 CHLORIDE CONCENTRATION 2024 (mg/L)

NOTES

TO BE READ IN CONJUNCTION WITH REPORTING WITHIN WHICH ILLUSTRATION IS BOUND.
LOCATION AND ELEVATIONS OF FIELD VERIFIED WELLS ARE SUBJECT TO REVISION.

BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN DETERMINED ONLY AT WELL AND TEST WELL LOCATIONS. BETWEEN THE WELLS AND TEST WELLS, BOUNDARIES ARE NOT PROVEN BUT ARE ASSUMED FROM GEOLOGICAL EVIDENCE.

0 100 200 300 m
1:5000
PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17
masl - METRES ABOVE SEA LEVEL

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SITE CROSS-SECTION A - A'

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	TLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.3

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

25 mm

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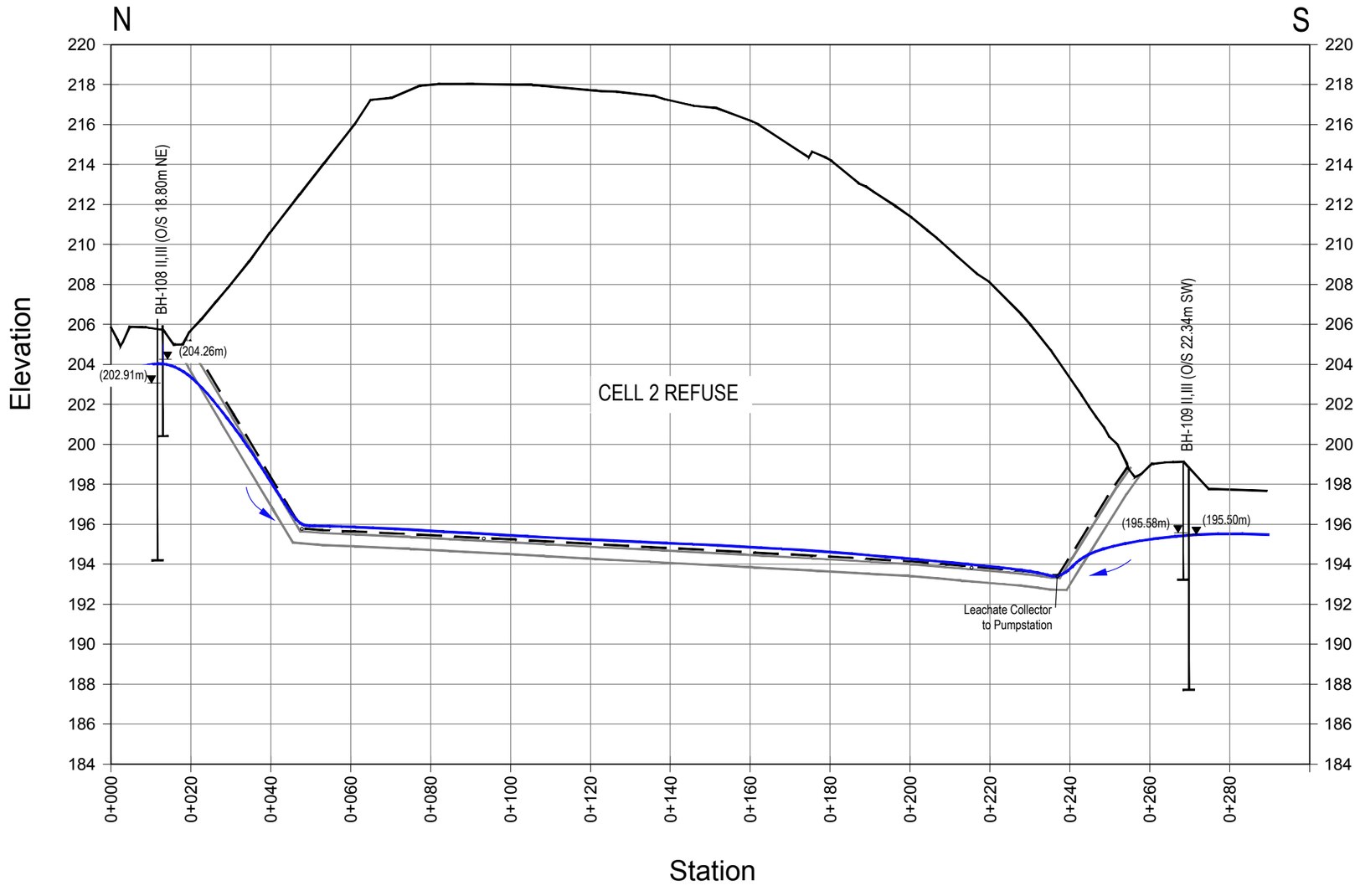

LEGEND

- (203.8m) — SHALLOW GROUNDWATER ELEVATIONS (MASL, SEPTEMBER 2024)
- BOTTOM OF DRAINAGE LAYER / TOP OF CORRUGATED BASE
- COMPACTED LINER (OVEREXCAVATED & RECOMPACTED TILL)
- EXISTING GROUND ELEVATION (DECEMBER 2024)
- GROUNDWATER CONTOUR

REFERENCE: TYPICAL DETAIL, DRAWING 4 (PAGE 1 OF 2) PROJECT 111-53296-13 (ISSUED FOR CONSTRUCTION 2022).

0 25 50 75 m

1:1250

PLOTTED 11X17" TABLOID

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COUNTY OF PETERBOROUGH /
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2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
CROSS-SECTION A - A' DETAIL
NORTH FILL AREA CELL 2 PROFILE

CONSULTANT

YYYY-MM-DD	2025-03-20
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PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.4

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

25 mm

0

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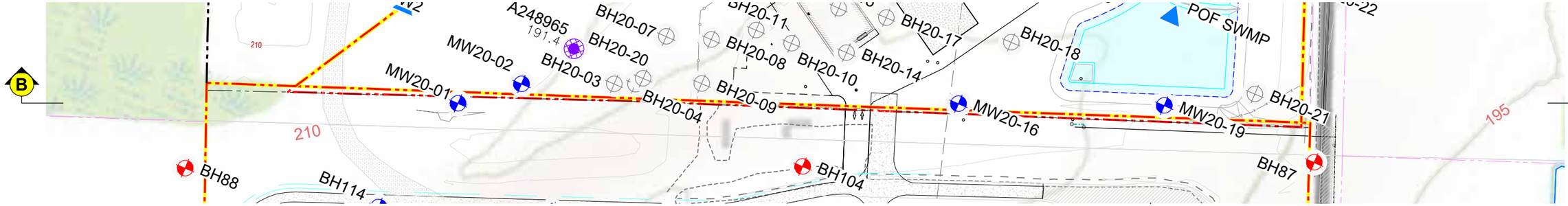

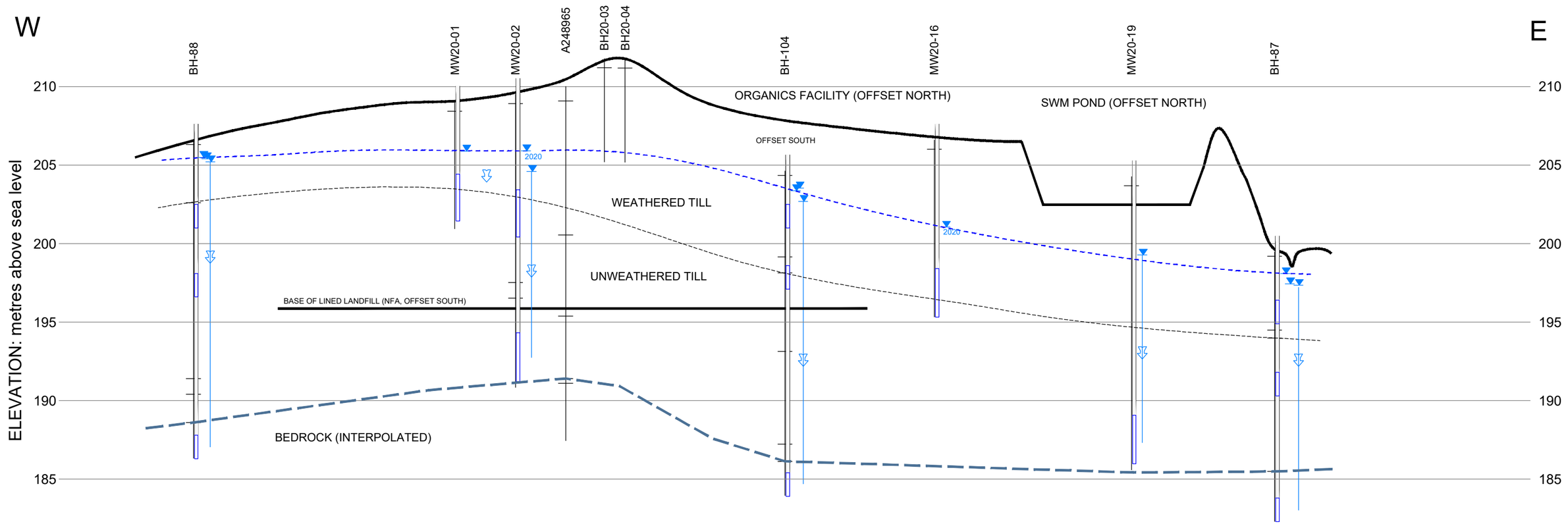

SOIL PATTERN LEGEND AND GENERIC SHADING

- ORGANICS / TOPSOIL
- FILL
- SAND
- SAND TRACE SILT
- SILTY SAND
- SANDY SILT
- CLAYEY SILT
- SILTY CLAY
- GRANULAR TILL
- SILTY SAND / SANDY SILT TILL
- LIMESTONE

SECTION WELL SYMBOLS

- BH1 — BOREHOLE ID
- RECORDED STATIC WATER LEVEL (FALL 2024)
- FLOWING WELL
- AS BUILT / PREVIOUS STATIC
- SCREEN

NOTES

TO BE READ IN CONJUNCTION WITH REPORTING WITHIN WHICH ILLUSTRATION IS BOUND. LOCATION AND ELEVATIONS OF FIELD VERIFIED WELLS ARE SUBJECT TO REVISION.

BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN DETERMINED ONLY AT WELL AND TEST WELL LOCATIONS. BETWEEN THE WELLS AND TEST WELLS, BOUNDARIES ARE NOT PROVEN BUT ARE ASSUMED FROM GEOLOGICAL EVIDENCE.

MW20-16 DAMAGED, OVER-DRILLED AND ABANDONED JUNE 2024 (AUDIT# Z428371). REPLACED WITH MW20-16N OFFSET APPROXIMATE SIMILAR SCREEN DETAIL TAG# A406363.

0 100 200 300 m

1:5000
PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17
masl - METRES ABOVE SEA LEVEL

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SITE CROSS-SECTION B - B'

CONSULTANT

YYYY-MM-DD	2025-03-21
DESIGNED	
PREPARED	JPR
REVIEWED	TG
APPROVED	TLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.5

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

25 mm

0

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NORTHERN WATERCOURSE
BENSFORT ROAD
ORGANICS FACILITY
NORTH FILL AREA
SOUTH FILL AREA
WETLAND AREA
WETLAND BOUNDARY
GROUNDWATER EASEMENT
WESTERN WATERCOURSE
CENTRAL WATERCOURSE
EASTERN WATERCOURSE
SCALE
CHAINLINK FENCE
POST & WIRE FENCE
WOOD FENCE

MW20-28 202.25 (203.30)
MW20-27 (199.94)
MW20-30 204.95 203.57
MW20-31 (205.76)
MW20-22 198.18 198.70
MW20-02
MW20-01 205.89 205.48
MW20-16 201.40
MW20-19 199.27 199.78
BH88 205.49 205.86
BH114 205.30
BH112 205.54 205.64
BH108 204.26 204.35
BH104 203.36 203.37
BH87 198.08 198.15
BH91 200.59 200.56
BH106 197.63 197.69
BH110 199.03 199.46
BH115 202.65
BH85 197.30 197.30
BH92 197.69 197.87
BH86 194.31 194.49
BH107 194.74 194.87
BH95 194.19 194.44
BH109 195.58 195.81
BH111 196.53 196.64
BH84 198.05 198.07
BH94 194.48 194.78
BH89 198.76 199.02
BH93 195.66 195.92
BH113 194.06 194.31
BH77 194.13 194.22
BH74 194.13 194.20
BH44 196.23 196.26
BH33 195.45 196.63
BH66 196.35 196.41
BH46 192.43 192.65
BH40 195.23 194.62
BH41
BH48 191.69 191.83
BH61 192.94 192.95
BH76
BH63 190.42 190.67
BH101 215.21 215.61
BH81 194.07 194.10
BH75 189.18 189.33
BH50 190.27 190.47
BH62 189.17 189.69
BH19 188.70 188.91
BH52 188.59 188.63
BH20 188.49 188.67
BH53
BH23 197.77 197.92
BH17 189.16 189.54
BH18 187.70 187.79
BH5 189.41 190.02
BH16
BH54 191.54 191.66
BH64 188.28 188.46

188.73

PLAN LEGEND

- SITE PROPERTY LINE
- FACILITY (LANDFILL & ORGANIC)
- TOE DRAIN INTERCEPTOR TRENCH
- OVERBURDEN MONITORING WELL NEST
- 187.70 SHALLOW GROUNDWATER ELEVATION (Sept 2024)
- SHALLOW GROUNDWATER CONTOUR (masl)

REFERENCES & DISCLAIMERS

WATER LEVELS ARE KNOWN AT MEASURED LOCATIONS ONLY. AWAY FROM MEASURED LOCATIONS CONTOURING IS BASED ON INTERPOLATION AND TOPOGRAPHIC INFORMATION.

0 100 200
1:5,000 METRES
PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SHALLOW GROUNDWATER FLOW FALL 2024

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0

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NORTHERN WATERCOURSE
MW20-28
MW20-27
MW20-30
MW20-31
ORGANICS FACILITY
MW20-22
MW20-02
MW20-01
MW20-16
MW20-19
BH88 205.21
BH114
BH112
BH108
BH104 202.68
BH87 197.34
BH91 199.05
NORTH FILL AREA
BH106 197.22
SCALE
BH110
BH85
BENSFORT ROAD
BH115
BH92 197.19
BH86 195.15
BH107 >195.99
BH95 195.42
BH109
BH111
BH84 198.10
BH94 195.39
BH93
BH89 198.74
WETLAND AREA
WETLAND BOUNDARY
BH113 194.88
GROUNDWATER EASEMENT
BH77
BH74
BH44 197.44
BH33
BH66 195.24
BH46 186.28
BH76 [183.80]
BH40
BH61 192.44
BH48
WESTERN WATERCOURSE
BH41 196.86
BH63 190.90
SOUTH FILL AREA
BH101 205.22
BH81 192.04
BH75 (182.19)
BH50 190.55
CENTRAL WATERCOURSE
BH62 [185.86]
BH19 188.38
BH52 188.76
BH20 188.95
BH53 191.37
BH23
BH17 189.16
BH54
EASTERN WATERCOURSE
BH18 189.02
BH5 190.15
BH16 191.30
BH64 188.98

PLAN LEGEND

- PROPERTY LINE
- FACILITY (LANDFILL & ORGANIC)
- SHALLOW BEDROCK GROUNDWATER CONTOUR (masl)
- DRILLED SUPPLY WELL
- OVERBURDEN MONITORING WELL NEST
- WELL NEST WITH BEDROCK MONITOR (MONITORS 84-I, 94-I & 95-I NEAR BEDROCK)

REFERENCES & DISCLAIMERS

WATER LEVELS ARE KNOWN AT MEASURED LOCATIONS ONLY. AWAY FROM MEASURED LOCATIONS CONTOURING IS BASED ON INTERPOLATION AND GEOLOGICAL INFORMATION.

0 100 200
1:5,000 METRES

PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SHALLOW BEDROCK POTENTIOMETRIC SURFACE FALL 2024

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0

LEGEND

SHALLOW BEDROCK

39	BH-5-V-202404
40	BH-16A-202404
41	BH-17A-202403
42	BH-18A-202403
43	BH-19A-202403
44	BH-20A-202403
45	BH-41-II-202403
46	BH-44-II-202404
47	BH-46-I-202404
48	BH-50-I-202404
49	BH-52-I-202404
50	BH-53-I-202404
51	BH-61-I-202404
52	BH-70-I-202404
53	BH-81-I-202403
54	BH-101-I-202403

LOWER BEDROCK (CHANNEL)

55	BH-63-I-202403
56	BH-64-I-202404
57	BH-66-I-202403

DEEP BEDROCK

33	BH-5-IV-202404
34	BH-17-I-202403
35	BH-41-I-202403
36	BH-44-I-202404
37	BH-62-IR-202403
38	BH-76-I-202403

LEACHATE

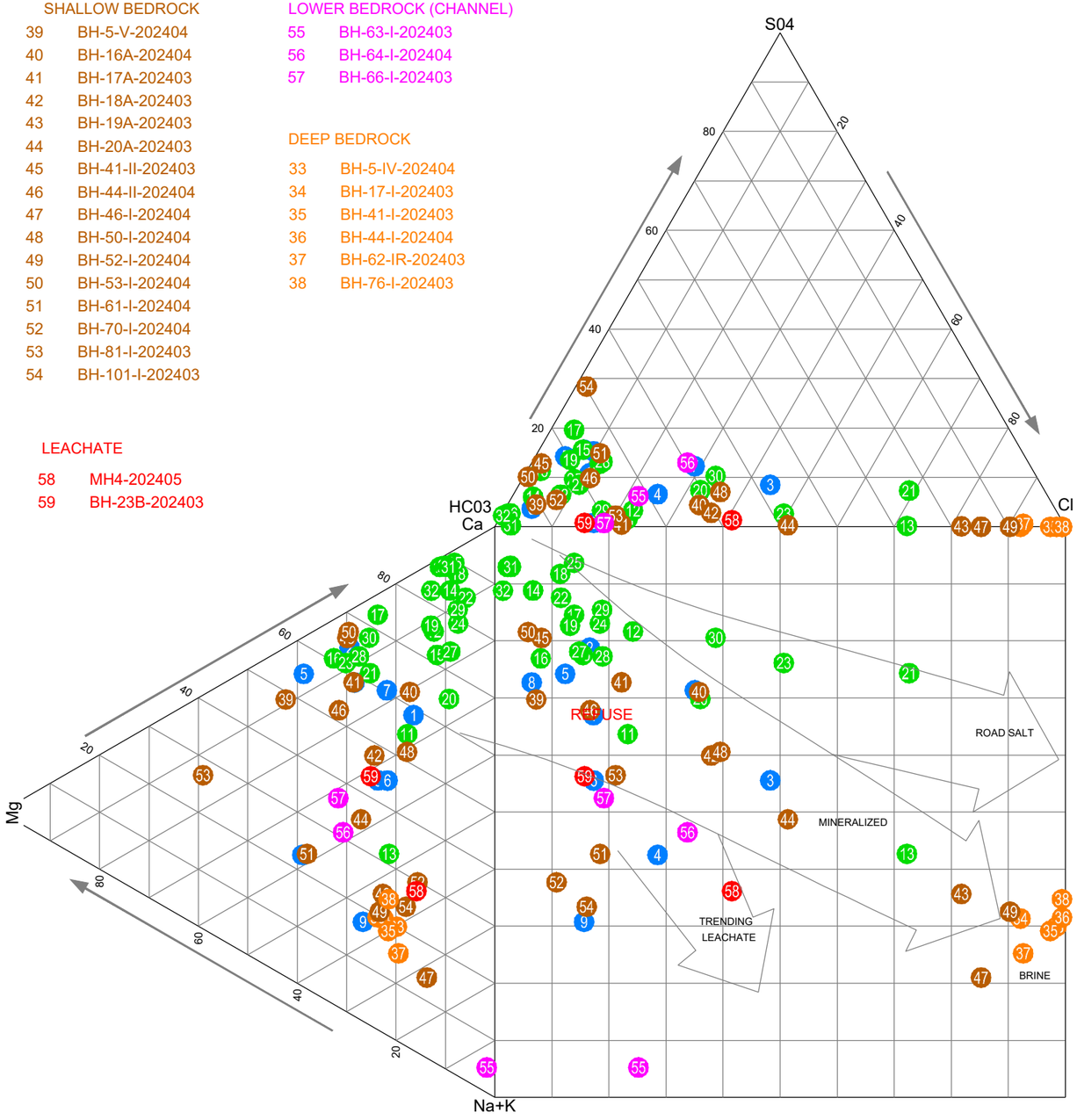
58	MH4-202405
59	BH-23B-202403

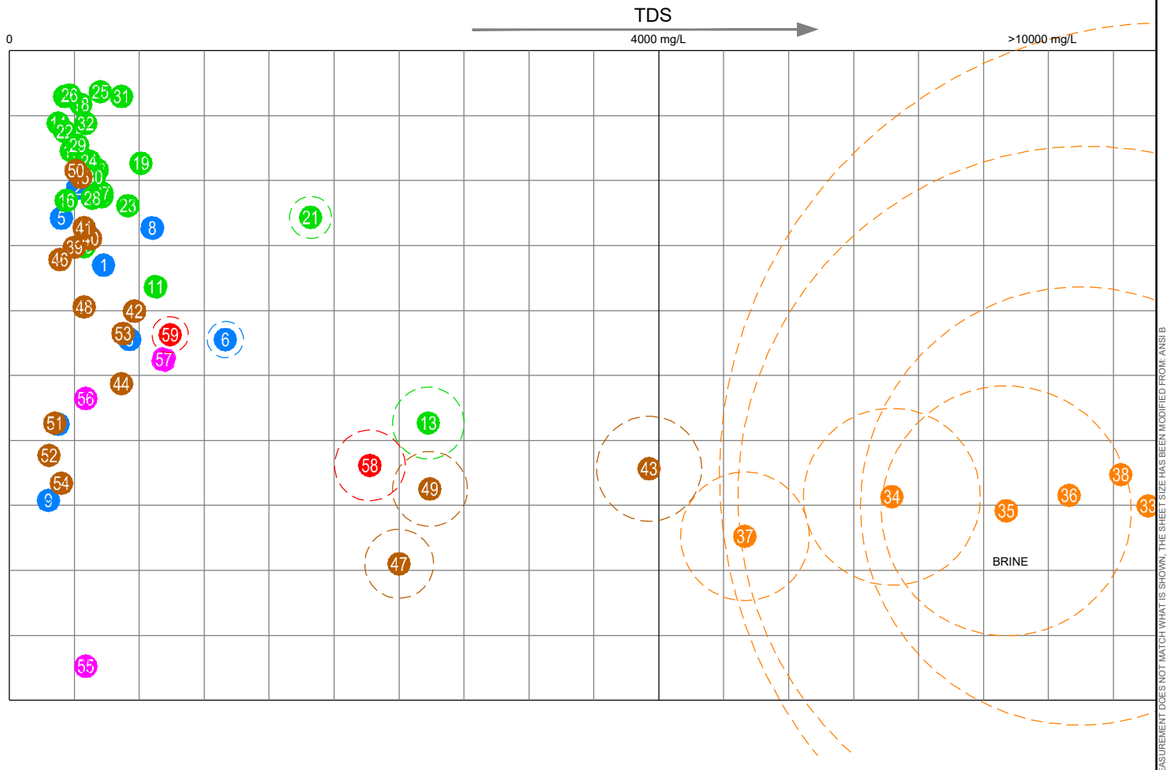
OVERBURDEN PIEZOMETERS

1	BH-33-II-202403
2	BH-46-II-202404
3	BH-50-II-202404
4	BH-61-II-202404
5	BH-63-II-202403
6	BH-66-II-202403
7	BH-70-II-202404
8	BH-81-II-202403
9	BH-101-II-202403

SHALLOW OVERBURDEN

10	BH-5-VI-202404
11	BH-17B-202403
12	BH-18B-202403
13	BH-19B-202403
14	BH-20B-202403
15	BH-33-III-202403
16	BH-40-II-202403
17	BH-44-III-202404
18	BH-46-III-202404
19	BH-48-202403
20	BH-50-III-202404
21	BH-52-II-202404
22	BH-54-II-202404
23	BH-61-III-202404
24	BH-62-II-202403
25	BH-63-III-202403
26	BH-64-II-202404
27	BH-66-III-202403
28	BH-70-III-202404
29	BH-75-II-202403
30	BH-77-I-202404
31	BH-81-III-202403
32	BH-101-III-202403





Conductivity uS/cm
0 500 1000 2000
Diameters (> 500 uS/cm)

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-27
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
DUROV DIAGRAM - SOUTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.8

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

25 mm

0

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LEGEND

LOWER SCREEN OVERBURDEN

1	BH-85-I-202403
2	BH-86-II-202403
3	BH-88-II-202403
4	BH-89-II-202403
5	BH-114-I-202403
6	BH-115-I-202403

SHALLOW BEDROCK

52	BH-86-I-202403
53	BH-87-I-202403
54	BH-88-I-202403
55	BH-89-I-202403
56	BH-91-I-202403
57	BH-92-I-202403
58	BH-104-I-202403
59	BH-106-I-202403
60	BH-107-I-202403

BASAL OVERBURDEN / BEDROCK

49	BH-84-I-202403
50	BH-94-I-202403
51	BH-95-I-202403

LEACHATE

61	MH4-202408 *
62	MH4-202405 *
63	NFA TANK-201210

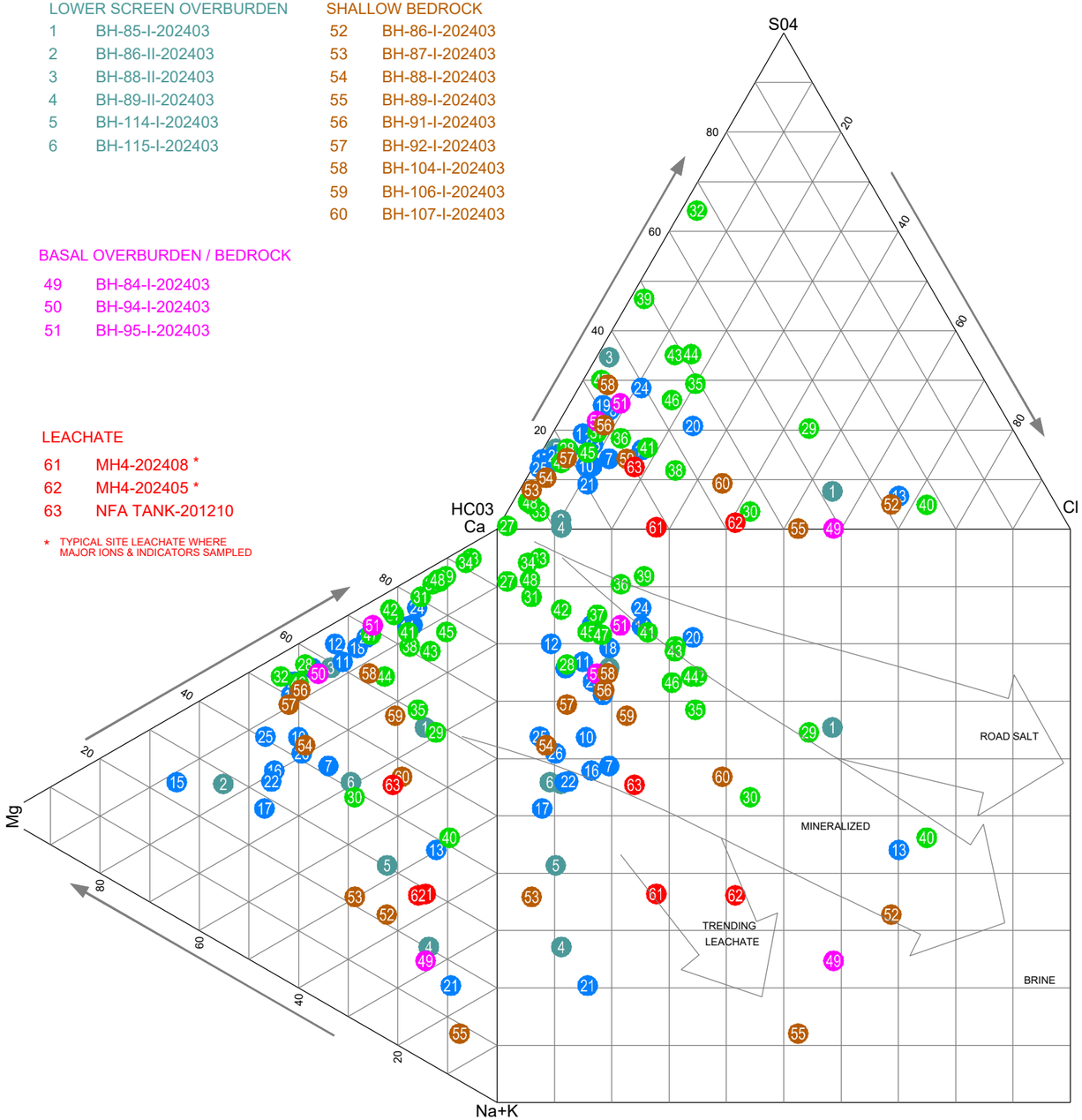
* TYPICAL SITE LEACHATE WHERE MAJOR IONS & INDICATORS SAMPLED

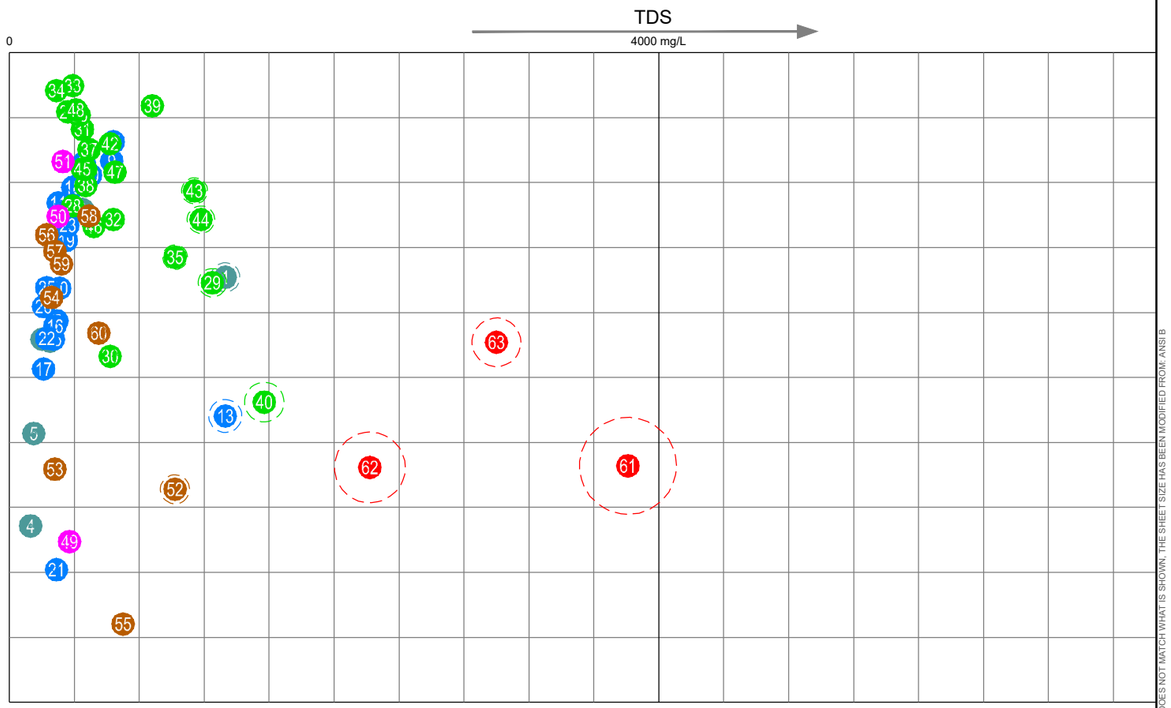
OVERBURDEN PIEZOMETERS

7	BH-74-II-202403
8	BH-87-II-202403
9	BH-91-II-202403
10	BH-92-II-202403
11	BH-93-I-202403
12	BH-104-II-202403
13	BH-106-II-202403
14	BH-107-II-202403
15	BH-108-I-202403
16	BH-108-II-202403
17	BH-109-I-202403
18	BH-109-II-202403
19	BH-110-I-202403
20	BH-110-II-202403
21	BH-111-I-202403
22	BH-111-II-202403
23	BH-112-I-202403
24	BH-112-II-202403
25	BH-114-II-202403
26	BH-115-II-202403

SHALLOW OVERBURDEN

27	BH-74-III-202403
28	BH-84-II-202403
29	BH-85-II-202403
30	BH-86-III-202403
31	BH-87-III-202403
32	BH-88-III-202403
33	BH-89-III-202403
34	BH-91-III-202403
35	BH-92-III-202403
36	BH-93-II-202403
37	BH-94-II-202403
38	BH-95-II-202403
39	BH-104-III-202403
40	BH-106-III-202403
41	BH-107-III-202403
42	BH-108-III-202403
43	BH-109-III-202403
44	BH-110-III-202403
45	BH-111-III-202403
46	BH-112-III-202403
47	BH-114-III-202403
48	BH-115-III-202403





Conductivity uS/cm
0 500 1000 2000
Diameters (> 500 uS/cm)

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-27
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
DUROV DIAGRAM - NORTH FILL AREA

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	5.9

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

0 25 mm

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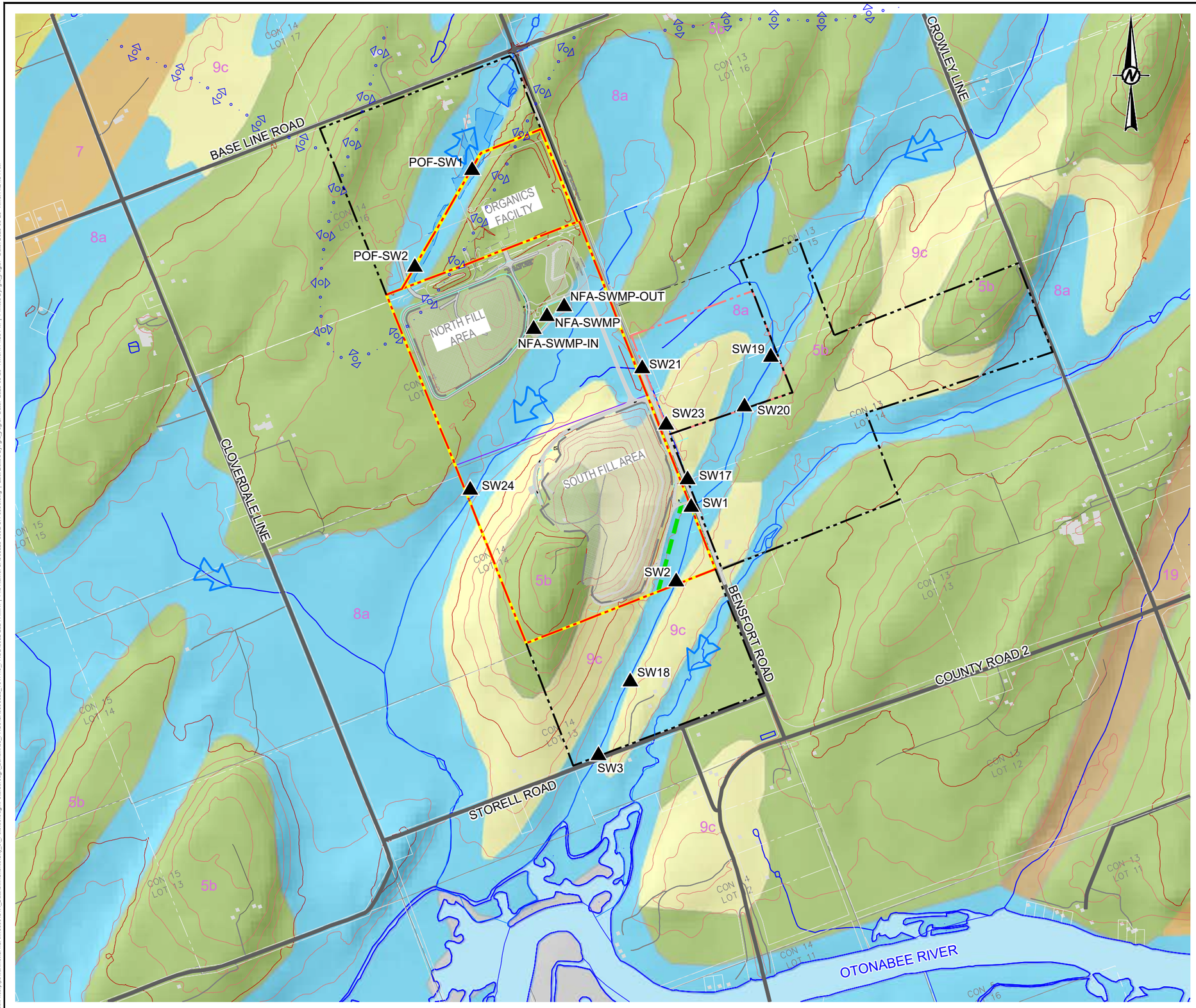

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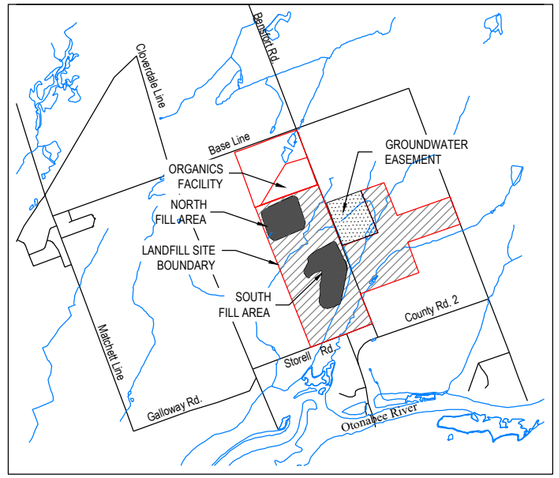

PLAN LEGEND

- TOWN OWNED LANDS
- LANDFILL AND ORGANICS FACILITIES
- MODERN DEPOSITS / ANTHROPEGENIC
- 19 FLUVIAL SILT, SAND, GRAVEL
- 9c GLACIOLACUSTRINE SILT & SAND DEPOSITS
- 8a GLACIOLACUSTRINE DEEP WATER DEPOSITS
- 7 GLACIOFLUVIAL OUTWASH SAND & GRAVEL
- 5b ABLATION TILL
- PRE-GRADING SURFACE WATER DIVIDE
- GROUND CONTOUR
- 2024 SURFACE MONITORING LOCATION

REFERENCES & DISCLAIMERS

QUATERNARY GEOLOGY MAP, OGS/ GSC DIGITAL COMPILATION 2016; KINGS PRINTER.

ALIGNMENT OF ORTHOGRAPHIC IMAGERY IS APPROXIMATED TO SELECT FEATURES ON DATUM. AWAY FROM POINTS OF ALIGNMENT THE ORTHOGRAPHIC IMAGE MAY BE DIMENSIONALLY SKEWED OR PROJECTED OFF THE MAP DATUM PLANE.

0 250 500 750 m

1:12500

PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
SURFACE WATER LOCATIONS AND DRAINAGE SOILS AND TOPOGRAPHY

CONSULTANT

wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	MRP
APPROVED	TLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	6.1

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

0 25 mm

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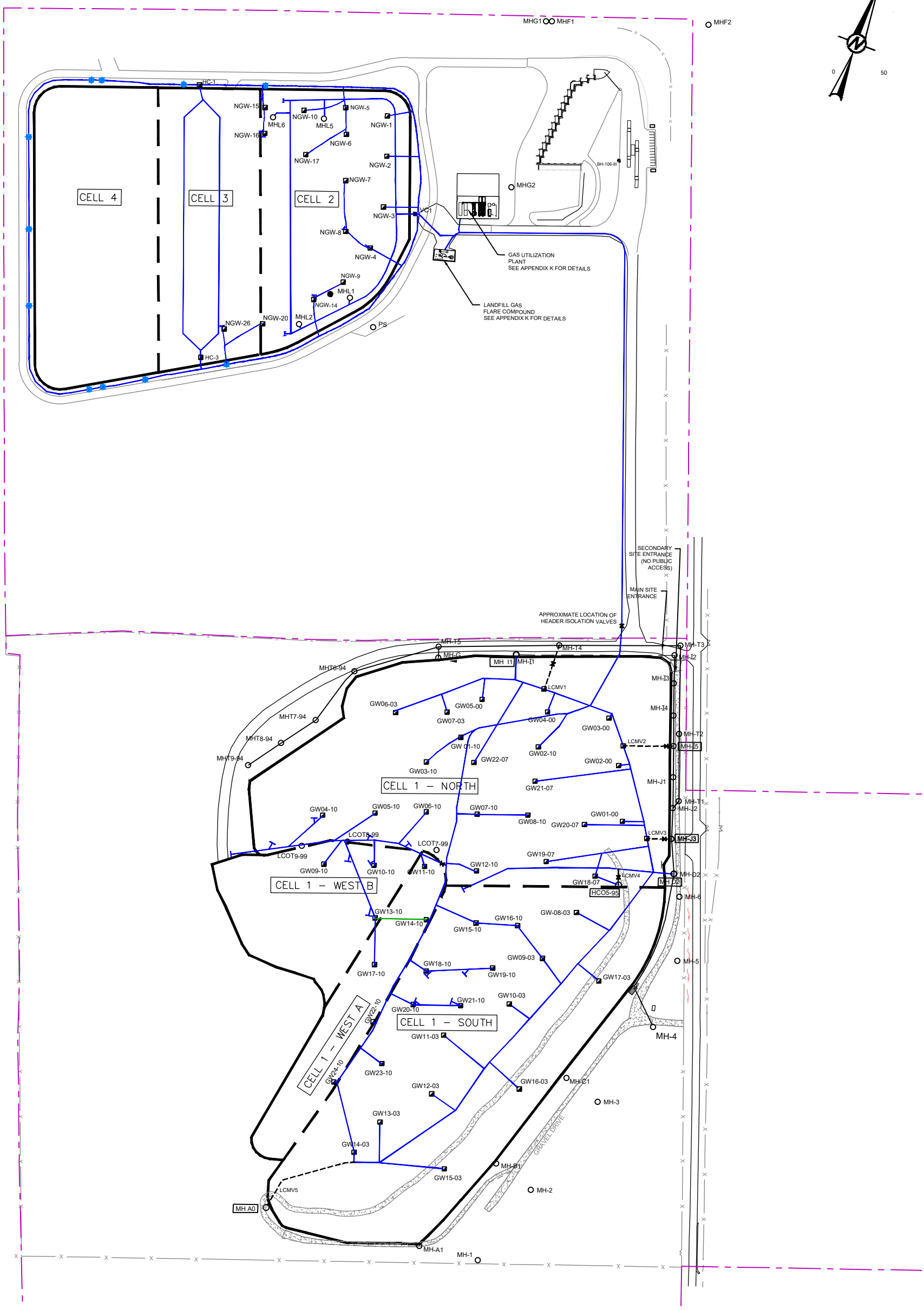

LEGEND

- PROPERTY LINE
- LIMIT OF REFUSE
- LIMIT OF CELL
- TEMPORARY LANDFILL GAS COLLECTION PIPING
- LANDFILL GAS COLLECTION PIPING
- LANDFILL GAS COLLECTION BRANCH SADDLE CAPPED FOR FUTURE CONNECTIONS
- LCMV3 — LANDFILL GAS RELIEF PIPING & CONTROL VALVE
- GRAVEL DRIVE
- MH D2 — LEACHATE COLLECTION SYSTEM TIE-IN
- GW01-00 — LANDFILL GAS EXTRACTION WELL

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

YYYY-MM-DD	2025-03-20
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
LANDFILL GAS COLLECTION SYSTEM LAYOUT

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	7.1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0

APPENDIX A

Environmental Compliance Approvals

APPENDIX A - I)

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL – A341508 ISSUED: JUNE 23, 2023

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER A341508
Issue Date: June 23, 2023

The Corporation of the City of Peterborough
500 George St N
Peterborough, Ontario
K9H 3R9

The Corporation of the County of Peterborough
470 Water St
Peterborough, Ontario
K9H 3M3

Site Location: 1260 Bensfort Road and 1923 Base Line
Township of Otonabee-South Monaghan, County of Peterborough

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 40.95 hectare Waste Disposal Site (landfill/transfer/processing) within a total site area of 197.32 hectares, which includes the following:

- a 27.5 hectare landfill (9.5 hectares North Fill Area and 18 hectares South Fill Area);
- a 15 hectare groundwater easement zone;
- a public drop-off and reuse centre for the receipt, transfer, temporary storage and reuse of solid, non-hazardous waste; and
- a 13.45 ha composting facility, receiving and processing Organic Waste at a rate not exceeding 42,270 tonnes per year, consisting of the structures, processes and equipment described under Schedule "C".

Note: Use of the site for any other type of waste is not approved under this environmental compliance approval, and requires obtaining a separate approval amending this environmental compliance approval.

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

1. "Adverse Effect" is as defined in the EPA;

2. "Agent of the City of Peterborough" means a person or company who is hired by the City of Peterborough to fulfil the requirement of Competent Supervisor or Competent Supervisors required under this Approval. Such person or company would provide independent reports directly to the City of Peterborough and would not be employed or closely associated with any company that the City of Peterborough has contracted to operate the Site;

3. "Amendment Materials" means brush, Clean Wood (including wooden overs from the Composting process) and Clean Wood products (wood chips);

4. "Approval" means this Environmental Compliance Approval and any Schedules attached to it;

5. "Buffer Area" means that part of the Site that is not waste fill area and includes those lands and easements comprising 84.63 hectares as shown on Tab L of item 9 in Schedule "A";

6. "Change Log" means a section in the Design and Operations Report for the Composting Facility (Item #59 of Schedule "A") that contains a record for each change to the Design and Operations Report, including the date and description for each change that occurred;

7. "characteristic waste" is as defined in Reg 347;

8. "City of Peterborough" means The Corporation of the City of Peterborough;

9. "Clean Wood" means brush, clean virgin wood and clean virgin wood products, that does not contain painted wood or composite wood products, including laminated wood;

10. "Competent Supervisor" and "Competent Supervisors" means a person or people who:
    a. is/are an employee(s) of the City of Peterborough or in the alternative, is an agent of the City of Peterborough;
    b. is/are a Trained Personnel;
    c. is/are qualified because of their knowledge, training and experience to assure that direction given by the City of Peterborough to any contractor that the City of Peterborough has hired for the Site and the organization of work and its performance by that contractor is sufficient to assure that the terms and conditions of this Approval and associated legislation and regulations are followed; and
    d. is not an employee of the contractor that is referred to in paragraph c of this definition and also operates at arms length from such a contractor;

11. "Compost" has the same meaning as set out in the document "Ontario Compost Quality Standards" dated July 25, 2012, as amended.

12. "Composting" has the same meaning as set out in the document "Ontario Compost Quality Standards" dated July 25, 2012, as amended. Composting consists of thermophilic composting (active composting) and curing;

13. "Composting Facility" means the 13.45 ha waste disposal site (compost) located within a total

site area of 39.32 ha at 1923 Base Line, Southern Half of Lot 16, Concession 14, Otonabee, Township of Otonabee-South Monaghan;

14. "Compost Quality Standards" means the Ministry standards for compost as set out in the document entitled "Ontario Compost Quality Standards" dated July 25, 2012, as amended;

15. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

16. "District Manager" means the District Manager of the Peterborough District Office;

17. "District Office" means the Peterborough District Office of the Ministry;

18. "EAA"means the *Environmental Assessment Act* , R.S.O. 1990, c. E.18;

19. "EAAB" refers to the Environmental Assessment and Approvals Branch of the Ministry of the Environment;

20. "EASR" means the Environmental Activity and Sector Registry;

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

22. "Finished Compost" means the Organic Waste that has been fully processed, as required, and is considered ready for sampling and testing for compliance with the Compost Quality Standards;

23. "Handbook" means the December 2009 Ministry publication that has the title, "Land Disposal Restrictions (LDR) Handbook";

24. "IC&I" means industrial, commercial and institutional;

25. "Immature Compost" means the Organic Waste which has been thermophilically Composted but not cured and screened, if screening is required;

26. "Land Disposal Restrictions" means the requirements of Sections 74 through 85 of Regulation 347, which prohibit the disposal of hazardous wastes that are listed wastes or characteristic waste until they have been treated to meet the land disposal treatment requirements;

27. "Land Disposal Treatment Requirements" means the requirements identified in Schedule 1, Part A and Part B of Schedule 2 and Schedule 3 of Regulation 347 for listed wastes and in Schedule 5 of Regulation 347 for characteristic wastes. Land disposal treatment requirements are specified as either concentration-based numerical levels or as specified methods of treatment. Regulated constituents must be treated to meet the treatment requirements prior to land disposal;

28. "Landfill" means the 27.5 ha waste disposal site (9.5 hectares North Fill Area and 18 hectares South Fill Area) (landfill/transfer) being more particularly described as Part of Lots 14 and 15, Concession 14, Otonabee, Township of Otonabee-South Monaghan, located within a total site area of 158 hectares, which includes a 15 hectare groundwater easement zone in accordance with the plans and specifications described in Schedule "A". The 158 hectares are more particularly described as Part Lot 13, 14 and 15, Concession 14 and Part of Lots 14 and 15, Concession 13, Otonabee, Township of Otonabee-South Monaghan;

29. "Leaf and Yard Waste" and "LYW" means waste consisting of natural Christmas trees and other plant materials but not tree limbs or other woody materials in excess of 7 centimetres in diameter and as defined in the Ontario Regulation 101/94, as amended, made under the EPA;

30. "Listed Waste" is as defined in Reg 347;

31. "Minister" means the Minister of the Ministry 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;

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

33. "NMA" means the *Nutrient Management Act,* 2002, S.O. 2002, c. 4;

34. "North Fill Area" and "NFA" means the 9.5 hectares landfill Site that is located in the North part of the Site;

35. "Organic Waste" means solid non-hazardous waste derived from plants or animals, including wastes consisting of other compounds of carbon, all readily biodegradable, and as further described in Condition 8(2) of this Approval;

36. "Organic Waste Mix" means the mixture of the incoming SSO, Leaf and Yard Waste, and/or the Amendment Materials and/or additives approved in this Approval;

37. “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;

38. “Owner" means the Corporation of the City of Peterborough and the Corporation of the County of Peterborough, including any successors and assignees, and has the same meaning set out in section 25 of the EPA, as applicable;

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

40. “PA” means the *Pesticides Act* , R.S.O. 1990, c. P-11;

41. "Peterborough Landfill and Compost Public Liaison Committee" or "PLC" means a committee

comprised of representatives of the City of Peterborough and area residents established in accordance with Condition 1(23) of this Approval;

42. "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 or Section 4 of the NMA or Section 8 of the SDWA;

43. "Public Drop-Off and Reuse Centre" means waste disposed site located within the Landfill that is used to receive, temporarily store and transfer solid, non-hazardous waste from residential, industrial, commercial and institutional sources for reuse or final disposal;

44. "Reasonable Use Guideline" means the Ministry guideline entitled "Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities, Guideline B-7", dated April 1994, as amended;

45. "Regulation 232" or "Reg. 232" or "O. Reg. 232/98" means Ontario Regulation 232/98: (Landfilling Sites), made under the EPA;

46. "Regulation 347" or "Reg. 347" means Revised Regulations of Ontario 1990, Regulation 347: (General - Waste Management), made under the EPA;

47. "Rejected Waste" means the load of incoming waste inadvertently received at the Site and deemed by the City of Peterborough to contain waste that does not meet the incoming Organic Waste quality criteria set out in this Approval or that cannot be Composted;

48. "Residual Waste" means waste resulting from the waste processing activities at the Site, and that cannot be Composted. Residual Waste is waste that is destined for final disposal;

49. "SDWA" means the *Safe Drinking Water Act,* 2002, S.O. 2002, c. 32;

50. “Site” means the waste disposal site approved under this Approval, including the Composting Facility, the Landfill, and the Public Drop-Off and Reuse Centre;

51. "South Fill Area" and "SFA" means the 18 hectares landfill site that is located in the South part of the Site;

52. "Spill" is as defined in the EPA;

53. "SSO" means the source separated Organic Waste which consists of the Organic Waste suitable for Composting, which has been separated at its source of origin by the generator of the waste;

54. "Stage 1" means the initial phase of the Composting Facility development as described in Schedule "C", with the maximum Organic Waste receipt rate described under Condition

8(4)(a);

55. "Stage 2" means the final phase of the Composting Facility development described in Schedule "C", with the maximum Organic Waste receipt rate described under Condition 8(4)(b);

56. "Standards Document" means the Ministry's document entitled "Ontario Compost Quality Standards" dated July 25, 2012, as amended;

57. "Trained Personnel" means an employee trained in accordance with the requirements of Condition 5 and is knowledgeable through instruction and/or practice and able to carry out any necessary duties; and

58. "waste" has the same meaning as in the EPA and regulations made thereunder.

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

TERMS AND CONDITIONS

1. GENERAL

Compliance

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

(2) Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this Approval.

In Accordance

(3) Except as otherwise provided for in this Approval, the Site shall be designed, developed, constructed, operated and maintained in accordance with the Design and Operations Reports (Items 36, 37 and 59 of Schedule "A") and all documents listed in Schedule "A" to this Approval.

(4) Unless exempted from an Environmental Compliance Approval requirement, any waste handling equipment that is not approved in this Approval but is to be operated at the Site must be a waste management system, also referred to by the Ministry as a mobile unit, approved by the Ministry for a temporary operation at any site.

(5) Notwithstanding the provisions of the Environmental Compliance Approval for the waste

management system or the mobile unit, the waste management system or the mobile unit shall not be operated at the Site in excess of sixty (60) days per year.

Other Legal Obligations

(6) The issuance of, and compliance with, this Approval does not:

(a) relieve any person of any obligation to comply with any provision of the EPA or any other 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 request that any further information related to compliance with this Approval be provided to the Ministry.

(7) Despite an Owner or any other person fulfilling any obligations imposed by this Approval, the person remains responsible for any contravention of any other condition of this Approval or any applicable statute, regulation, or other legal requirement resulting from any act or emission that caused the Adverse Effect or impairment of water quality.

Adverse Effect

(8) The Owner and Operator shall take steps to minimize and ameliorate any adverse effect 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.

Furnish Information

(9) Any information requested by the Ministry, concerning the operation of the Site and its operation under this Approval, including but not limited to any records required to be kept by this Approval shall, upon request, be provided to the Ministry in a timely manner and in a format specified by the Ministry**.** Records shall be retained for two (2) years except as otherwise authorized in writing by the Director.

(10) 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 Approval or under any statute, regulation or subordinate legal instrument, 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 condition of this Approval or any statute, regulation or other subordinate legal requirement; or
(b) acceptance by the Ministry of the information's completeness or accuracy.

(11) The Owner shall ensure that a copy of this Approval, in its entirety and including all its Notices of Amendment, and all documentation listed in Schedule "A", are retained at the Site at all times.

Interpretation

(12) Where there is a conflict between a provision of any document listed in Schedule "A" in this Approval, and the conditions of this Approval, the conditions in this Approval shall take precedence.

(13) Where there is a conflict between the application and a provision in any document 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.

(14) Where there is a conflict between any two documents listed in Schedule "A", the document bearing the most recent date shall take precedence.

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

Certificate of Requirement

(16) Prior to dealing with the Site in any way, the Owner shall provide a copy of this Approval and any amendments, to any person who acquires an interest in the Site as a result of the dealing.

(17) (a) If not already completed, within ninety (90) calendar days from the date of issuance of this Approval, the Owner shall submit to the Director a completed Certificate of Requirement which shall include:

(i) a plan of survey prepared which shows the approximate area of the Site where waste has been and is to be deposited at the Site;
(ii) proof of ownership of the Site;
(iii) a letter signed by a member of the Law Society of Upper Canada or other qualified legal practitioner acceptable to the Director, verifying the legal description provided in the Certificate of Requirement;
(iv) the legal abstract of the property; and
(v) any supporting documents including a registerable description of the Site.

(b) If not already completed, within thirty (30) calendar days of receiving a Certificate of Requirement authorized by the Director, the Owner shall:

(i) register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and
(ii) submit to the Director and the District Manager, written verification that the Certificate of Requirement has been registered on title.

Registration on Title Requirement - Contaminant Attenuation Zone

(18) If not completed previously, the Owner shall, within a year from the date of issuance of this Approval, submit to the Director documents confirming that a CAZ has been established, in either fee simple or by way of a groundwater easement.

(a) If rights are obtained in fee simple, the Owner shall provide:

(i) documentation evidencing ownership of the CAZ obtained in compliance with O.Reg. 232/98, as amended;

(ii) a completed Certificate of Requirement and supporting documents containing a registerable description of the CAZ; and

(iii) a letter signed by a member of the Law Society of Upper Canada or other qualified legal practitioner acceptable to the Director, verifying the legal description of the CAZ.

(b) Within thirty (30) calendar days of receiving a Certificate of Requirement signed or authorized by the Director, the Owner shall:

(i) register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and

(ii) submit to the Director a written verification that the Certificate of Requirement has been registered on title.

(c) If rights are obtained by way of a groundwater easement, the Owner shall:

(i) provide a copy of the easement agreement;

(ii) provide a plan of survey signed and sealed by an Ontario Land Surveyor for the CAZ;

(ii) submit proof of registration on title of the groundwater easement to the Director;

(d) The Owner shall not amend or remove or consent to the removal of the easement or CAZ from title without the prior written consent of the Director.

Change of Owner

(19) 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 change in:

(a) the ownership of the Site;

(b) the Operator of the Site;

(c) the address of the Owner or Operator;

(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; and

(e) the name of the corporation where the Owner or Operator 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.

(20) 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 and sufficient financial assurance is deposited with the Ministry to ensure that these conditions will be carried out.

(21) In the event of any change in Ownership of the Site, other than change to a successor Owner, the Owner shall notify the successor of and provide the successor with a copy of this Approval, and the Owner shall provide a copy of the notification to the District Manager and the Director.

Inspections

(22) No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the OWRA, the EPA, the PA, the SDWA or the NMA, of any place to which this Approval 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 Approval are kept;
(b) to have access to, inspect, and copy any records required to be kept by the conditions of this Approval;
(c) to inspect the Site, related equipment and appurtenances;
(d) to inspect the practices, procedures, or operations required by the conditions of this Approval;
(e) to conduct interviews with staff, contractors, agents and assignees of the Owner; and
(f) to sample and monitor for the purposes of assessing compliance with the terms and conditions of this Approval or the EPA, the OWRA, the PA, the SDWA or the NMA.

Public Liaison Committee

(23) The Owner shall establish and and maintain the Landfill and Composting Facility Public Liaison Committee (PLC). The PLC shall serve as a focal point for dissemination, review and exchange of information and monitoring results relevant to the operation of the undertaking. In addition, the purpose of the PLC shall be to provide community review of the development, operation (current and proposed) and ongoing monitoring, closure and post-closure care related to this Site.

(24) The general mandate of the PLC shall include:

a. Work cooperatively towards proper on-Site operations and the avoidance of off-site impacts from the Site;
b. Review operations and provide regular input to the Owner with respect to all matters pertaining to the landfill and compost Site operations, including issues pertaining to ongoing operations, fences that may be needed for litter, off-site odours that may be causing nuisances/complaints, monitoring, the need for contingency plans/environmental emergency plan or remedial measures, response to community complaints, the need for changes to the Approval,post-closure monitoring and maintenance, and development of the proposed end use for the landfill site;
c. Review operational and monitoring reports;
d. Consider and make recommendations to the Owner regarding outside consulting advice in respect of the Site (including both landfilling and composting operations);

e. Facilitate ongoing dialogue between the Owner, the District Office and the community, including residents and businesses in the immediate vicinity of the Site;
f. Provide reports regularly to the community on the activities of the PLC, the landfill and compost operations, and landfill and compost related issues and seek public input on these activities and issues;
g. Monitor the Owner's complaint response program and make recommendations to the Owner with respect to this program; and
h. Provide recommendations to the Owner with respect to unresolved complaints.

(25) The PLC shall not exercise any supervisory, regulatory, approval, legal or other decision making role with respect to the operations (current and proposed) at the Site.

(26) (a) The Owner shall provide for the administrative costs of operating the PLC, including the cost of meeting places and clerical services up to a maximum annual cost of $5000; and
(b) The District Manager may suggest to the Owner that a higher amount than $5000 of the cost be paid for by the Owner.

(27) The PLC shall operate under a Terms of Reference of the committee. Suggestions to revise the PLC Terms of Reference may be made at any meeting that a quorum is present. No changes to the Terms of Reference can be made until the committee members mutually agree to changes.

(28) A copy of the revised Terms of Reference shall be provided to the District Manager within thirty (30) days of issuance of this Approval. Any changes to the Terms of Reference shall be provided to the District Manager for information purposes.

(29) The community members shall be appointed by the PLC. The community member positions are intended to be available to individuals that are not members of groups already represented on the PLC and have an interest in the operation of the Site. The PLC shall encourage individuals who reside in close proximity to the Site to participate. A community member is defined as a taxpayer and/or resident of the City or County of Peterborough.

(30) The PLC shall determine the appropriate meeting frequency and review it on an annual basis.

(31) Minutes and agendas of meetings shall be printed and distributed as per the mailing list on a timely basis.

(32) The PLC shall have reasonable access to the Site and its landfill and compost related facilities for the purpose of carrying out its objective and mandate and the Owner's consultants' reports relating to Site operations shall be provided to the PLC.

(33) The Owner shall provide the PLC with access to the Owner's consultants as required and consultants reports in accordance with protocols agreed to between the Owner and the PLC.

(34) Unless disclosure would be contrary to the Freedom of Information and Protection of Privacy

Act, the PLC is to be provided all formal submissions and correspondence related to the Site operations by the Owner at the same time as these items are submitted to the Ministry, or any other body.

(35) The Owner shall allow access to the Site during normal operating hours, to enable any individual member of the PLC and member of the public recommended by local representatives on the PLC, to observe operations (including both landfill and composting operations). An individual member of the PLC must contact the operator to arrange for a Site pass, be accompanied by an operators representative at all times and follow all safety procedures.

(36) All recommendations made to the Owner with respect to ongoing landfill and compost operations, monitoring and the implementation of contingency measures shall be discussed at joint meetings between representatives of the Owner and the PLC. The purpose of these meetings will be to arrive at an agreement between the Owner and PLC with respect to implementation of the recommendations.

(37) The Owner shall disclose all monitoring results to the PLC and deliver to the PLC all documents and information (except as may be privileged) relevant to the operation of the Site.

2. GENERAL SITE OPERATIONS

Operation

(1) The Site shall be operated and maintained at all time including management and disposal of all waste in accordance with the EPA, Regulation 347, and the conditions of this Approval. At no time shall the discharge of a contaminant that causes or is likely to cause an adverse effect be permitted.

(2) The three (3) separate Design and Operations Reports (Items 36, 37 and 59 of Schedule "A") shall be retained at the Site, kept up to date through periodic revisions, and be available for inspection by Ministry staff.

(3) Except for a change to the Change Log, changes to any of the Design and Operations Reports shall be submitted to the Director for approval.

Hours of Operation

(4) (a) Waste shall only be accepted at the Site for landfilling and transfer from 7:00 AM to 7:00 PM - Monday to Saturday (except statutory holidays).

(b) On-Site equipment used for daily landfill and transfer station preparation and closing activities shall only be used from 6:00 AM to 8:00 PM - Monday to Saturday (except statutory holidays).

(c) Waste shall only be accepted at the Site for composting from 7:00 AM to 7:00 PM -

Monday to Friday (except statutory holidays).

(d) On-Site equipment used for daily composting activities shall only be used from 7:00 AM to 7:00 PM - Monday to Saturday (except statutory holidays).

(5) With the prior written approval of the District Manager, the time periods may be extended to accommodate seasonal or unusual quantities of waste.

(6) The Owner may provide limited hours of operation provided that the hours are posted at the landfill gate and that suitable notice is provided to the public of any change in operating hours.

(7) Upon reasonable notice to the District Manager, contingency actions may take place outside normal hours of operation. Emergency response may occur at any time as required.

Site Access and Security

(8) No waste shall be received, landfilled or removed from the Site unless Trained Personnel are present to supervise the operations during operating hours. The Site shall be closed when Trained Personnel are not present to supervise operations at the Site.

(9) The Owner shall ensure that Trained Personnel is/are on duty at all times when the Site is open to carry out any activity required under this Approval.

(10) The Site shall be operated and maintained in a safe and secure manner, such that unauthorized persons are restricted from entering the Site. During non-operating hours, the Site entrance and exit gates shall be locked and the Site shall be secured against access by unauthorized persons.

(11) The Owner shall ensure that:
(a) access to the Site is restricted by fencing; and
(b) fencing and lockable gate are kept in good repair.

Signage

(12) A sign shall be installed and maintained at the main entrance(s)/exit(s) to the Site on which is legibly displayed the following information:
(a) the name of the Site and Owner;
(b) the number of the Approval;
(c) the name of the Operator;
(d) the waste receipt hours;
(e) the allowable and prohibited waste types for the Composting Facility, the Landfill and the Public Drop-Off and Reuse Centre, respectively;
(f) the telephone number to which complaints may be directed;
(g) a warning against unauthorized access;
(h) a twenty-four (24) hour emergency telephone number (if different from above); and
(i) a warning against dumping outside the Site.

(13) The Owner shall install and maintain signs to direct vehicles to the Composting Facility, the Landfill's working face, and the Public Drop-Off and Reuse Centre.

(14) The Owner shall provide signs at the recycling depot informing users what materials are acceptable and directing users to the appropriate storage area(s).

Incoming Waste Inspection

(15) (a) Prior to being accepted, the Owner shall ensure all incoming loads are inspected by Trained Personnel to ensure only wastes approved under this Approval are received at this Site, and that incoming Organic Waste loads for the Composting Facility contain only incidental amounts of other waste materials;

(b) If any incoming waste load is known to, or is discovered to, contain unapproved waste, that load shall not be accepted at the Site; and

(c) If any unacceptable waste is discovered on-site, that waste shall be re-directed to the designated Rejected Waste storage area.

(16) Loads of incoming waste (excluding waste received at the Public Drop-Off and Reuse Centre) and outgoing Residual Waste and Rejected Waste shall only be transported to and from the Site by haulers approved by the Ministry or registered on the EASR, as required.

Rejected and Residual Waste Handling

(17) The Owner shall ensure that the Rejected Waste and the Residual Waste are:
(a) temporarily stored in designated storage area(s);
(b) stored in a way that ensures that no adverse effects result from such storage;
(c) segregated from all other waste;
(d) stored in a way that ensures that no adverse effects result from the temporary storage; and
(e) handled and removed from the Site in accordance with Reg. 347 and the EPA, or sent to the Landfill for final disposal, as applicable.

(18) The Rejected Waste shall be removed from the Site or sent to the Landfill for final disposal, as applicable, within four (4) business days of its receipt.

(19) The Residual Waste shall be temporarily stored in a covered bin-which shall be removed from Site or sent to the Landfill for final disposal, as applicable, when full or once per week, whichever comes first.

(20) The Rejected Waste and the Residual Waste transported from the Site shall be in appropriately covered vehicles that will not allow fugitive dust or odour emissions to be emitted into the natural environment during the said transport.

Landscape Plan

(21) The Owner shall ensure a completed landscape plan for the Site is submitted to the District Manager with copies to the PLC.

Vermin, Dust, Litter, Odour, Noise, Traffic, Screening

(22) The Site shall be operated and maintained such that the vermin, vectors, dust, litter, odour, noise and traffic do not create a nuisance.

(23) If at any time problems such as odours, dust, litter, noise, vectors, vermin, rodents or other nuisances are found at the Site, the Owner shall take appropriate, immediate remedial action to eliminate the problem, including suspension of all waste management activities and removal of waste from the Site, if necessary.

(24) The Owner shall control fugitive dust emissions from on-Site sources including but not limited to on-Site roads, waste storage/processing/handling areas, the active working face, and the closed landfill area prior to seeding especially during times of dry weather conditions. If necessary, major sources of dust shall be treated with clean water and/or dust suppression materials to minimize the overall dust emissions from the Site.

(25) The Owner shall:
- (a) take all necessary steps to prevent the escape of litter from the Site;
- (b) pick up litter at the Site on a daily basis, or more frequently if necessary;
- (c) if necessary, erect litter fences around the areas causing a litter problem; and
- (d) weekly, or more frequently as necessary, pick up off-Site litter (e.g., along access roads) which can reasonably be determined to have originated from the Site.

(26) Upon being notified of the approximate location of litter that has blown from the Site or from waste haulage vehicles that have used the Site or were en route to the Site, the Owner shall clean-up such litter as soon as is reasonably practicable.

(27) The Owner shall comply with noise criteria in Ministry guidance document titled “Noise Guidelines for Landfill Sites" dated October 1998 as amended from time to time.

(28) On-Site roads shall be provided and maintained in a manner that vehicles hauling waste to and on the Site may travel readily and safely on any operating day. During winter months, when the Site is in operation, roads must be maintained to ensure safe access to the landfill working face. Access roads must be clear of mud, ice and debris which may create hazardous conditions.

(29) The City of Peterborough shall ensure that all waste and Compost handling activities, including turning of the processing windrows and waste screening are only undertaken during favourable wind conditions.

(30) The City of Peterborough shall implement appropriate housekeeping procedures, including

regular cleaning of the Organic Waste handling equipment to minimize emissions of odour from the Organic Waste handling areas.

(31) The City of Peterborough shall maintain a negative air pressure atmosphere within the Receiving Building of the Composting Facility, as required by the Air Approval.

(32) The City of Peterborough shall ensure that, at all times when the SSO is in the Receiving Building, the air from the Receiving Building is exhausted through an appropriate air pollution control equipment approved by the Ministry in the Air Approval.

(33) The City of Peterborough shall ensure that the window(s) and doors of the Receiving Building are kept closed at all times except to permit the entry or exit of persons, waste and/or processing/maintenance/waste transport equipment.

(34) In the event that the outdoor Leaf and Yard Waste storage pile becomes odourous, the Leaf and Yard Waste shall be immediately diverted to the Landfill, the Receiving Building, or a composting system.

(35) If at any time the Organic Waste or the waste undergoing composting creates a negative impact, including but not limited to attraction to vermin and vectors, and the remedial measures cannot successfully mitigate the impacts within seven (7) days, the City of Peterborough shall forthwith remove the waste causing the negative impact for disposal at an approved waste disposal site.

(36) The Owner shall ensure that all vehicles transporting waste from the Site are not leaking or dripping waste or wastewater when leaving the Site.

(37) Should the City of Peterborough become aware that a vehicle delivering Organic Waste to the Site has leaked wastewater on the municipal roadways, the City of Peterborough shall immediately report the violation to the owner of the vehicle(s) and to the District Manager.

(38) The Owner shall ensure that vehicles leaving the Site do not drag mud or waste onto the public roadways.

(39) The Owner shall ensure that:
- (a) the wheels of all vehicles departing from the Site are inspected and cleaned, as required, prior to the vehicles' departure from the Site; and
- (b) any truck washing at the Compost Facility is conducted indoors within the confines of the Receiving Buildings with all washwater collected in the floor drains.

(40) The Owner shall ensure that there is no queuing or parking of vehicles that are waiting to enter the Site on any roadway that is not a distinct part of the Site.

(41) The Owner shall ensure that vehicles transporting waste and Compost from the Site are appropriately covered as they depart the Site, so that fugitive dust or odour emissions are minimized during the transport to their next destination.

(42) The City of Peterborough shall install a litter fence around the designated screening area within the Composting Facility.

(43) The City of Peterborough shall install and maintain planted perimeter berms along the west, north and east sides of the Composting Facility with the necessary height needed to block the line of sight from the adjacent residential homes to the Composting Facility (including the waste piles stored at the Composting Facility).

Wastewater Management

(44) The Owner shall take all appropriate measures to minimize surface water from coming in contact with waste. Temporary berms and ditches shall be constructed around the Landfill's active waste disposal areas to prevent extraneous surface water from coming in contact with the landfill's active working face.

(45) If surface water ponding occurs in any surface water ditches having a drainage slope less than 0.5%, the Owner shall regrade the ditches.

(46) The City of Peterborough shall ensure that all run-off from the Composting areas is directed to the perimeter swale system for discharge into the sanitary sewer, and is cleaned up to prevent accumulation of run-off (i.e., standing water) in the Composting area.

(47) The Owner shall ensure that all run-off and/or leachate from any waste management activity carried out at the Site is not discharged into the municipal drains, or any other natural drain or watercourse unless approved by the Ministry.

Composting Facility Environmental Impact Study Requirements

(48) The City of Peterborough shall install and maintain metal and mirrored flashers, reflective tape and streamers, and netting and overhead lines at the Composting Facility to deter birds and wildlife on an as-needed basis.

(49) The City of Peterborough shall maintain a 30 m buffer around the wetland and watercourse boundaries, as shown in Figure 4 of the Environmental Impact Study (Item #57 of Schedule "A").

(50) The City of Peterborough shall maintain a sediment fence around the Composting Facility during construction between May 15 and September 30 to prevent impacts to turtle nesting/egg hatching season.

(51) The City of Peterborough shall submit pictures and coordinates of any turtles or species at risk encountered during construction of the Composting Facility to the District Manager within two (2) days of the encounterment.

(52) Following the completion of construction of the Composting Facility, the City of Peterborough shall install and maintain permanent turtle exclusionary fencing along the chain link fencing on the north and west sides of the Composting Facility. The permanent fencing shall include chicken wire with 1/4" spacing, installed 20 cm deep and 60 cm above grade.

(53) The City of Peterborough shall use ensure that any Composting Facility construction activities which may cause adverse impacts to birds or their habitats (e.g. vegetation clearing) are conducted outside of the breeding bird season of April 15 to August 31. If this time period is unavoidable, additional Species at Risk (SAR) avifauna surveys and nest sweeps must be conducted by a qualified biologist retained by the City of Peterborough, prior to any clearing of vegetation on-site. If, during a nest sweep, any breeding birds and/or nests are encountered, all construction activities shall be ceased and a buffer should be placed around the nest until after August 31, or as soon as the birds have permanently left the nest. The size of the buffer will be dependent on the species and shall be developed in consultation with the District Manager and the retained qualified biologist.

(54) No development shall take place in Field 2 of Figure 2 of the Environmental Impact Study (Item #57 of Schedule "A").

Prohibitions

(55) Burning of waste at the Site is prohibited.

(56) The Owner shall ensure that there is no scavenging as defined in Reg. 347 at the Site.

3. ENVIRONMENTAL EMERGENCY

Emergency Response and Contingency Plan

(1) A minimum of three (3) months prior to the first receipt of the Organic Waste at the Site for composting, the Owner shall submit to the District Manager an updated Emergency Response and Contingency Plan. The Emergency Response and Contingency Plan shall be updated in consultation with the District Manager and the local Fire Department and as a minimum it shall include the following information:

a. emergency response procedures to be undertaken in the event of a spill, process upset, power failure, fire or any other emergency situation, including specific clean up methods for wastes expected to be generated from the emergency situation;
b. a Fire and Explosion Safety Plan for the Site that has been developed by a Professional Engineer or other qualified person that is knowledgeable about fire and explosion issues at landfill sites;
c. a list of equipment and clean up materials available for dealing with the emergency situations and their locations on the Site plan;

d. notification protocol with names and telephone numbers of persons to be contacted, including persons responsible for the Site, the Ministry's District Office and Spills Action Centre, the local Fire Department, the local Municipality, the local municipal sewage treatment plant, the local Medical Officer of Health, and the Ministry of Labour, and the names and telephone numbers of waste management companies available for emergency response;
e. contingency procedures to be followed in the event of a labour disruption, transportation disruption, inability of receiving sites to accept waste/leachate or other business disruption to the operation;
f. contingency procedures to be followed in the event of an operational upset such as, but not limited to, equipment malfunction, anaerobic composting conditions resulting in odours, or excessive stormwater flows;
g. contingency procedures to be followed in the event that the Site has reached maximum approved capacities or is unable to except additional waste for other reasons;
h. a requirement that an exceedance of any trigger concentration shall initiate contingency measures to ensure that groundwater and surface water discharging to the natural environment does not exceed surface water trigger concentrations outlined in this Approval;
i. list of alternate facilities to which waste and/or composting material can be re-directed if required;
j. procedures and actions to be taken should unacceptable waste inadvertently end up at the Site, including incoming Organic Waste that does not meet the quality criteria set out in this Approval for composting;
k. procedures and actions to be taken should the Composted Organic Waste fail to meet the required Compost Quality Standards;
l. procedures and actions to be taken should the Composting Recipe Criteria set out in this Approval not be met;
m. odour abatement plan with procedures and actions to be taken should the occurrence of complaints require the Owner to implement additional odour control measures necessary to alleviate impacts from odours emitted from the waste management activities at the Site, including the proposed design and operations for the odour control measures;
n. dust abatement plan to propose the design and operation of the contingency measure to alleviate impacts from dust originating from the waste management and vehicular activities at the Site;
o. trigger mechanism for implementation of the abatement plans required by m. and n. above; and
p. procedures and actions to be taken should the occurrence of the complaints require the Owner to suspend the waste processing activities at the Site.

(2) The Owner shall implement the provisions of the Emergency Response and Contingency Plan immediately upon receiving written concurrence from the District Manager.

(3) An up-to-date version of the Emergency Response and Contingency Plan shall be kept at the Site

at all times, in a central location available to all staff, and a copy shall be submitted to the District Manager, the local Municipality and the Fire Department, if requested.

(4) The Emergency Response and Contingency Plan shall be reviewed on an annual basis and updated, if necessary. The revised version of the Emergency Response and Contingency Plan shall be submitted to the District Manager and the Fire Department for comments and concurrence.

Emergency Response and Reporting

(5) The Owner shall immediately take all necessary measures, as outlined in the Emergency Response and Contingency Plan, to handle the emergency situations occurring at the Site.

(6) The Owner shall ensure that the equipment and materials outlined in the Emergency Response and Contingency Plan are immediately available at the Site at all times and are in a good state of repair and fully operational.

(7) The Owner shall ensure that all Site personnel are fully trained in the use of the equipment and materials outlined in the Emergency Response and Contingency Plan, and in the procedures to be employed in the event of an emergency.

(8) All Spills shall be immediately reported to the **Ministry's Spills Action Centre at 1-800-268-6060** and the shall be recorded in the log book as to the nature and cause of the Spill, and the action taken for clean-up, correction and prevention of similar future occurrences.

(9) Should a Spill occur at the Site, in addition to fulfilling the requirements from the EPA, the Owner shall submit to the District Manager a written report within three (3) calendar days outlining the nature of the Spill, remedial measure taken and the measures taken to prevent future occurrences at the Site.

(10) All Spills shall be reported to the residents of the Township of Otonabee-South Monaghan and the County of Peterborough within three (3) days of the spill, outlining the nature of the Spill and remedial measure(s) taken.

4. COMPLAINT RESPONSE PROCEDURE

(1) A designated representative for the Owner shall be available to receive environmental complaints twenty-four (24) hours per day, seven (7) days per week. The telephone number for the designated representative for the Owner shall be clearly posted at the entrance to the Facility.

(2) If at any time, the Owner receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval, the Owner shall take the following steps:

a. The Owner shall record each complaint in a computerized tracking system. The information recorded shall include the following:
   i. the name, address and the telephone number (or contact information) of the complainant,

if known;
ii. the date and time of the complaint;
iii. details of the complaint, including the description and duration of the incident.

b. After the complaint has been received by the Owner and recorded in the tracking system, the Owner shall, immediately notify, either the District Manager by phone during office hours or the Ministry's Spills Action Centre at 1-800-268-6060 after office hours. The Owner shall immediately initiate investigation of the complaint. The investigation shall include, as a minimum, the following:
   i. determination of the activities undertaken at the Facility at the time of the complaint;
   ii. general meteorological conditions including, but not limited to the ambient temperature, approximate wind speed and its direction, sunny versus cloudy, inversion versus clear and windy, etc. at the time of the complaint;
   iii. location of the person who submitted the complaint, if known, at the time of the incident; and
   iv. determination if the complaint is attributed to activities being undertaken at the Facility and if so, determination of all the possible cause(s) of the complaint;
c. The Owner shall determine the remedial action(s) to address the cause(s) of the complaint and implement the remedial action(s) to eliminate the cause(s) of the complaint, as soon as practicably possible, and to prevent a similar occurrence in the future.
d. The Owner shall forward a formal reply to the complainant, if known and to the District Manager within one (1) week after the receipt of the complaint. The response shall include the results of the investigation of the complaint, the action(s) taken or planned to be taken to address the cause(s) of the complaint, and if follow-up response would be provided.
e. All of the information collected and actions taken must be recorded in the tracking system.

(3) If the District Manager deems the remedial measures taken as per Condition 4(2)(c) to be unsuitable, insufficient or ineffective, the District Manager may direct the Owner, in writing, pursuant to the remedial order section (s.17) or the preventative measures order section (s.18) of the EPA to take further measures to address the noted failure, upset or malfunction, including but not limited to the following:
   a. reduction in the receipt of the waste;
   b. cessation of the receipt of the waste;
   c. removal and off-site disposal of waste; and
   d. repairs or modifications to the equipment or processes at the Facility.

(4) All complaints shall be reported to the PLC at the next PLC meeting.

5. OPERATIONS MANUAL and PERSONNEL TRAINING

Operations Manual

(1) A minimum of one (1) month prior to the first receipt of the Organic Waste at the Site for composting, the Owner shall update and implement the Operations Manual for the Site for use by the Site personnel. As a minimum, the updated Operations Manual shall contain the following:

a. outline of the responsibilities of the Site personnel;
b. a detailed job description of the duties of a Competent Supervisor;
c. personnel training protocols;
d. health and safety requirements;
e. a site plan showing the waste disposal site boundary, the Landfilling area, the Public Drop-off and Reuse Centre, Organic Waste and Amendment Materials storage/processing areas, Composting pads, Finished Compost storage areas, and surface water/storm water management areas, including dimensions and construction details;
f. Site Operating Procedures including, but not limited to, leachate management, landfill gas management, surface water/stormwater management, and waste receiving, screening, refusal, unloading, handling, storage, processing, disposal, development, sorting, and shipping procedures;
g. sampling, testing, monitoring and recording procedures as required by this Approval;
h. required data recording and reporting procedures;
i. emergency response procedures including an outline of the responsibilities of Site personnel including roles and responsibilities during emergency situations, exit locations and evacuation routing, and locations of relevant equipment available for handling of the emergency situations;
j. the contingency plans for the Site;
k. the odour monitoring;
l. equipment and Site inspection and maintenance procedures;
m. nuisance impact control & housekeeping procedures, as required by this Approval; and
n. the procedures for handling and recording complaints as described in this Approval.

(2) A copy of this Operations Manual shall be kept at the Owner's office, must be accessible to Site personnel at all times and must be updated, as required.

Personnel Training

(3) Within thirty (30) days from the date of this Approval, all Site personnel shall be trained with respect to the following:
a. relevant waste management legislation, regulations and guidelines, including but not limited to the EPA and Regulation 347;
b. environmental, occupational health and safety concerns pertaining to the waste to be handled;
c. emergency first-aid information;
d. terms and conditions of this Approval, relevant to the specific job requirements of each individual operator in accordance with the Operations Manual required by Condition 5(1);
e. operation and management of the Site, or area(s) within the Site, as per the specific job requirements of each individual operator in accordance with the Operations Manual required by Condition 5(1); and

f. the procedures to be employed in the event of an emergency, as outlined in th ethe Emergency Response and Contingency Plan required by this Approval.

(4) Despite Condition 5(3) above, Site personnel do not have to be trained on any items related to the Composting Facility (including any operation and management requirements) until thirty (30) days prior to the first receipt of Organic Waste at the Composting Facility.

(5) The Owner shall ensure that all employees at the Site are trained in the requirements of this Approval relevant to the employee's position:
a. upon commencing employment at the Site in a particular position;
b. whenever items listed in Condition 5(3) are changed; and
c. during the planned three (3)-year refresher training.

(6) The Owner shall have a Competent Supervisor or Competent Supervisors for the Site.

(7) (a) An up to date list of Competent People shall be kept at the Site and be readily available for inspection by a Provincial Officer.

(b) The District Manager shall be informed in writing within seven (7) days of any additions or changes to who is/are a Competent Supervisor(s).

6. LANDFILL

Waste Type and Service Area

(1) (a) The Landfill shall only accept solid non-hazardous waste generated from residential, IC&I sources located within the City of Peterborough and the County of Peterborough.

(b) Waste disposal operations are approved for the South Fill Area and the North Fill Area, of the Landfill, as generally described in the three volume supporting documentation reports listed as Items 36 to 38, of Schedule "A", submitted pursuant to the Environmental Assessment Act approval listed as Item 30, of Schedule "A".

Receipt Rate

(2) The Owner may receive at the Site a maximum of 85,000 tonnes per year of waste, including non-hazardous contaminated soil for landfilling at the Site.

(3) In the event of an emergency, the Owner may request to the District Manager that the amount allowed to be received in one particular year be increased by 20,000 tonnes and the District Manager has the authority to grant written approval to such a request.

Capacity

(4) The Owner shall only accept and deposit waste at the NFA as long as there is available capacity as defined by the final contours for the NFA approved by this Approval. This Approval permits disposal of waste at the Site to fill an air space of 1,527,000 cubic metres (including waste, daily and interim cover material) for the North Fill Area.

Buffer Area

(5) A minimum 30 metre buffer area shall be provided and maintained between the disposal areas and the landfill property boundaries.

Waste Limits

(6) (a) No waste, including daily cover, intermediate cover or final cover layer, may be landfilled outside the limits of the base contours and the final contours outlined in Items 36, 37, and 38 of Schedule "A"; and

(b) Notwithstanding Condition 6(6)(a) of this Approval, daily, intermediate and/or final cover materials may be temporarily stockpiled up to five (5) metres above the approved final contours for the Site for a maximum of time of six (6) months. Where cover material is temporarily stockpiled above final contour elevations, silt fencing, dust control and/or all other appropriate measures shall be taken to prevent dust and surface water impacts on/off Site.

Waste Operations

(7) (a) The Owner shall deposit waste in a manner that minimizes exposure area at the landfill working face and waste shall be compacted before cover is applied.

(b) As further compliance with the EAA approval listed as Item 30, of Schedule "A", in particular Condition 5. A) of that approval, as it relates to the North Fill Area, the Owner shall continue to demonstrate the suitability of the in situ overburden materials to meet the design specifications, i.e. permeability, for the proposed recompacted base and side slopes.

(c) Should it not be possible to achieve this design permeability referred to in Condition 6(7)(b) of this Approval, recommendations shall be provided to the Director for an alternate design of the recompacted base and side slopes which will achieve an equivalent or better performance with respect to minimizing the flow of groundwater into the landfill.

Asbestos Waste

(8) Any waste that is considered asbestos waste shall be handled in accordance with Section 17 of Reg. 347 as amended from time to time.

(9) A suitable sized excavation for the asbestos waste shall be made by the Owner in a location away from the active landfilling face.

(10) All asbestos waste shall be inspected to ensure that the asbestos waste is properly bagged or contained and free from puncture, tears or leaks.

(11) The asbestos waste shall be placed in the excavation to avoid damage to the containers and to prevent dust and spillage.

(12) Upon completion of the unloading and deposition of the asbestos in the excavation, at least 125 centimetres of cover or waste material shall be placed over the asbestos.

(13) All asbestos waste shall be deposited to a level no higher that 1.25 metres below the general elevation of the disposal area to ensure that daily cover material removal in the future does not encounter the asbestos waste.

Application of Cover Material

(14) Cover material shall be applied as follows:

(a) Daily Cover - At the end of each working day, the entire working face shall be covered with a minimum thickness of 150 mm of soil cover or an approved alternative cover material;

(b) Daily cover that is exposed shall be checked at least once every week to see if the 150 mm of soil cover or approved alternative cover material is being maintained;

(c) Where the inspection required in Condition 6(14)(b) reveals that the 150 mm cover has been compromised, soil cover or an approved alternative cover material shall be added to bring the thickness of the daily cover to a minimum of 150 mm;

(d) Intermediate Cover - In areas where landfilling has been temporarily discontinued for six (6) months or more, a minimum thickness of 300 mm of soil cover or an approved alternative cover material shall be placed; and

(e) Final Cover - In areas where landfilling has been completed to final contours, a minimum 0.9 metre thick layer of final cover soil shall be placed. Fill areas shall be progressively completed and rehabilitated as landfill development reaches final contours.

(15) Final cover, consisting of material of low permeability that has hydraulic conductivity to allow at least 0.15 metres of infiltration per year, shall be applied and compacted in maximum 15 cm thick lifts. The total compacted thickness of the final cover shall be at least 0.9 metre. A minimum of 0.15 metres of topsoil or other material approved by the Director shall cover the 0.9 metre of cover so that plant growth may be sustained.

(16) A vegetative cover consisting of vegetation that is suited to local conditions and that is capable with minimal care of providing vigorous, plentiful cover no later than its 3rd growing season shall be established over all completed areas to control erosion and maximize evapotranspiration. The Owner shall complete planting as soon as possible but no later than 6 months after reaching final contours.

(17) If weather conditions do not allow timely placement of final and vegetative cover, silt curtains shall be employed to minimize silt loadings to surface water bodies.

(18) Appropriate surface inspections of the final cover will be made annually by the Owner to ensure that erosional problems are identified and remediated forthwith.

(19) Final cover and topsoil layer shall be progressively applied to the Site as the final waste contours are reached.

Cover Materials Allowed

(20) The following materials, in the corresponding thickness, may be used as an alternative to soil as a daily and intermediate cover:
- (a) non-hazardous contaminated soil that meets the Land Disposal Requirements of Regulation 347 and the Handbook; and
- (b) Finished Compost, wood chips, and compost overs consisting of processed chipped wood.

(21) The Owner shall keep a record of the delivery of all contaminated soil to the Site. The record shall include the following information as a minimum:
- (a) The name and Approval number of the hauler;
- (b) The name and address of the generator of the waste;
- (c) The date and time of delivery; and
- (d) The quantity of waste delivered.

(22) The use of non-hazardous contaminated soil for daily/intermediate cover referenced in this Approval, shall be subject to the Owner:
- (a) making sure that the Generator has provided a signed statement with the following information at a minimum to the Owner regarding the contaminated soil including:
  - (i) the date;
  - (ii) the name of the Generator;
  - (iii) Generator Registration number, if the Generator has one;
  - (iv) the source of the non-hazardous contaminated soil;
  - (v) whether the non-hazardous contaminated soil was ever categorized as a listed or characteristic hazardous waste;
  - (vi) any records required by Section 79 and 84 of Regulation 347;
  - (vii) if the waste were a characteristic waste but has been treated, a copy of the Land Disposal Restrictions Form required by Regulation 347 or a notification stating that the waste was a characteristic waste and that the waste can be land disposed as per Sections 79 and 84 of Regulation 347; and
  - (viii) analytical test results of the contaminated soil.
- (b) taking all reasonable precautions to ensure that the requirements of the Land Disposal Restrictions and the Land Disposal Treatment Requirements outlined in Regulation 347 are being followed at the Site.

(23) The volume of contaminated soils stored at the Site shall not exceed the three months limitation of the annual daily/ interim cover material requirements as determined by the previous annual report. The Owner shall ensure at all times that the stockpiled contaminated soils shall produce no off-Site nuisance odours.

(24) In the event of a reported incident of odour from the contaminated soil at the Site which causes a nuisance and poses a threat to the health and safety of person(s) and the environment, the Owner shall forthwith implement a contingency plan to immediately abate the nuisance odour and/or run-off that may originate from the stockpile.

(25) The use of any other alternative materials as daily or intermediate cover material is subject to approval by the Director.

(26) Use of contaminated soil as daily or intermediate cover materials shall be discontinued within two (2) working days of receipt of written notification from the District Manager, stating that the use of the alternative daily or intermediate cover materials at the Site has proven to be environmentally unsuitable.

Contaminated Soil as Daily or Intermediate Cover

(27) Prior to receipt at the Site, each source of contaminated soils which are to be used as daily or intermediate cover shall be tested to determine if the soils meet the criteria in this Approval and Regulation 347. A copy of the test results shall be kept in the daily records for the Site.

(28) If confirmatory testing of the contaminated soil used for daily or intermediate cover indicates it is hazardous or exceeds the allowed Land Disposal Restrictions, the Owner shall report any failed sample of the contaminated soil testing to the District Manager forthwith.

(29) Any contaminated soil that is determined to be hazardous shall be considered a hazardous waste and shall be disposed in the appropriate manner.

(30) Subject to Conditions 6(22) and (27) of this Approval, contaminated soil for use as daily cover shall be stockpiled in areas of the Site that have a leachate collection system installed below.

(31) Subject to Conditions 6(22) and (27) of this Approval, contaminated soil may be used for daily/intermediate cover but only on slopes where surface water drainage is into the waste fill and isolated from the storm water collection system.

(32) Surface water run off from the contaminated soils stockpile which exceeds the Provincial Water Quality Objectives shall not be discharged through the surface water management system.

(33) The Owner must ensure that measures are in place for the on-Site treatment and disposal of any contaminated run off from the contaminated soils stockpile.

Leachate Collection System

(34) No Waste shall be deposited in any cell in the North Fill Area of the Site until the leachate collection system for that cell, as described in the documents listed in Item 37 in Schedule "A" has been installed.

(35) Engineered components of the leachate collection system at the NFA, including those involving geotextile, granular blanket drainage layers, perforated pipes-french drains, and monitoring installations shall be inspected by a professional engineer prior to placement of waste, with appropriate maintenance and/or replacement of parts of the system occurring from time to time, as required and where feasible.

(36) Leachate alarms shall be installed and maintained in the NFA and the SFA having regard to Section 6 of item 5 in Schedule "A".

(37) The flow of leachate from the leachate collection systems shall be determined and the results integrated into the annual Site water balance. This information shall be used as part of an annual assessment of the performance of the leachate collection system and all interpretations and conclusions shall be included in the Annual Report report.

(38) Leachate that is to be removed from the leachate collection system shall be removed in a manner which prevents any overflow of leachate to any surface water course.

(39) As-built drawings of the leachate control system for the North Fill area shall be submitted to the District Manager within sixty (60) days of issuance of this Approval or within sixty (60) days of the completion of the leachate control system for the North Fill area.

(40) Leachate samples shall be collected from the leachate collection system of the NFA and the SFA in order to characterize and monitor the leachate chemistry for a period of twenty-five (25) years subsequent to Site closure, at which time the monitoring program will be re-evaluated by the Owner to determine the need and/or type of monitoring to be continued. Recommendations from the Owner shall be submitted to the District Manager for acceptance. Leachate shall be sampled by the Owner at least two times per year (Spring and Fall) to monitor annual trends in leachate chemistry.

Cleaning of Leachate Collection System

(41) The leachate collection system piping for each stage of the development of the North Fill Area of the landfill shall be inspected annually for the first five years after waste placement and then as often as future inspections indicate to be necessary. Additionally, leachate collection pipes must be cleaned whenever an inspection indicates that cleaning is necessary.

(42) Leachate video system inspection shall be:
- (a) biannual (every 2 years)
- (b) video inspection of the entire system or selected portions of the system shall be

undertaken on an annual basis if obstructions or if significant changes in the ability to flush the system are encountered; and

(c) annual video inspection of newly installed leachate pipes shall be undertaken for five years following installation.

(43) The leachate collection system for the North Fill Area and the South Fill Area shall be cleaned at least once per year, having regards with a report entitled "Annual Monitoring Report, Design and Operations - 1997, Bensfort Road Landfill, Peterborough, Ontario", date May 1998, prepared by CRA. A video inspection performed of the NFA and SFA, where practicable, biannually, having regard to the 2003 to 2004 Annual Monitoring Reports, Design and Operations, South Fill Area, City of Peterborough, Waste Facility, Peterborough, Ontario. An opinion of a professional engineer as to the structural integrity and efficiency of the leachate collection system of the NFA and the SFA shall be included in the Annual Report required under this Approval.

(44) In areas where leachate collection pipe slopes are less than 0.5%, the leachate collection pipes shall be inspected semi-annually for the first three (3) years after waste placement and then as often as future inspections indicate to be necessary. Additionally, leachate collection pipes must be cleaned whenever an inspection indicates that cleaning is necessary. After the three (3) year period, inspection and cleaning of the leachate collection pipes shall be in accordance with the previous condition.

Landfill Gas

(45) (a) Before the placement of any waste in the North Fill Area of the Site, the Owner shall ensure that the proposed landfill gas management system specified in Item 45 and 48 of Schedule "A" is installed and operational;

(b) Within sixty (60) days of the flare equipment operating to control landfill gas, an acoustic audit to measure the noise emissions from the flare equipment shall be conducted by the Owner. The Owner shall report the results of the acoustic audit to the Director within 120 days of the flare equipment becoming operational; and

(c) All buildings are to be free of any landfill gas accumulation. The Owner shall provide adequate ventilation systems to relieve landfill gas accumulations in buildings if necessary.

(46) The landfill gas collection and flaring/utilization system, South Fill Area, shall be constructed and operated in accordance with the detailed design and development, as described in Item 45 and in Sections 3.0 to 3.4 in Item 48 of Schedule "A".

(47) Approval is hereby granted for the detailed design and construction of the landfill gas collection system in the North Fill Area of the Landfill Site all in accordance with the Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated September 30, 2016 and supporting documentation as listed below and forms part of Schedule "A", of the Provisional Certificate of Approval, No. A341508.

(48) Within ninety (90) days of commissioning of each phase of the landfill gas collection and flaring system, the Owner shall submit to the District Manager a construction report detailing the construction activities and any design changes made to the Landfill Gas System during construction.

(49) The Owner shall obtain an approval under section 9 of EPA and Section 27 of EPA for any future upgrade in the Landfill Gas Collection and Utilisation system.

(50) The Owner shall maintain the flare that is installed at the Site for controlling landfill gas in proper working order.

(51) The Owner/Operator shall develop and operate the landfill gas collection and flaring system, including all approved facilities, in accordance with the approved detailed design and operations report, and shall implement QA/QC activities and procedures, as approved by the Director.

(52) The Owner/Operator shall ensure the Site's Operations and Maintenance Manual required by Condition 5(1) of this Approval is updated to reflect the development and operation of the landfill gas collection and flaring system expansion, with respect to details on inspection and maintenance schedules, documentation procedures, shut-down procedures, Ministry contact procedures, and flare operation and maintenance. A copy of the Manual shall be provided to the District Manager and a copy retained on-Site and made available to Ministry staff upon request.

(53) Prior to implementation of any change in the landfill gas collection and flaring system operation, that may result in activities not specified in the Design Report, identified in Item 48, in Schedule "A", attached to this Approval, or in the Approval, and that may likely cause the discharge of contaminant to the natural environment, the Owner/Operator shall obtain approval from the Director.

(54) The Owner/Operator shall maintain records of landfill gas flow. Such records shall be made available for inspection upon request by a Provincial Officer.

(55) In the event of a discharge of a contaminant, including landfill gas, landfill gas condensate, leachate, etc., that causes or is likely to cause an adverse effect, the Owner/Operator shall immediately notify the District Manager and the Ministry's "Spills Action Centre", and advise of actions being taken to contain, control and ameliorate the situation.

(56) For any situation when landfill gas is not being collected and incinerated and which cannot be rectified within 48 hours, the Owner/Operator shall notify the District Manager and advise of actions being taken to contain, control and ameliorate the situation.

(57) The Owner/Operator shall ensure a written report describing a plan and implementation schedule for landfill gas and odour management in conjunction with Site development and progressive rehabilitation is submitted to the Ministry. The plan shall include, as a minimum:
(a) A description of any anticipated progress of final cover placement until Site closure,

based on progressive rehabilitation of the Site; and

(b) A program to evaluate the effectiveness of the landfill gas collection system which shall identify areas of the Site which require upgrading, alteration, or additional collection and control facilities. The program shall include an assessment to be conducted at least once a year, of the Site's conformance with an operating code of practice which includes the development of system design parameters, details on the management of the system to satisfy the design parameters and a description of rationale for landfill gas flow adjustments to optimize system operation.

(58) During construction and continued use of the landfill gas collection system, the Owner/Operator shall implement as a minimum, odour control plan. The effectiveness of the odour control plan shall be monitored and evaluated regularly, and updated or amended as necessary, based on operational experience and odour complaints received.

(59) As a component of the Annual Monitoring and Operation Report for the Site, the Owner/Operator shall include a written report covering each year's construction season. The report shall detail the construction activities, QA/QC program carried out for the construction, as-built drawings of the landfill gas collection and flaring system to date, including a description and reasons for any changes to the design of the landfill gas collection and flaring system.

(60) Any gas extraction well that needs to be replaced due to damage or the well is deemed to be not functioning properly, or additional wells to upgrade the system, the Owner/Operator shall install or replace the gas extraction well within a reasonable time frame of identifying the need for replacement. Any such changes to the gas extraction system shall be documented in the Annual Monitoring and Operation Report.

(61) The Owner/Operator shall implement the monitoring program for landfill gas to monitor the performance of the landfill gas collection and flaring system as approved by the Ministry, as well as any written recommendations of the District Manager through the review of the Annual Monitoring Reports.

(62) Components of the active gas collection system shall be monitored on an as-needed basis, with a routine frequency of once per month for the full collection field. Any observed deficiencies/problems shall be repaired as soon as practicable and a summary of remedial actions carried out, shall be reported in the Annual Report required under this Approval.

Backup Power

(63) (a) The Owner shall provide adequate backup power at the Site in order to ensure operation of the scale facility and operation of the landfill gas blower on-Site; and

(b) A portable generator would be considered sufficient for back-up power for the landfill gas blower.

(64) A power supply connection at each leachate collection pumping station shall be installed by the

Owner that will permit a portable generator to be connected during a power outage.

Closure Plans

(65) In accordance with Environmental Compliance Application dated June 6, 2013, Waste Fill Area known as the South Fill Area is hereby approved for closure in accordance with Item No 51, Schedule "A".

(66) At least 2 years prior to closure of the North Fill Area or when 90% of the NFA allowed capacity is reached, whichever comes first, the Owner shall submit to the Director for approval, with copies to the District Manager, and the PLC, a detailed North Fill Area Landfill closure plan pertaining to the termination of landfilling operations at this Site, post-closure inspection, maintenance and monitoring, and end use. The plan shall include the following:

a. a plan showing the appearance of the NFA and the entire Site after closure;
b. a description of the proposed end use of the NFA and the entire Site;
c. a description of the procedures for closure of the Landfill, including:
    i. advance notification of the public of the landfill closure;
    ii. posting of a sign at the Site entrance indicating the landfill is closed and identifying any alternative waste disposal arrangements;
    iii. completion, inspection and maintenance of the final cover and landscaping;
    iv. Site security;
    v. removal of unnecessary landfill-related structures, buildings and facilities; and
    vi. final construction of any control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
d. a schedule indicating the time-period for implementing Sub-conditions i. to vi. above.
e. descriptions of the procedures for post-closure care of the Landfill, including:
    i. operation, inspection and maintenance of the control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
    ii. record keeping and reporting; and
    iii. complaint contact and response procedures;
f. an assessment of the adequacy of and need to implement the contingency plans for leachate and methane gas; and
g. an updated estimate of the contaminating life span of the NFA and the entire Site, based on the results of the monitoring programs to date.

(67) The SFA and/or the NFA and when applicable, the Site as a whole shall be closed in accordance with the closure plan(s) as approved by the Director.

(68) The Owner shall consult with affected stakeholders on the proposed end uses prior to the submission of its closure report required under Condition 6(66). The proposed end use activities should be consistent with the types of activities consulted upon during the Environmental Assessment for the Site.

Post-Closure Care

(69) Upon closure of the South Fill Area, and/or the North Fill area, the following features will be inspected, recorded on a quarterly basis and maintained as required on a seasonal basis :
   (a) evidence of settlement;
   (b) possible leachate seeps and springs;
   (c) cover soil integrity;
   (d) vegetative cover;
   (e) surface water drainage works;
   (f) erosion and sediment in surface water drainage system; and
   (g) groundwater monitoring wells.

7. PUBLIC DROP-OFF AND REUSE CENTRE

Waste Type and Service Area

(1) The Public Drop-Off and Reuse Centre shall only accept solid non-hazardous waste generated from residential, IC&I sources located within the County of Peterborough.

(2) Waste that is received at the Public Drop-Off and Reuse Centre shall be for final disposal at the Site, for Composting at the Site, or transfer off-site for recycling or reuse.

Storage and Processing

(3) Waste may be stored at the Public Drop-Off and Reuse Centre for a maximum of ninety (90) days.

(4) Despite Condition 7(3), all putrescible waste shall be transferred to the Composting Facility within twenty-four (24) hours of receipt.

(5) With the exception of using a chipper to process wood waste into more manageable sizes, no waste processing shall occur at the Public Drop-Off and Reuse Centre.

(6) Waste shall be placed in the appropriate bins before the end of each operating day. No overnight storage of waste outdoors is permitted.

(7) The Owner shall ensure that:
   (a) all bins and waste storage areas are clearly labelled;
   (b) all lids or doors on bins shall be kept closed during non-operating hours and during the high wind events; and
   (c) if necessary to prevent litter, waste storage areas shall be covered during the high winds events.

(8) All storage containers/bins used to store waste shall be maintained in good condition to prevent leakage. The Owner shall immediately remove from service any leaking container. Containers/bins used to store clean scrap metal may be equipped with drainage holes to permit

the drainage of rainwater.

Reuse Centre

(9) The Owner may operate a "Reuse Centre" located on the public drop-off platform for the handling and temporary storage of reusable items in accordance with Items 54 and 55 of Schedule "A".

(10) The following waste types are prohibited from being received and stored at the "Reuse Centre":
(a) Subject waste;
(b) Asbestos waste; and
(c) Putrescible waste.

(11) The amount of waste stored at the "Reuse Centre" shall not exceed 30 cubic metres or 2 tonnes.

(12) The storage of waste outside of the "Reuse Centre" is prohibited during non-operating hours.

8. COMPOSTING FACILITY

Waste Type and Service Area

(1) Only waste that is generated within the geographical boundaries of the City of Peterborough and the County of Peterborough may be accepted at the Site for composting.

(2) This Site is approved to accept municipal solid, non-hazardous waste destined for Composting at the Site. The Organic Waste approved for receipt at the Composting Facility:
a. is limited to:
i. Leaf and Yard Waste from residential, industrial, commercial and institutional sources;
ii. Amendment Materials from residential, industrial, commercial and institutional sources; and
iii. SSO from residential, industrial, commercial and institutional sources;
b. shall exclude diapers, incontinence products, and sanitary products, except in incidental amounts; and,
c. shall exclude any Organic Waste stored in non-compostable bags and collection bags that promote anaerobic conditions.

(3) The City of Peterborough shall ensure that only wastes approved under this Approval are received at this Composting Facility by limiting the receipt of waste at the Composting Facility to the municipal curbside yard waste collection vehicles, the Public Drop-Off and Reuse Centre, and the Owner's Parks and Recreations Department and/or Public Works Department employees only.

Waste Receipt Rates and Storage Limits:

(4) Subject to Condition 8(11), the Composting Facility is approved to receive Organic Waste in quantities that are not to exceed:

(a) for Stage 1:

(i) 270 tonnes per day;

(ii) 471 tonnes per week; and

(iii) 30,020 tonnes per year, subject to the following limitations:

(1) a maximum of 24,500 tonnes per year of SSO, Leaf and Yard Waste and Amendment Material for composting in the GORE Composting System; and

(2) a maximum of 5,520 tonnes of Leaf and Yard Waste and Amendment Material per year for composting in the outdoor windrow Leaf and Yard Waste composting system;

(b) for Stage 2:

(i) 320 tonnes per day;

(ii) 920 tonnes per week; and

(iii) 42,270 tonnes per year, subject to the following limitations:

(1) a maximum of 36,750 tonnes per year of SSO, Leaf and Yard Waste and Amendment Material for composting in the GORE Composting System; and

(2) a maximum of 5,520 tonnes of Leaf and Yard Waste and Amendment Material per year for composting in the outdoor windrow Leaf and Yard Waste composting system.

(5) At the Composting Facility, the City of Peterborough is approved to temporarily store a maximum of approximately 14,100 tonnes of waste in Stage 1 and a maximum approximately 17,000 tonnes of waste in Stage 2 (including the presence of all waste at the Composting Facility such as in-process waste), subject to the following:

(a) Within the Receiving Building:

(i) a maximum of 30 cubic metres of Rejected Waste and/or Residual Waste within a roll-off bin; and

(ii) a maximum of approximately 460 cubic metres of Organic Waste to be located on the 15 m x 29 m tipping floor, the 28.5 m x 10 m shredding/mixing area and the 22.4 m x 19.3 m storage area (note: for reference purposes only, this is equivalent to approximately 300 tonnes);

(b) Within the GORE Composting System:

(i) Under Stage 1, a maximum of eight (8) bunkers, with each bunker containing a maximum of approximately 1,030 cubic metres (8 m wide x 50 m long x 3.7 m tall piles) of Organic Waste Mix and/or Immature Compost, for a total of up-to approximately 8,240 cubic metres of Organic Waste Mix and/or Immature Compost (note: for reference purposes only, this is equivalent to approximately 5,750 tonnes); and

(ii) Under Stage 2, a maximum of twelve (12) bunkers, with each bunker containing a maximum of approximately 1,030 cubic metres (8 m wide x 50 m long x 3.7 m tall piles) of Organic Waste Mix and/or Immature Compost, for a total of up-to approximately 12,360 cubic metres of Organic Waste Mix and/or Immature

Compost (note: for reference purposes only, this is equivalent to approximately 8,600 tonnes);

(c) a maximum of approximately 3,750 cubic metres (20 m x 50 m x 5 m wide pile) of Amendment Materials and Leaf and Yard Waste within the designated outdoor excess Leaf and Yard Waste storage area (note: for reference purposes only, this is equivalent to approximately 1000 tonnes);

(d) Within the outdoor windrow Leaf and Yard Waste composting system for the active composting and curing of Leaf and Yard Waste, a maximum of ten (10) static windrows, with each windrow containing a maximum of approximately 370 cubic metres (4.5 m wide x 50 m long x 2.2 m tall piles) of Organic Waste Mix and/or Immature Compost, for a total of up-to approximately 3,700 cubic metres of Organic Waste Mix and/or Immature Compost (note: for reference purposes only, this is equivalent to approximately 2,400 tonnes);

(e) Within the outdoor aerobic windrow curing system for the curing of Immature Compost from the GORE Composting System, a maximum of fifteen (15) static windrows, with each windrow containing a maximum of approximately 370 cubic metres (4.5 m wide x 50 m long x 2.2 m tall piles) of Immature Compost and/or Finished Compost, for a total of up-to approximately 5,500 cubic metres of Immature Compost and/or Finished Compost (note: for reference purposes only, this is equivalent to approximately 3,000 tonnes);

(f) a maximum of approximately 1,030 cubic metres of Immature Compost and/or Finished Compost within the designated outdoor screening area; and

(g) a maximum of two (2) Finished Compost and/or Compost stockpiles within the designated outdoor Finished Compost storage area, each containing a maximum of approximately 1,640 cubic metres (25 m in diameter x 10 m high), for a total of up-to approximately 3,280 cubic metres of Finished Compost and/or Compost (note: for reference purposes only, this is equivalent to approximately 1,680 tonnes).

(6) No waste shall be stored at any part of the Composting Facility other than those identified in Condition 8(5) at any time.

(7) In the event that Organic Waste cannot be processed at the Composting Facility and the Composting Facility is at its approved waste storage capacity, the City of Peterborough shall cease accepting additional Organic Waste. Receipt of additional waste may be resumed once such receipt complies with the waste storage limits approved in this Approval.

(8) Despite Conditions 2(17), (18) and (19), the Residual Waste and Rejected Waste generated within the Receiving Building shall be:

(a) stored within the designated roll-off bin within the confines of the Receiving Building at all times;

(b) segregated from all other waste; and

(b) removed from the Receiving Building within forty eight (48) hours from the time of it's receipt for final disposal in the the Landfill or disposal at an approved waste disposal site in accordance with Reg. 347 and the EPA.

(9) The City of Peterborough shall ensure that all waste storage is undertaken in a manner that does not cause an Adverse Effect or a hazard to the environment or any person.

(10) No storage of incoming Organic Waste in its transportation vehicle is approved under this Approval.

Development, Expiry of Approval and As-Built Drawings

(11) (a) Prior to receiving the waste quantity set out in Condition 8(4)(a) for Stage 1, the City of Peterborough shall construct and install all of the Composting Facility's processes, working areas and supporting units described under Stage 1 in Schedule "C".

(b) Stage 1 of the Composting Facility shall be constructed and the approved processes, working areas and supporting units shall be installed and must commence operation, as set out in Condition 8(11)(a), within five (5) years of issuance of this Approval, after which time the Approval for Stage 1 ceases to apply if the Composting Facility has not been constructed and installed in accordance with Condition 8(11)(a). In the event that the construction, installation and/or operation of any portion of Stage 1 of the Composting Facility is anticipated to be delayed beyond the time period stipulated, the City of Peterborough shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).

(c) Prior to receiving the waste quantity and types set out in Condition 8(4)(c) for Stage 2, the City of Peterborough shall construct and install all of the Composting Facility's processes, working areas and supporting units described under Stage 2 in Schedule "C".

(d) Stage 2 of the Composting Facility shall be constructed and the approved processes, working areas and supporting units shall be installed and must commence operation, as set out in Condition 8(11)(c), within ten (10) years of issuance of this Approval, after which time the Approval for Stage 2 ceases to apply if the Composting Facility has not been constructed and installed in accordance with Condition 8(11)(c). In the event that the construction, installation and/or operation of any portion of Stage 2 of the Composting Facility is anticipated to be delayed beyond the time period stipulated, the City of Peterborough shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).

(e) Within thirty (30) calendar days of commencement of construction of each stage, the City of Peterborough shall prepare and submit to the District Manager a schedule for the completion of construction and commissioning operation of the respective Composting Facility stage. The City of Peterborough shall notify the District Manager within thirty (30) days of the commissioning operation of each stage of the Composting Facility.

Upon completion of construction of each stage of the Composting Facility, the City of Peterborough shall prepare and submit a statement to the District Manager, certified by a Professional Engineer, that the Composting Facility has been constructed in accordance with this Approval.

(f) Upon the construction of each stage, the City of Peterborough shall update the Change Log in the Design and Operations Report to record the completion of construction and declare that the design conforms with Schedule "C". All supporting information including technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the design conforms with Schedule "C" shall remain on-site for future inspections.

(12) Within ninety (90) days from the construction of Stages 1 and 2 of the Composting Facility, a set of as-built drawings or updated as-built drawings, as appropriate, certified by a Professional Engineer and showing the Composting Facility as constructed shall be prepared and kept at the Site.

Organic Waste Handling:

(13) The following waste management activities are approved at the Composting Facility in this Approval:

a. receipt, temporary storage and transfer of Organic Waste; and
b. processing of the Organic Waste, including the following Organic Waste management activities:
    i. mixing of the Organic Waste within the Receiving Building to generate the Organic Waste Mix;
    ii. shredding of the Organic Waste Mix destined for the Composting process within the Receiving Building;
    iii. grinding of Leaf and Yard Waste and Amendment Materials at the outdoor excess Leaf and Yard Waste storage area;
    iv. thermophilic Composting of the Organic Waste Mix that contains SSO within the GORE Composting System only;
    v. curing of the Immature Compost from the GORE Composting System within the outdoor aerobic windrow curing system;
    vi. thermophilic Composting and curing of the Organic Waste Mix that does not contain SSO within the outdoor windrow Leaf and Yard Waste composting system;
    vii. screening of the Immature Compost and Finished Compost, as required; and
    viii. shredding/grinding of wooden overs destined for re-use in the Composting process, as required.

(14) The City of Peterborough shall ensure that the Organic Waste management at the Composting Facility is carried out in accordance with the following requirements:

a. a waste tracking system shall be established and implemented for all waste received, in-process, processed, temporarily stored and transferred from the Composting Facility;

b. all incoming SSO shall be received, unloaded and temporarily stored within the confines of the Receiving Building, at all times;
c. all incoming Amendment Materials and Leaf and Yard Waste shall be received, unloaded and temporarily stored within the confines of the Receiving Building or on the designated excess Leaf and Yard Waste outdoor storage pad, at all times;
d. the City of Peterborough shall ensure that all incoming SSO, Leaf and Yard Waste and Amendment Materials are shredded and mixed into the Organic Waste Mix within the confines of the Receiving Building, at all times;
e. the SSO received in the Receiving Building shall be mixed into the Organic Waste Mix and transferred into the GORE Composting System within twenty-four (24) hours of receipt;
f. the Leaf and Yard Waste and Amendment Materials received in the Receiving Building shall be mixed into the Organic Waste Mix and transferred into a composting system within five (5) days of receipt;
g. Leaf & Yard Waste stored outdoors shall be transferred into a composting system within one (1) month of receipt or more frequently as needed to prevent odour impacts;
h. if needed, the outdoor Leaf and Yard Waste storage stockpile shall be turned at a rate frequent enough to reduce the likelihood of anaerobic conditions and odours arising within the stockpiles;
i. all storage, processing, Composting and other waste management activities shall take place in designated areas outdoors as set out in the supporting documentation listed in the attached Schedule "A";
j. during the fifteen-day pasteurization phase of the active Composting process within the outdoor windrow Leaf and Yard Waste composting system, the windrows shall be turned a minimum of five (5) times;
k. during the remainder of the active Composting process within the outdoor windrow Leaf and Yard Waste composting system, the windrows shall be turned at a frequency necessary to ensure compliance with the process operating criteria set out in this Approval;
l. during the curing phase, the Immature Compost shall be turned at least once per month, or more frequently if required, to maintain aerobic conditions;
m. in circumstances where it is not feasible to turn windrows as required in this Approval (e.g., during the extreme weather conditions or cold causing frozen material) and the turning frequency is decreased, the minimum Composting durations shall account for the time periods during which the biological activity becomes dormant or turning is not feasible;
n. only clean water shall be used to moisten the waste undergoing active Composting and curing, and any areas needed for dust control purposes;
o. wastewater collected at the Site may be used to moisten the waste prior to the start of the pasteurization phase of Composting, only if the use of the wastewater does not result in odorous discharges to the natural environment;
p. for each category of Compost produced at the Site, the progress of Composting through all of its stages shall be tracked; and

q. all windrows producing different categories of Compost, waste or NASM shall be kept separated.

(15) All activities approved under Condition 8(13) shall only be carried out by appropriately Trained Personnel.

(16) The City of Peterborough shall ensure that adequate lighting for the Composting waste inspection areas is provided to ensure proper waste inspection/screening.

(17) Unless otherwise specified in this Approval, the approved Composting activities shall be carried out as set out in the documents in the attached Schedule "A".

Cross-Contamination Prevention:

(18) The City of Peterborough shall ensure that the incoming Organic Waste and the equipment used in handling of the incoming Organic Waste are kept separate and do not come in contact with the Immature Compost / the Finished Compost and Compost except where the Immature Compost / the Finished Compost and Compost are being fed back into the Composting process.

(19) The City of Peterborough may use equipment utilized in processing of incoming Organic Waste to process the Immature Compost / the Finished Compost and Compost provided that the equipment has been cleaned and disinfected to prevent the Immature Compost / the Finished Compost and Compost from being contaminated by the incoming Organic Waste.

(20) If the same equipment is used in production of different categories of Compost, the City of Peterborough shall ensure that the equipment is cleaned before use in a different process.

General Requirements for Sampling and Analysis

(21) The City of Peterborough shall maintain a Quality Assurance/Quality Control (QA/QC) program for sampling and analysis of the Organic Waste, Immature Compost and the Finished Compost, as required by this Approval.

(22) All required analytical results shall be from a laboratory service provider accredited to the ISO/IEC:17025:2005 standard.

(23) The City of Peterborough shall contact their laboratory service provider for recommended sample preparation methods, sample containers, and other materials and instructions for sample collection and handling and shall prepare a written sampling protocol. This protocol shall be made available to the Ministry staff, upon request.

(24) The Organic Waste, Organic Waste Mix, Immature Compost, and Finished Compost

sampling/composite sample preparation and testing methods and procedures shall be as set out in Appendix 1 and Appendix 2 of the Standards Document.

(25) Retesting due to sample failure is as set out in the Standards Document.

Waste Screening and Quality Control of the Incoming Organic Waste

(26) Prior to being accepted, the City of Peterborough shall ensure all incoming Organic Waste loads are visually inspected by Trained Personnel to ensure only wastes approved under this Approval are received at this Site for Composting, and that incoming loads contain only incidental amounts of other waste materials.

(27) If any incoming waste load is known to, or is discovered to, contain unapproved waste, that load shall not be accepted at the Site.

(28) In the event that waste that is not approved under this Approval is inadvertently accepted at the Site, the City of Peterborough shall refuse receipt of the unapproved waste and return this Rejected Waste to the generator if it is safe to do so. If return of the Rejected Waste is not feasible, then the waste shall be re-directed to the designated Rejected Waste storage area.

(29) The Organic Waste or an additive necessary for Composting received at the Site for Composting shall not exceed the maximum concentrations for metals listed in Column 2, Table 3.2 of the Standards Document. Until such a time that the Standards Document dated July 25, 2012 is amended, the Organic Waste must not exceed the metal concentrations in Column 2, Table 3.2 of Schedule "D".

(30) The City of Peterborough shall ensure that all incoming Organic Waste accepted at this Site for Composting is characterized for metals in accordance with the requirements of this Approval.

(31) If the City of Peterborough relies on the published data for the well-studied/characterized Organic Waste feedstocks (e.g., Leaf and Yard Waste, wood, etc.), the latest published information shall be used to confirm that the Organic Waste feedstocks received at the Site and are destined to be processed into Compost at the Site comply with the feedstock standards from the Standards Document.

(32) If the published data is not available or used to confirm compliance of the Organic Waste with the feedstock standards from the Standards Document, the City of Peterborough shall:

a. establish the incoming Organic Waste feedstock sampling/testing protocol as set out in Appendix 1 and Appendix 2 of the Standards Document;
b. sample and analyze representative samples of the Organic Waste to be received at the Site prior to receipt at the Site for Composting;
c. sample the incoming Organic Waste on a monthly basis for a period of one (1) year

or until a consistent characteristic profile is obtained or for Organic Waste which are received less frequently than monthly, sample each incoming load for a period of one (1) year, or until a consistent characteristics profile is obtained; and

d. sample the incoming Organic Waste when the characteristics of the Organic Waste have changed.

(33) Notwithstanding the provisions of Condition 8(32) above, the City of Peterborough shall periodically sample the incoming Organic Waste for which consistent characteristics have been obtained to confirm that the Organic Waste has not changed.

(34) If at any time, the average concentration of any regulated metal in the Finished Compost is found to be greater than 80% of the concentration limit for the Category AA Compost set out in Condition 8(29), the City of Peterborough shall carry out testing of the incoming Organic Waste.

(35) Based on demonstrated compliance with the feedstock characterization requirements from Conditions 8(30) to (34), the City of Peterborough may designate the generator as a pre-approved source.

(36) At the weigh scale, the Trained Personnel shall ensure that all loads of the incoming Organic Waste being accepted at the Site are accompanied by documentation containing the results of the required waste characterization or showing the origin of the Organic Waste, if generated by a source considered to be well-studied and classified by the City of Peterborough as a pre-approved generator of the Organic Waste.

(37) The Organic Waste that has not been characterized in accordance with this Approval or that is not accompanied by the required documentation shall not be accepted at the Site and shall immediately be directed off-Site.

(38) The Trained Personnel shall visually inspect the incoming Organic Waste being unloaded in the unloading areas to ensure that only the approved waste types are processed at the Site.

Composting Recipe Criteria

(39) The City of Peterborough shall ensure that the Carbon to Nitrogen Ratio (C:N Ratio) of the Organic Waste Mix prior to its incorporation into the Composting process is maintained between 25:1 and 35:1 with the target of 30:1.

(40) The City of Peterborough shall ensure that the moisture content of the Organic Waste Mix prior to its incorporation into the Composting process is maintained between 40% and 60%.

(41) The City of Peterborough shall ensure that prior to its incorporation into the Composting process, the Organic Waste Mix has the appropriate porosity and the bulk density to

promote aerobic conditions within the windrows.

GORE Cover Operations

(42) (a) Unless otherwise required by this Approval or during loading and unloading, all Phase 1 and 2 GORE windrows shall remain covered with the GORE cover.

(b) Phase 3 GORE windrows shall have covers available for use at all times should the need for covering the windrows arise.

(c) if an malodorous situation is detected in the Phase III GORE windrows, the City of Peterborough shall manage or cover all material in the windrow(s) in accordance with the following:

(i) The material must be moved out of Phase III GORE windrows and reintroduced back into the composting process within 12 hours; and

(ii) If the material cannot be moved in accordance with Condition 8(42)(c)(i) above due to capacity limitations, the material must be immediately covered with GORE cover(s) until it is able to be moved.

(d) If a complaint involving odour is received by the Owner or the Ministry, the City of Peterborough shall carry out the activities required under Condition 8(42)(c) unless there is evidence that the odour is coming from another source.

(e) Removal of the GORE cover for any reason shall only be done during favourable weather conditions.

Compost Processing and Monitoring Requirements

(43) The City of Peterborough shall ensure that the moisture content of:

(a) the Organic Waste Mix undergoing active Composting is maintained on average between 40% and 60% per batch; and

(b) the Immature Compost undergoing curing is maintained on average between 40% and 60% per batch.

(44) The moisture of the waste shall be monitored and recorded:

(a) once the Organic Waste Mix has been generated for Composting (applies to both Composting systems);

(b) each time the waste is transferred within the GORE Composting System (e.g., Phase 1 to Phase 2, Phase 2 to Phase 3 and Phase 3 to curing);

(c) at the beginning of curing for the outdoor windrow Leaf and Yard Waste composting system; and

(d) at a minimum of once every two weeks during curing (applies to both Composting systems).

(45) For the purpose of verifying compliance with the:

(a) moisture requirement under Conditions 8(40) and (43)(a), the City of Peterborough shall monitor the moisture within the Organic Waste Mix using the following methods:

(i) the procedure(s) set out in the BNQ Industry Standard, CAN/BNQ 0413-200/2005 *Organic soil conditioners - Composts;* or

(ii) the squeeze test in accordance with the document entitled "Best Practices for Operating an Aerated Windrow Composting Facility", prepared by The Compost Council of Canada for Manitoba Conservation and Water Stewardship, dated 2016; and,

(b) the standard moisture requirement under Condition 8(43)(b), the City of Peterborough shall test the moisture level within the Immature Compost undergoing curing using the procedure(s) set out in the BNQ Industry Standard, CAN/BNQ 0413-200/2005 *Organic soil conditioners - Compost* .

(46) The City of Peterborough shall use best efforts to ensure that the oxygen content of the Organic Waste Mix and Immature Compost undergoing GORE Composting is maintained above 10%, with a target of 12-18%, at all times.

(47) The City of Peterborough shall initiate appropriate remedial measures to increase the oxygen content of the Organic Waste Mix or Immature Compost undergoing Composting:

(a) within one (1) hour of identifying the oxygen content excursions at or below 5% within the Organic Waste Mix; and

(b) within one (1) day of identifying the oxygen content excursions at or below 5% within the Immature Compost.

(48) (a) Temperature and oxygen shall be measured within the windrows within the GORE Composting System at the locations that will provide representative pasteurization temperature readings and oxygen readings as described in the supporting documentation in the attached Schedule "A".

(b) Temperature shall be measured within the windrows within the outdoor windrow Leaf and Yard Waste composting system and the windrows within the outdoor aerobic windrow curing area for the GORE Composting System:

(i) at a depth of one (1) metre from the surface of the waste undergoing Composting; and

(ii) every fifteen (15) metres along the length of the Composting windrow section or at six (6) representative locations, whichever method yields more locations.

(49) (a) The temperature and oxygen content of the waste within the GORE Composting System shall be monitored and recorded on a continuous basis.

(b) The temperature of the waste undergoing curing in the outdoor aerobic windrow curing area for the GORE Composting System shall be monitored and recorded weekly during the curing phase.

(c) The temperature of the waste within the outdoor windrow Leaf and Yard Waste

composting system shall be monitored and recorded daily during the active Composting phase and weekly during the curing phase.

(50) Where continuous automated temperature monitoring is used, the compliance with the pasteurization requirement may be demonstrated on the basis of daily averages using all data points acquired over a twenty four (24) hour period.

(51) The City of Peterborough shall ensure that the temperature of the Immature Compost does not exceed 65 degrees Celsius and that within four (4) hours of identifying the temperature excursions above this level, appropriate remedial measures to lower the Composting temperature to the required level are initiated.

(52) The City of Peterborough shall ensure that the curing phase does not start until the Organic Waste Mix has completed the active Composting phase under Condition 8(54) and the temperature monitoring required by this Approval demonstrates reduced temperatures of equal to or less than 50°C.

(53) The oxygen and moisture monitoring frequencies may be modified by the Director in writing after two (2) years of successful monitoring results in accordance with this Approval.

Quality Control of the Finished Compost

(54) Compost shall comply with the pathogen reduction Compost Quality Standards set out in the Standards Document. Until such a time that the Standards Document dated July 25, 2012 is amended, the Organic Waste Mix is considered to be Immature Compost when it complies with the following pathogen reduction requirements:

a. using the windrow composting method, the Organic Waste Mix has been maintained at a minimum temperature of 55 degrees Celsius for at least fifteen (15) cumulative days. Also, during the high temperature period, the windrow has been turned at least five times; or
b. using the GORE Composting System, the Organic Waste Mix has been maintained at a minimum temperature of 55 degrees Celsius for at least three (3) consecutive days AND the Organic Waste Mix does not exceed the following pathogen concentrations:
    i. 1,000 colony forming units (CFU) E. coli or most probable number (MPN)/gram total solids (on a dry weight basis); and
    ii. 3 MPN Salmonella/4 grams total solids (on a dry weight basis, based on an analysis of the entire 4g sample).

(55) Compost shall comply with the maturity requirements set out in the Standards Document. Until such a time that the Standards Document dated July 25, 2012 is amended, Immature Compost is considered to be Finished Compost when it complies with the following maturity requirements:

a. the Immature Compost has been maintained at ≥ 40% moisture during curing; and

b. using the windrow composting method for Leaf and Yard Waste:
    i. the Immature Compost has been cured for a minimum period of six (6) months from the day the last portion of material went into the batch; or
    ii. the Immature Compost has been cured for a minimum period of twenty one (21) days from the day the last portion of material went into the batch, and the respiration rate is:
        1. less than, or equal to, 400 milligrams of oxygen per kilogram of volatile solids (on a dry weight basis) per hour; or
        2. less than, or equal to, 4 milligrams of carbon in the form of carbon dioxide per gram of organic matter (on a dry weight basis) per day; or
c. using the GORE Composting System, the Immature Compost has been cured for a minimum period of twenty one (21) days from the day the last portion of material went into the batch, and the respiration rate is:
    i. less than, or equal to, 400 milligrams of oxygen per kilogram of volatile solids (on a dry weight basis) per hour; or
    ii. less than, or equal to, 4 milligrams of carbon in the form of carbon dioxide per gram of organic matter (on a dry weight basis) per day.

(56) Compost shall comply with the metal, total foreign matter and sharp foreign matter content limits set out in the Standards Document for its intended end use criteria. Until such a time that the Standards Document dated July 25, 2012 is amended, Finished Compost is considered to be Compost when it complies with the following requirements:
a. Finished Compost must not contain regulated metals in a concentration that exceeds any of the limits set out in Table 3.1 of the Standards Document, as calculated on a dry weight basis, for the applicable end-use of the Organic Waste processed at the Site. Until such a time that the Standards Document dated July 25, 2012 is amended, Finished Compost must not exceed the metal concentrations in Table 3.1 of Schedule "D" for the applicable end-use of the Organic Waste processed at the Site.
b. Finished Compost shall comply with the total foreign matter content and sharp foreign matter content limits set out in Table 3.3, of the Standards Document, as calculated on a dry weight basis, for the applicable end-use of the Organic Waste processed at the Site. Until such a time that the Standards Document dated July 25, 2012 is amended, Finished Compost must not exceed the foreign matter content and sharp foreign matter concentrations in Table 3.3 of Schedule "D" for the applicable end-use of the Organic Waste processed at the Site.

(57) Prior to being transferred from the Site for its intended end use, the City of Peterborough shall:
a. conduct quality control testing of the Finished Compost in accordance with the requirements set out in the Standards Document and listed in Conditions 8(54) to (56) above; and
b. ensure that all Composting records for the Finished Compost demonstrate compliance with the temperature and residence time requirements for pathogen inactivation set out in the Standards Document and listed in Condition 8(54), above.

Compost End Use Requirements

(58) Finished Compost is considered to be Compost when it complies with Compost Quality Standards for the intended end use category.

(59) Finished Compost which does not exceed the maximum concentrations for metals as set out in Column 2 of Table 3.1 of the Standards Document and which complies with the foreign matter quality requirements, the maturity criteria, the pathogen reduction requirements and the pasteurization temperature and residency time requirements set out in the Standards Document may be transferred off Site:

a. for unrestricted use as Category AA Compost; or
b. for use as a non-agricultural source material in accordance with the NMA.

(60) Finished Compost which does not exceed the maximum concentrations for metals as set out in Column 3 of Table 3.1 of the Standards Document and which complies with the foreign matter quality requirements, the maturity criteria, the pathogen reduction requirements and the pasteurization temperature and residency time requirements set out in the Standards Document may be transferred off Site:

a. for unrestricted use as Category A Compost, provided that the labelling requirements as specified in the Standards Document are met; or
b. for use as a non-agricultural source material in accordance with the NMA.

(61) Finished Compost which does not exceed the maximum concentrations for metals as set out in Column 4 of Table 3.1 of the Standards Document and which complies with the foreign matter quality requirements, the maturity criteria, the pathogen reduction requirements and the pasteurization temperature and residency time requirements set out in the Standards Document may be transferred off Site:

a. for use as a non-agricultural source material in accordance with the NMA; or
b. for use at a waste disposal facility approved to receive this type of waste.

(62) Finished Compost which does not exceed the maximum concentrations for metals as set out in Table 3.1 of the Standards Document and which complies with the foreign matter quality requirements, the pathogen reduction requirements and the pasteurization temperature and residency time requirements but not with the maturity requirements set out in the Standards Document is considered to be an Immature Compost and a waste and shall:

a. be re-tested and/or shall continue to undergo curing at the Site; or
b. be disposed of as waste at a waste disposal site approved by the Ministry, or its equivalent if in jurisdictions outside of Ontario, to accept such waste.

(63) Finished Compost which does not exceed the maximum concentrations for metals as set out in Table 3.1 of the Standards Document and which complies with the foreign matter quality requirements, the maturity requirements but not with the pathogen reduction requirements and the pasteurization temperature and residency time requirements set out in the Standards Document is considered to be a waste and shall:

a. be returned to the Composting process for pasteurization as set out in this Approval; or
b. be disposed of as waste at a waste disposal site approved by the Ministry, or its equivalent if in jurisdictions outside of Ontario, to accept such waste.

(64) If Finished Compost exceeds the maximum concentrations for metals in Compost for its intended end use, as set out in Table 3.1 of the Standards Document, but meets the maximum concentrations for metals in feedstock listed in Table 3.2 of the Standards Document, it may be returned to the Composting process as waste for re-processing.

Best Management Plan

(65) The City of Peterborough shall ensure that a Best Management Practices Plan for the control of litter from the Site is prepared, maintained and implemented at the Site.

Closure Plan

(66) The City of Peterborough shall submit, for approval by the Director, a written Composting Facility Closure Plan at least four (4) months prior to the permanent closure of the Composting Facility. This plan must include, as a minimum, a description of the work that will be done to facilitate closure of the Composting Facility and a schedule for completion of that work.

(67) Within ten (10) days after closure of the Composting Facility, the City of Peterborough shall notify the Director, in writing, that the Composting Facility is closed and that the Closure Plan has been implemented.

9. MONITORING

Reasonable Use

(1) The Site shall be operated in such a way to ensure compliance with the Reasonable Use Guideline at monitoring points along the Site's property line.

Monitoring Program

(2) Monitoring programs shall be carried out for leachate, groundwater, private wells, surface water, landfill gas in accordance with the Environmental Monitoring Plan outlined in Schedule "B" of this Approval.

(3) The Site environmental monitoring programs shall be continually evaluated and enhanced as required by the ministry or as recommended in the Annual Report.

(4) The Owner shall implement the landfill monitoring recommendations outlined in the memorandums from Shawn Kinney, Hydrogeologist, Ministry, dated March 5, 2014 and B.W. Metcalfe, Surface Water Specialist, Ministry, dated December 19, 2013.

(5) Prior to construction of the Composting Facility, the City of Peterborough shall collect:
   (a) the static bedrock and overburden groundwater elevations at all wells listed in Table F of Schedule "B"; and
   (b) at least one round of water quality samples from all domestic and agricultural wells within a 500m radius of the site. Analysis for the contaminants of concern and all parameters included in the appendix D-5-5 Private Wells: Water Supply Assessment. Where access is not granted to collect a sample, written confirmation, including the dated letter circulated to the property owners, shall be forwarded to the Ministry.

(6) Prior to the initial commencement of operations at the Composting Facility, the City of Peterborough shall conduct predictive modelling of the potential leachate plume. The potential leachate plume modelling results shall be included in the Annual Report each year.

(7) (a) Prior to installing/finalizing the three (3) wells that are to-be-determined (TBD) under Table F of Schedule "B" and by no later than three (3) months following construction of the Composting Facility, the City of Peterborough shall submit Site Plan(s) identifying the three (3) proposed TBD monitoring locations to the District Manager for written concurrence.

(b) The monitoring wells identified in Condition 9(7)(a) shall be installed within (3) months of receiving written concurrence from the District Manager.

Landfill Groundwater Contingency Plan and Trigger Mechanism

(8) The trigger concentration for groundwater quality shall be 80% of the Guideline B-7 values for all parameters that have an Ontario Drinking Water Standards value.

(9) Groundwater chemical concentrations must be assessed with the trigger concentrations within twelve (12) weeks of sample collection.

(10) The assessment process for the Landfill's groundwater quality is detailed in Item 36, 37 and 38 of Schedule "A".

(11) If the District Manager determines that the Landfill's leachate collection is not successful and that the monitoring program indicates that contamination will potentially be migrating off-site, or, if leachate springs and/or outbreaks down gradient of manhole J1 occur, the Owner must install and operate the contingency program outlined in the appended documents as defined by Items 24, 29, 36, 37 and 38 of Schedule "A" of this Approval and as instructed by the District Manager. The District Manager may, at any time, instruct the Owner to implement the recommendations made in the monitoring report.

Composting Facility Groundwater Contingency Plan and Trigger Mechanism

(12) The City of Peterborough shall update the Reasonable Use Criteria (RUC) limits set out in Table

8 of the Compost Facility's Hydrogeological Report (Item 57 of Schedule "A") every 5 years from the date of the ECA.

(13) The trigger concentrations for the groundwater trigger wells listed in Table F of Schedule "B" shall be 80% of the Guideline B-7 RUC limits under Condition 9(12) for all parameters that have an Ontario Drinking Water Standards value.

(14) If three (3) leachate indicator parameters exceed the trigger concentrations at the trigger wells described under Condition 9(13) during three (3) consecutive monitoring events, the City of Peterborough shall:
- (a) Immediately conduct an investigation into the source of the contamination to determine a list of corrective actions;
- (b) Submit the proposed findings and corrective actions to the District Manager within one (1) month of receiving the analytical results for the third consecutive monitoring event described under this condition; and
- (c) If leachate is confirmed to be the source:
  - (i) increase the groundwater sampling frequency indentified in Table F to quarterly; and
  - (ii) prepare and submit a Corrective Action Plan, that includes the proposed corrective actions to prevent exceedance of RUC limits at the Site property line, to the Director for approval within three (3) months of receiving written concurrence from the District Manager for the proposed corrective actions.

(15) If three (3) leachate indicator parameters exceed the RUC concentration limits under Condition 9(12) during three (3) consecutive monitoring events at the leachate well listed in Table F of Schedule "B", the City of Peterborough shall:
- (a) Immediately conduct an investigation into the potential leakages of the Composting Facility leachate collection system to determine a list of corrective actions;
- (b) Submit the proposed findings and corrective actions to the District Manager within three (3) months of receiving the analytical results for the third consecutive monitoring event described under this condition;
- (c) Increase the groundwater sampling frequency identified in Table F to quarterly; and
- (d) Submit the proposed corrective actions under Sub-condition (b) to the Director for approval within three (3) months of receiving written concurrence from the District Manager for the proposed corrective actions.

Surface Water Contingency Plan and Trigger Mechanism

(16) The trigger mechanisms for surface water quality shall be one of the following:
- (a) Where off-site surface water quality satisfies the Ministry's PWQO, the respective PWQO shall be used as a trigger concentration; and
- (b) Where the background surface water quality naturally exceeds the PWQO, the background concentration should be considered in evaluating and updating the trigger concentration.

(17) Surface water quality results will be assessed with the trigger concentrations within twelve (12) weeks of sample collection.

(18) The assessment process for surface water quality and response to results above the trigger concentration are as detailed in Item 36, 37, 38 and 57 of Schedule "A".

Groundwater Monitors

(19) The Owner shall ensure all groundwater monitoring wells are properly capped, locked and protected from damage when not in use.

(20) Any groundwater monitoring wells included in the monitoring program shall be assessed, repaired, replaced or decommissioned as required.

(21) The Owner shall repair or replace any monitoring well which is destroyed or in any way made inoperable for sampling such that no more than one sampling event is missed.

(22) All monitoring wells that are no longer required as part of the groundwater monitoring program shall be decommissioned in accordance with good standard practice that will prevent contamination through the abandoned well and in accordance with Ontario Regulation 903.

(23) A report on the decommissioning referred to in Condition 9(22) of this Approval shall be provided in the Annual Report for the period during which the well was decommissioned.

Landfill Gas Monitoring and Subsurface Migration

(24) The updated landfill gas monitoring program, listed as Item 56 in Schedule "A" is hereby approved.

(25) The Owner shall ensure that all on-Site buildings/structures and all future buildings/structures have methane detection and alarm equipment installed and maintained, with active venting or an effective passive venting system to relieve any possible landfill gas accumulation if necessary.

(26) Subsurface migration of combustible methane gas shall meet the following limits, as required by Ontario Reg. 232/98:

(a) The concentration of methane gas must be less than 2.5 percent by volume at the limits of the property boundary;

(b) The concentration of methane gas must be less than 1.0 percent by volume (15% of the Lower Explosive Limit of methane) in any on-Site building or enclosed structure, and in the area immediately outside the foundation or basement floor of the building or structure that is located on-Site, if the building or structure is accessible by people or contains electrical equipment or a potential source of ignition;

(c) Sub-condition (b) does not apply to a leachate collection, storage or pumping station or a landfill gas collection and/or treatment facility for which specific Occupational Health and Safety measures and procedures relating to the risk of asphyxiation and the risk of explosion, must be followed; and

(d) The concentration of methane gas from the Site in any off-site building or enclosed structure, and in the area immediately outside the foundation or basement floor of the building or structure, if the building or structure is accessible by people or contains electrical equipment or a potential source of ignition, must be less than 0.05 percent by volume.

(27) If a measured gas concentration at any specific compliance location, reaches the applicable limit identified in Conditions 9(26)(a) and (b) above, the Owner shall undertake additional monitoring, or if a notification is given that gas concentration has reached the limit specified in Condition 9(26)(d), above, or if landfill gas concentrations exceed 10% of the Lower Explosion Level (LEL), the reading shall be re-measured to assess the source and pathway of methane to determine if the elevated concentrations are landfill related. If these readings confirm an exceedance of the applicable limit, the District Manager shall be notified immediately, and appropriate control measures shall be implemented as soon as possible thereafter.

(28) In the event a result of a monitoring test exceeds the trigger mechanisms detailed in Conditions 9(26) and (27) of this Approval, the Owner shall:
(a) notify the District Manager, and the PLC of any trigger level exceedances within twenty four (24) hours of receipt of the results;
(b) conduct an investigation into the cause of the adverse result and submit a report to the District Manager that includes an assessment of whether contingency measures need to be carried out;
(c) if contingency measures are needed, submit detailed plans, specifications and descriptions for the design, operation and maintenance of the contingency measures, and a schedule as to when these measures will be implemented, to the Director and notify District Manager; and
(d) implement the required contingency measures upon approval by the Director.

(29) If the elevated concentrations are landfill related, the Owner shall undertake contingency measures.

Changes to the Monitoring Plan

(30) Changes to the Environmental Monitoring Plan outlined in Schedule "B" of this Approval shall be submitted to the District Manager for review by the Ministry's Regional Technical Support Section prior to submission to the Director for approval.

(31) The Owner shall provide a copy of any requests for modification to the monitoring program to the PLC at the same time or prior to the time that such request is made to the District Manager.

(32) Changes to the Environmental Monitoring Plan outlined in Schedule "B" of this Approval for which the Owner has received written concurrence from the District Manager shall be submitted to the Director for approval prior to implementation.

(33) Upon completing one (1) year of monitoring in accordance with Table F of Schedule "B":

(a) the City of Peterborough may cease the monitoring of the BTEX parameters identified in Table F of Schedule "B";
(b) the City of Peterborough shall submit a report detailing the BTEX monitoring results to the District Manager for review by the Ministry's Regional Technical Support Section, including a discussion on whether further BTEX monitoring is required; and
(c) if the District Manager provides a written notice that further BTEX monitoring is required based on a review of the BTEX monitoring report, the City of Peterborough shall submit this notice to the Director for approval within thirty (30) days of the receipt of said notice.

10. INSPECTIONS AND RECORD KEEPING

Daily Inspections:

(1) Within thirty (30) days from the issuance of this Approval, the Owner shall prepare a comprehensive written inspection program which includes procedures for inspections of all aspects of the Site's operations including, but not limited to, the following:
a. waste loading/unloading/storage areas including the condition of the Receiving Building and its ventilation system and the air pollution control equipment;
b. condition of all major pieces of the Organic Waste processing equipment;
c. condition of all instruments including but not limited to the instruments for monitoring the Composting process parameters;
d. security fence and property line;
e. presence of excessive fugitive dust emissions from the operation of the Site;
f. presence of the on and off-Site litter;
g. presence of vector and vermin;
h. presence of off-Site odours; and
i. condition of all run-off drainage, collection and storage facilities.

(2) The inspections required in Condition 10(1) shall be undertaken daily by Trained Personnel in accordance with the inspection program to ensure that all equipment and facilities at the Site are maintained in good working order at all times and that no off Site impacts are occurring. Any deficiencies detected during these regular inspections must be remedied immediately, including temporarily ceasing operations at the Site if needed.

Monthly Inspections

(3) The Owner shall inspect the Site monthly for the following items as a minimum:
(a) Erosion rills;
(b) General settlement areas or depressions;
(c) Shear and tension cracks;
(d) Condition of surface water drainage works;
(e) Erosion and sedimentation in surface water drainage system;
(f) Presence of any ponded water;
(g) Adequacy of cover material;
(h) Evidence of vegetative stress;

(i) Condition of groundwater monitoring wells and gas wells;
(j) Presence of insects, vermin, rodents and scavenging animals;
(k) The amount of litter at the Site;
(l) Condition of fence surrounding the Site; and,
(m) General Site appearance.

(4) The Owner shall inspect the Site weekly for presence of leachate seeps.

Critical Spare Parts:

(5) The Owner shall prepare a list of critical spare parts and update this list annually or more frequently, if necessary, to ensure that this list is maintained up-to-date. The list shall be retained at the Site and be made available for inspection by a Provincial Officer, upon request.

(6) The Owner shall ensure that the critical spare parts are available at the Site at all times or be immediately available from an off-Site supplier.

Preventative Maintenance:

(7) The Owner shall develop and implement a preventative maintenance program for all on-Site equipment associated with the processing and managing of waste and control of odour, noise and dust emissions. The preventative maintenance program shall be maintained up-to-date, be retained at the Site and be available for inspection by a Provincial Officer, upon request.

Daily Activity Log:

(8) The Owner shall update and maintain a written or digital record of daily activities undertaken at the Site. All measurements shall be recorded in consistent metric units of measurement. The record shall include, as a minimum, the following information*;*

a. For the Landfill and Public Drop-off and Reuse Centre:
   i. the type, geographic source, date and time of arrival, hauler, and quantity (tonnes) of all waste received at the Landfill and Public Drop-off and Reuse Centre*;*
   ii. the area of the Landfill in which waste disposal operations are taking place;
   iii. calculation of the total quantity (tonnes) of waste received at the Landfill and Public Drop-off and Reuse Centre during each operating day and each operating week;
   iv. itemization of each load of contaminated soil delivered to the Landfill in accordance with this Approval;
   v. results of any test done to determine the acceptability of waste at the Landfill;
   vi. the client and type of solid non-hazardous industrial waste for each load of solid non-hazardous industrial waste received;
   vii. type and amount of daily, intermediate and final cover used;

b. For the Composting Facility:
   i. date, quantity, source and type of the Organic Waste, Amendment Materials, and

Compost received at the Composting Facility;

ii. analytical data from testing of the incoming Organic Waste or the published data and justification for using the published data;

iii. date, quantity, type, and quality (including the analytical data from any compliance testing) of Compost, by each category, transferred from the Site, including the destination of any Compost sold for non-residential purposes;

iv. date, quantity, type, quality (including the analytical data from any compliance testing) and the destination of Finished Compost that was transferred back to the Composting process to produce a different category of Compost;

v. date, quantity, type and the destination of the total Residual Waste transferred from the Site for final disposal;

vi. date, quantity, type and the destination of the Rejected Waste transferred off-Site, the reason for rejection and actions taken to prevent a recurrence in the future;

vii. waste processing activities undertaken at the Composting Facility, including shredding, grinding, screening, windrow construction, addition of moisture and windrow turning activities;

viii. monitoring and sampling activities;

ix. housecleaning activities;

x. temperature and/or oxygen excursions outside of the required levels;

xi. estimated running total of the Organic Waste temporarily stored prior to Composting, the Organic Waste Mix undergoing Composting, Immature Compost, the Finished Compost, the Residual Waste, the Rejected Waste and the Compost present at the Site;

c. For the General Site:

i. a record of any litter collection activities and the application of any dust suppressants;

ii. a description of any out-of-service period of any control, treatment, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service;

iii. emergency situations and actions taken to resolve them; and

iv. any other pertinent information required by the District Manager.

Emergency Situations

(9) The Owner shall establish and maintain a written or digital record of the emergency situations. The record shall include, as a minimum, the following:

a. the type of an emergency situation;

b. description of how the emergency situation was handled;

c. the type and amount of material spilled, if applicable;

d. a description of how the spilled material was cleaned up and waste stored, if generated; and

e. the location and time of final disposal, if applicable.

Inspections

(10) The Owner shall maintain a written or digital record of inspections as required by this Approval. The record shall include, as a minimum, the following:
   a. the name and signature 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.

Personnel Training

(11) The Owner shall maintain a written or digital record of training as required by this Approval. The record shall include, as a minimum, the following:
   a. date of training;
   b. name and signature of person who has been trained; and
   c. description of the training provided.

Sampling and Testing Records

(12) The Owner shall establish and maintain a written or digital record of all sampling and testing activities at the Site. This record shall include, as a minimum, the following information:
   a. waste sampled, sample collection locations and volume collected;
   b. day and time of collection;
   c. sample handling procedures;
   d. name of the person undertaking the sampling;
   e. parameters tested for and the results;
   f. name of the laboratory service provider facility conducting the testing, if applicable; and
   g. conclusions drawn with respect to the results of the monitoring and testing.

Monitoring Records

(13) The Owner shall establish and maintain a written or digital record of all monitoring activities at the Site as required by this Approval. This record shall include, as a minimum, the temperature, oxygen levels and moisture levels in the active Composting and curing windrows.

Complaints Response Records

(14) The Owner shall maintain a written or digital record of all complaints and the responses as required by this Approval.

Record Retention

(15) Except as authorized in writing by the Director, all records required by this Approval shall be retained at the Site for a minimum of five (5) years from their date of creation.

(16) All monthly Site inspection records are to be kept at the Site until they are included in the Annual Report.

(17) The Owner shall retain employee training records as long as the employee is working at the Site.

Annual Report

(18) A written report on the development, operation and monitoring of the Site, shall be completed annually (the "Annual Report"). The Annual Report shall be submitted to the District Manager, and the PLC, by May 15th of each year, and shall cover the 12 month period preceding December 31st.

(19) The Annual Report shall include, as a minimum, the following:

a. For the Landfill and Public Drop-off and Reuse Centre:
   i. an updated Landfill site plan showing the areas of fill, buffer zones, present contours, monitoring locations and surface water control systems;
   ii. a calculation of the remaining capacity of the Landfill, an estimate of the remaining Landfill life and a comparison of actual capacity used to approved Landfill capacity;
   iii. the optimization of remaining Landfill capacity with respect to refining final contours, having regard to minimizing the potential for off-site impacts;
   iv. approved changes to the operation the Landfill;
   v. procedures at the Landfill;
   vi. areas of landfilling operation during the reporting period;
   vii. areas of intended operation during the next reporting period;
   viii. areas of excavation during the reporting period;
   ix. the progress of final cover, vegetative cover, and any intermediate cover application;
   x. calculations of the volume of waste, daily and intermediate cover, and final cover deposited or placed at the Landfill during the reporting period and a calculation of the total volume of Landfill capacity used during the reporting period;
   xi. calculations of the amount of contaminated soil used as alternative cover at the Landfill;
   xii. the amount of contaminated soil stored at the Landfill at the end of the previous year;
   xiii. summary of the weekly, maximum daily and total annual quantity (tonnes) of waste received at the Landfill;
   xiv. a summary of recycling efforts undertaken at the Public Drop-Off and Reuse Centre including the amount of recyclable received;
   xv. a summary of the requirements outlined in Condition 6(22) of this Approval regarding the use of contaminated soil for daily/intermediate landfill cover;

b. For the Composting Facility:
   i. annual amount of the Organic Waste received and processed at the Composting Facility, including the waste type, quantity and sources;
   ii. annual amount and quality of Compost transferred from the Site and its final destination;
   iii. a summary describing any Rejected Waste including quantity, waste type, reasons for

rejection and origin of the Rejected Waste;

iv. annual amount of the Residual Waste transferred from the Site for final disposal and its destination;
v. number of Composting and curing windrows and the status of processing at the end of the operating year;
vi. amount of unprocessed Organic Waste temporarily stored at the Composting Facility at the end of the operating year;
vii. amount of Compost temporarily stored at the Composting Facility at the end of the operating year;
viii. a summary of the Composting monitoring and sampling results required by this Approval;

c. For the General Site:
i. results in tabular format and an interpretive analysis of the results of all leachate, groundwater, surface water and landfill gas monitoring and flaring, including an assessment of the need to amend the monitoring programs;
ii. the interpretive analysis referred to in Sub-condition i. above shall include a discussion of groundwater parameters and compliance with the Reasonable Use Policy at the property boundary as well as recommendations for future action (contingency measures) that may be necessary should the monitoring program detect failure of the design;
iii. groundwater flow and contaminant migration analyses for the Site;
iv. surface water quality with respect to Provincial Drinking Water Objectives;
v. Site plans showing all surface and ground water monitoring locations and the existing contours of the Site;
vi. a report on the status of all monitoring wells and a statement as to compliance with Ontario Regulation 903;
vii. an assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the Site, and the adequacy of and need to implement the contingency plans/environmental emergency plan;
viii. an assessment of potential and actual impacts, if any, of the leachate on the Peterborough Water Pollution Control Plant;
ix. leachate characterization results and a discussion of the potential impacts on the Water Pollution Control Plant;
x. total leachate volumes collected weekly, monthly and annually and the disposition of the collected leachate;
xi. a summary of any equipment changes;
xii. facilities installed during the reporting period;
xiii. Site preparations and facilities planned for installation during the next reporting period;
xiv. summary of any complaints received and the responses made;
xv. any environmental and operational problems, that could negatively impact the environment, encountered during the operation of the Site or identified during the facility inspections and any mitigative actions taken;
xvi. any changes to the Emergency Response and Contingency Plan, the Operations Manual or the Closure Plan that have been approved by the Director or the District Manager since the last Annual Report;

xvii. a descriptive summary of any spills, incidents or other emergency situations which have occurred at this Site, any remedial measures taken, and the measures taken to prevent future occurrences;

xviii. any other information with respect to the Site which the District Manager may require from time to time;

xix. summary of inspections undertaken at the Site;

xx. any changes in operations, equipment or procedures employed at the Site;

xxi. any recommendations to minimize environmental impacts from the operation of the Site and to improve Site operations and monitoring programs in this regard

xxii. an annual summary of any deficiencies, items of non-compliance or process aberrations that occurred at this Site and any remedial/mitigative action taken to correct them to ensure that future non-compliance does not occur; and

xxiii. a statement regarding compliance with all conditions of this Approval and other relevant Ministry requirements, guidelines and regulations.

(20) The implementation of any of the recommendations contained in an Annual Report that come within the scope of Section 27 of the Act, shall be by the approval of the Director.

SCHEDULE "A"

1. Application for a Certificate of Approval for a Waste Disposal Site (Landfill) dated July 28, 1993 and as amended November 17, 1993.

2. Report entitled "City of Peterborough Bensfort Road Landfill Site - Application for Interim Expansion, Volume 1" by Gartner Lee Limited and the City of Peterborough, dated March 1991.

3. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Volume 2" by Gartner Lee Limited dated March 1991.

4. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Volume 3" by Gartner Lee Limited, CJB Air Quality Management, S.S. Wilson and Associates and Gore & Storrie Ltd., dated March 1991.

5. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Volume 4" by Conestoga-Rovers & Associates dated March 1991.

6. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Volume 5" by Mark L. Dorfman, Planner Inc., City of Peterborough and Marshall, Macklin & Monaghan, dated March 1991.

7. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Addendum 1" by Conestoga-Rovers & Associates, The City of Peterborough, Gartner Lee Limited, CJB Air Quality Management, S.S. Wilson and Associates, Gore & Storrie Limited, Marshall Macklin Monaghan and Mark L. Dorfman Planner Inc., dated December 1991.

8. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Addendum 2" by Gartner Lee Limited, Conestoga-Rovers & Associates, CJB Air Quality Management and S. S. Wilson and Associates, dated September 1992.

9. Report entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion, Addendum 3" Tabs A-N by Gartner Lee Limited, Conestoga-Rovers & Associates, The City of Peterborough, CJB Air Quality Management, S. S. Wilson and Associates, Gore & Storrie Limited, Marshall Macklin Monaghan and Mark L. Dorfman Planner Inc., dated July 1993.

10. Report entitled "City of Peterborough Bensfort Road Landfill Site- 1992 Annual Monitoring Report" by Gartner Lee Limited dated March 1993.

11. Report entitled "City of Peterborough Bensfort Road Landfill Performance Monitoring Program" by Gartner Lee Ltd., dated October 1993.

12. Report entitled "Specifications for Tree Planting Bensfort Road Landfill Site" dated July 1992.

13. Draft Drawings 12-1, 12-2, 12-3, dated August 1993 and 12-4, 12-5 and 12-6 dated October 1993 by Conestoga- Rovers & Associates and any amendments to the Drawings which have been approved by the Director.

14. Report entitled "Annual Monitoring Report Design and Operations 1998, Bensfort Road Landfill Site Peterborough, Ontario," prepared by Conestoga Rovers & Associates dated May, 1999.

15. Report entitled: "City of Peterborough, Bensfort Road Landfill Provisional Certificate of number A341508 Application for an Emergency Certificate, prepared by Gartner Lee Limited in association with Conestoga-Rovers and Associates Limited dated May,1999.

16. Letter from G. L Treadwell, Conestoga-Rovers & Associates to S. Essop, EAAB dated June 8, 1999. Providing Clarification on Site size and area.

17. Letter from P. Douglas Petrie, Willms & Shier, Solicitor for municipality, the Township of Otonabee-South Monaghen to A. Dominski and S. Essop Environmental Assessment and Approvals Branch dated June 9,1999, response to City of Peterborough Bensfort Road Landfill, Application for Emergency Approval Ministry Certificate of Approval nos. A341508 (Site) and 8-4006-99-006(Air).

18. Letter from R. E. J. Leech Gartner Lee Limited to A. Dominski and S. Essop, EAAB dated June 17, 1999 response to the letter from P. Douglas Petrie Township of Otonabee - South Monaghan dated June 9, 1999.

19. Letter from T. A. McIelwain, Older Associates Ltd on behalf of D. Petrie, Willms & Shier, to S. Essop, EAAB, date June 21, 1999, response to petroleum hydrocarbon contaminated soils handling and storage protocol at the site.

20. Letter from E. Warburton, of the organization SHAME, to A. Dominski and S. Essop, EAAB, dated June 15, 1999 response and comments on the draft Emergency Application Certificate of Approval.

21. Letter from J. W. Hart, City Solicitor, City of Peterborough to S. Essop, EAAB, dated June 28, 1999 response and comments on Draft Emergency Certificate of Approval.

22. Letter from J. W. Hart, City Solicitor, City of Peterborough to SHAME and S. Essop, EAAB, dated June 28,1999 response on land compensation issue, odour problems, funding and site closure date.

23. Letter from P. Douglas Petrie, Willms & Shier, Solicitor for municipality, the Township of Otonabee-South Monaghen to A. Dominski and S. Essop, EAAB dated June 28,1999,

response and comments on draft Emergency Application Certificate of Approval.

24. Letter report from E. J. Leech, Gartner Lee Limited to A. Dominski, Environmental Assessment and Approvals Branch, dated July 26, 2999, providing revised plans for the Site.

25. Application for an Emergency Approval dated November 30, 2000 and supporting documentation titled "City of Peterborough, Bensfort Road Landfill, Provisional Certificate of Approval, No. A341508 - Application for an Emergency Certificate", prepared by Gartner Lee Ltd. and Conestpoga-Rovers and Associated Ltd., dated December 2000.

26. Letter to Mr. A Dominski, Environmental Assessment and Approvals Branch, Ministry of the Environment form Gartner Lee Ltd. Dated December 21, 2000, which provided environmental justification for expanding the service area of the Bensford Road Landfill site to include the waste from the Township of Havelock-Belmont-Methuen.

27. Application for an Emergency Approval dated June 8, 2001 and supporting documentation titled “City of Peterborough, Bensfort Road Landfill, Provisional Certificate of Approval, No. A341508 - Application for an Emergency Certificate”, prepared by Gartner Lee Ltd. and Earth Tech (Canada) Inc., dated June, 2001.

28. Letter to Mr. Michael Williams, Environmental Assessment and Approvals Branch, Ministry of the Environment from City of Peterborough, City Solicitor, dated June 8, 2001, which provides justification for the application for an emergency approval and outlines the context of the application.

29. Letter to Mr. Michael Williams, Environmental Assessment and Approvals Branch, Ministry of the Environment from Gartner Lee Ltd., dated June 26, 2001 outlining the public consultation undertaken by the City of Peterborough regarding the emergency application.

30. Notice of Approval to Proceed with the Undertaking as required by the Environmental Assessment Act (EAA), O.C. 450/2002, dated January 23, 2002.

31. Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated March 28, 2002.

32. Documentation supporting an Application for a Provisional Certificate of Approval, submitted in accordance with Section 27 of the *Environmental Protection Act* : titled "Oton-1 Landfill Site, located in the Township of Otonabee-South Monaghan, County of Peterborough, dated March 2002, prepared by Earth Tech Canada Inc. for the County of Peterborough and the City of Peterborough.

33. Letter requesting an extension for the submission of the North Fill Area design details

prepared by Earth Tech Canada Inc., submitted on behalf of the County and City of Peterborough, to the Ministry of the Environment, with attachments.

34. The letter requesting an extension for the submission of the North Fill Area design and operations report, prepared by McCarthy Tetrault, submitted on behalf of the County and City of Peterborough, to the Ministry of the Environment, dated September 17, 2003.

35. Letter dated January 29, 2004 to the ministry from Earth Tech Canada Ltd. submitting the following design documentation in compliance with condition 5.1.

36. Volume 1 – South Fill Area, Design and Operations Report, dated January 2004, including: -Hydrogeological Assessment

37. Volume 2 – North Fill Area Design and Operations Report, dated January 2004, including:
    - Hydrogeological Assessment
    - Surface Water Quality Study.

38. Volume 3 – Technical Assessments, South Fill Area and North Fill Area, dated January 2004, including:
    - Air Quality Impact Assessment
    - Leachate Environment Study
    - Natural Environment Study
    - Noise Impact Study Traffic Impact Study
    - Visual Impact Study.

39. Letter dated February 28, 2008 from Frederick (Rick) A. Mosher, Conestoga-Rovers & Associates to Director, Environmental Assessment and Approvals Branch, Ministry of the Environment regarding request for an amendment to condition 17.

40. Report entitled "Annual Monitoring Report, Design and Operations - 1997, Bensfort Road Landfill, Peterborough, Ontario", date May 1998, prepared by Conestoga-Rovers & Associates.

41. 2003 to 2004 Annual Monitoring Reports, Design and Operations, South Fill Area, Peterborough County/City Waste Facility, Peterborough, Ontario, prepared by Conestoga-Rovers & Associates.

42. Application for an Amendment to Provisional Certificate of Approval for a Waste Disposal Site, dated June 29, 2007 from The Corporation of the City of Peterborough.

43. Letter dated February 28, 2008 Frederick Mosher, Connestoga-Rovers & Associates requesting a revised leachate video inspection system inspection.

44. E-mail dated April 29, 2009 from Melanie Kawalec, The Corporation of the City of

Peterborough, to Roman Lysiak, Ministry regarding submission of additional information.

45. Report entitled "Landfill Gas Collection System Report, Peterborough County/City Waste Management Facility Peterborough, Ontario (PCCWMF)" dated June 30, 2009 prepared by UEM.

46. Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated November 8, 2010, signed by Melanie Kawalec, Manager, Waste Management Division, City of Peterborough.

47. Letter dated November 26, 2010, from Melanie Kawalec, Manager, Waste Management Division, City of Peterborough to the Director, Environmental Assessment and Approvals Branch, Ministry of the Environment, re: final detailed design for the landfill gas collection and flaring/utilization system in the South Fill Area of the Oton-1 Landfill Site.

48. Report entitled "Bensfort Road Landfill - Landfill Gas System Expansion", dated November 25, 2010 prepared by Dillon Consulting Ltd.

49. May 14, 2010, E-mail from Joe Ovcjak to K., Keeling, City of Peterborough with attached 2009 Monitoring Program.

50. September 1, 2011 e-mail from Wayne Jackson, Director, City of Peterborough, to Jim Chisholm of the Ministry of the Environment with the following attachments: 2010 Monitorimng Program, Groundwater and Leachate Monitoring Programs for the Site, Peterborough county/City Waste Management Facility; 2005 Annual Monitoring Report; and 2006 NFA Sampling Program.

51. Report titled South Fill Area Closure Plan, Peterborough Landfill, dated May 2013, prepared by Urban and Environmental Management Inc.

52. Application for a Provisional Certificate of Approval for a Waste Disposal Site, dated September 30, 2016, and supporting documentation prepared by WSP.

53. Response letter dated June 16, 2017 received from WSP regarding the clarification of design basis.

54. Application for Approval of a "Reuse Centre" dated June 3, 2016 and supporting documentation prepared by the Corporation of the City of Peterborough.

55. Email dated August 29, 2017 from Virginia Swinson, City of Peterborough to Nick Zambito, Ministry regarding additional "Reuse centre" construction and operation details.

56. Environmental Compliance Application dated September 13, 2017 signed by Don Briand, City of Peterborough and the supporting documentation regarding landfill gas monitoring

program.

57. Application for Environmental Compliance Approval submitted by James Istchenko, P.Eng., Manager of Environmental Services at the Corporation of the City of Peterborough dated September 8, 2022 and received on September 8, 2022 for the proposed Composting Facility, including all supporting attachments such as the Design and Operations Report, figures, Design Drawings, equipment specifications, process flow diagram, Odour Response and Control Plan, Environmental Impact Study and Hydrogeological Assessment Report.

58. Emails from Mike Lord, D.M. Wills Associates Limited, to Nick Zambito, Ministry, dated February 3, 2023, February 17, 2023, April 6, 2023, and May 9, 2023 regarding additional information requested during the review of the Composting Facility application.

59. Design and Operations Report for the Composting Facility dated June 2023 and prepared by D.M. Wills Associates Limited.

SCHEDULE "B"

ENVIRONMENTAL MONITORING PROGRAM

A) **GROUNDWATER (LANDFILL)**

Group	**Monitoring Designation**	**Monitoring Events**	
Ground water		*March/April*	*September/ October*
G1	18A, 18B, 19A, 19 B, 20B, 48 63-I, 63-II, 63-III, 75-I, 75-II, 66-III, 81-I,81-II, 81-III	Water Levels	Water Levels
		Analysis List 1	Analysis List 1
		Analysis List 2	
		Analysis List 3	
G2	16A, 20A, 33-II, 33-III, 40-II, 41-I, 41-II, 44-1, 44-II, 44-III, 46-I,46-II, 46-III, 50-I, 50-II, 52-I, 52-II, 53-I, 54-II, 61-I, 61-II, 61-III, 62-I, 64-I, 64-II, 66-I, 66-II, 70-I, 70-II, 70-III, 74-II, 76-I, 77-I, 101-I, 101-II, 101-III	Water Levels	Water Levels
		Analysis List 1	
G3	5-V, 5-VI, 62-II	Water Levels	Water Levels
		Analysis List 1	Analysis List 1
G4	5-IV, 16C, 50-III, 74-III	Water Levels	Water Levels
		Analysis List 1	Analysis List 3
G5	84-I, 84-II, 85-I, 85-II, 86-I, 86-II, 86-III, 87-I, 87-II, 87-III, 88-I, 88-II, 88-III, 89-I, 89-II, 89-III, 90-I, 90-II, 90-III, 91-I, 91-II, 91-III, 92-I, 92-II, 92-III, 93-I, 93-II, 94-I, 94-II, 95-I, 95-II, 104-I, 104-II, 104-III, 106-I, 106-II, 106-III, 107-I, 107-II, 107-III, 108-I, 108-II, 108-III, 109-I, 109-II, 109-III, 110-I, 110-II, 110-III	Water Levels	Water Levels
		Analysis List 1	Analysis List 1
		Analysis List 2	
		Analysis List 3	

B) PRIVATE WELLS

Group	Monitoring Designation	Monitoring Events	Comments
Private Wells		*March/April*	
P1	In Accordance with the Agreement Between the Corporation of the City of Peterborough and the Corporation of the Township of Otonabee. - January, 1993 as amended by previous annual reports.	Analysis List 4	As per agreement

C) SURFACE WATER

Group	Monitoring Designation	Monitoring Events					
Surface Water		*January/ February*	*March/ April*	*May/ June*	*July/ August*	*September/ October*	*November/ December*
S1	SW1, SW2, SW3, SW17, SW18, SW19, SW20, SW21, SW23, SW24	Flow Rate	Flow Rate	Flow Rate	Flow Rate	Flow Rate	Flow Rate
		Analysis List 1	Analysis List 1	Analysis List 1	Analysis List 1	Analysis List 1	Analysis List 1
		Analysis List 6	Analysis List 6	Analysis List 6	Analysis List 6	Analysis List 6	Analysis List 6

D) LEACHATE

Group	Monitoring Designation	Monitoring Events					
Leachate		*January/ February*	*March/ April*	*May/ June*	*July/ August*	*September/ October*	*November/ December*
L1	Holding Tank		By-Law + COD			By-Law + COD	
						Analysis List 5a	
L2	MHT9-94[1]					Analysis List 5	
L3	23B (In-Waste Leachate Monitors)		Leachate Levels			Leachate Levels	
	ISP7-95, ISPL-1, ISPL-2, ISPL2-1, ISPL2-2, ISP8, ISP9, SP1-90, SP2-90, SP3-90, SP4-90, SP6-90, SP7-90, SP8-90, SP10-94, SP11-94, SP14-91, P15-91, SP16-91, SP18-91, SP19-91, SP20-91, ISP11, ISP12, ISP13, ISP14, ISP15		Analysis List 1			Analysis List 2	
L4		Leachate Levels	Leachate Levels	Leachate Levels	Leachate Levels	Leachate Levels	Leachate Levels
Inter-ceptor trench							
T1	MH-4					Analysis List 5	

[1] Location to be MHT6-94 following construction of Cell 1 West B

E) LANDFILL GAS

Group	Monitoring Designation	Monitoring Events					
Landfill Gas		*January/ February*	*March/ April*	*May/ June*	*July/ August*	*September/ October*	*November/ December*
LFG-1	GP-2, GP-3, GP4, GP-5 and GP-6		Soil gas monitoring	Soil gas monitoring		Soil gas monitoring	Soil gas monitoring

F) COMPOSTING FACILITY

Location	Minimum Frequency	Parameters
Groundwater ● Background Wells: MW20-30, MW20-28A and (1) TBD bedrock well ● Downgradient Wells: MW20-01 and one (1) TBD bedrock well ● Trigger Wells: MW20-19 and MW20-22	Twice per year (Spring and Fall)	Laboratory: Alkalinity Ammonia Ammonium Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH Sodium Sulphate Total Dissolved Solids Zinc Dissolved Organic Carbon Chemical Oxygen Demand Total Suspended Solids Benzene, Toluene, Ethylbenzene, Xylene (BTEX) Field Parameters: pH, conductivity, temperature, water level
Leachate (1) TBD leachate well	Three times per year (Spring, Summer and Fall)	Laboratory: Alkalinity Ammonia Ammonium Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH

		Sodium Sulphate Total Dissolved Solids Zinc Dissolved Organic Carbon BOD_5 Chemical Oxygen Demand Total Suspended Solids Benzene, Toluene, Ethylbenzene, Xylene (BTEX) <u>Field Parameters</u>: pH, conductivity, temperature, water level
<u>Leachate Collection System</u>	Three times per year (Spring, Summer and Fall)	<u>Laboratory:</u> Alkalinity Ammonia Barium Boron Calcium Chloride Copper Iron Lead Magnesium Nickel Nitrate pH Sodium Sulphate Total Dissolved Solids Zinc Dissolved Organic Carbon BOD_5 Chemical Oxygen Demand Total Suspended Solids VOCs <u>Field Parameters</u>: pH, conductivity, temperature

Analysis List 1: Ca, Mg, Na, K, Cl, SO4, Alkalinity, NO3, NO2, NH3, TKN, pH, Conductivity, Fe, Mn, As, DOC, COD, Total Phenolics, Total P, P(dissolved), field pH and field conductivity, Anion Sum, Cation Sum, Bicarbonate, Carbonate, Hardness, Ion Balance, Orthophosphate (as P), field temperature, and Total Dissolved Solids (TDS).

Analysis List 2: Al, Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, and Zn.

Analysis List 3: VOC Scan.

Analysis List 4: pH, conductivity, Alkalinity, Cl, SO4, Total P, Soluble P, TKN, NH3, NO2, NO3, K, Mg, Ca, Na, Fe, COD, DOC, Phenols, field pH and field conductivity.

Analysis List 5: cBOD5, BOD, TSS, TKN, NH4, Phenolics, Fe, Cl, Sr, Br, Alkalinity, K, Na, field pH and field conductivity.

Analysis List 5a: cBOD5, Sr, Br, Alkalinity, K, Na, field pH and field conductivity.

Analysis List 6: BOD5, TOC, TSS, TDS, Turbidity, Fe (field filtered), temperature, DO, field pH and field conductivity.

By-Law + COD: City of Peterborough By-Law 05-104 Schedule 'H', Table 1: "Sanitary and Combined Sewer Discharge Limits".

Soil Gas Monitoring: percent by volume (v/v) for methane; carbon dioxide; oxygen; and water level in the probe.

SCHEDULE "C"

Stages of Development for the Composting Facility

Stage 1:

- one (1) Composting Facility consisting of the following structures, processes and equipment located on an asphalt pad:
  - one (1) fully enclosed Receiving Building measuring approximately 30 m wide x 59 m long x 15 m high, to be used for receiving, shredding, and mixing of the Organic Waste, equipped with: three (3) fast acting roll-up doors, an impermeable concrete floor with a minimum 1% slope towards four (4) floor drains/sumps, and one (1) negative pressure ventilation system discharging the Receiving Building air through an outdoor biofilter;
  - a GORE™ Composting System for the composting of SSO, Leaf and Yard Waste and Amendment Material, consisting of the following phases:
    - Phase 1 (active phase) consisting of a maximum of four (4) GORE™ covered aerated static windrows, each windrow located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, with each windrow aerated with two (2) in-floor aeration channels (also acting as leachate collection channels) and heated with an in-floor glycol-loop heating system during the winter months, separated by approximately 2 metres between bunkers;
    - Phase 2 (curing phase), for curing of the waste that completed Phase 1, consisting of a maximum of two (2) GORE™ covered aerated static windrows, each windrow located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, with each windrow aerated with two (2) in-floor aeration channels (also acting as leachate collection channels), separated by approximately 2 metres between bunkers; and
    - Phase 3 (curing phase) for curing of the waste that completed Phase 2, consisting of a maximum of two (2) aerated static windrows, each windrow located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, with each windrow aerated with two (2) in-floor aeration channels, separated by approximately 2 metres between bunkers;
  - a 100 m x 55 m outdoor aerobic windrow curing system, to be used for the curing of the waste that completed Phase 3, consisting of a maximum of fifteen (15) static windrows, separated by approximately 2 metres between windrows;
  - a 50 m x 20 m outdoor excess Leaf and Yard Waste storage area, to be used for the receipt, temporary storage and grinding of Leaf and Yard Waste prior to composting on-site;
  - a 80 m x 65 m outdoor windrow Leaf and Yard Waste composting system, to be used for the receipt and composting of excess Leaf and Yard Waste and Amendment Material only, consisting of a maximum of ten (10) static windrows, separated by approximately 2 metres between windrows;
  - a 50 m x 30 m outdoor screening area, to be used for the screening of Immature Compost and Finished Compost;
  - a 65 m x 30 m outdoor Finished Compost storage area, to be used for the temporary storage of

Finished Compost; and

- processing equipment used around the composting facility, including loaders, shredder, grinder, skid steers, trommel screens, stackers, tractor, mobile cover unwinding machine, stacker feeder, portable work lights, and a windrow turner.

Stage 2:

- All of the processes, working areas and supporting units listed under Stage 1 above;
- Within the GORE™ Composting System:
  - two (2) additional Phase 1 (active phase) GORE™ covered aerated static windrows, each windrow located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, with each windrow aerated with two (2) in-floor aeration channels (also acting as leachate collection channels) and heated with an in-floor glycol-loop heating system during the winter months, separated by approximately 2 metres between bunkers;
  - one (1) additional Phase 2 (curing phase) GORE™ covered aerated static windrow, located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, aerated with two (2) in-floor aeration channels (also acting as leachate collection channels), separated by approximately 2 metres between bunkers; and
  - one (1) additional Phase 3 (curing phase) aerated static windrow, located within an approximately 50 m long x 1.2 m tall x 8.2 m wide concrete bunker on a concrete base, aerated with two (2) in-floor aeration channels (also acting as leachate collection channels), separated by approximately 2 metres between bunkers.

SCHEDULE "D"

Compost Quality Standards

Table 3.1 - Maximum Concentration of Metals in Compost:

Item	Column 1	Column 2	Column 3
	Metal	Category AA Compost	Category A Compost
		mg/kg dry weight	*mg/kg dry weight*
1.	Arsenic	13	13
2.	Cadmium	3	3
3.	Chromium	210	210
4.	Cobalt	34	34
5.	Copper	100	400
6.	Lead	150	150
7.	Mercury	0.8	0.8
8.	Molybdenum	5	5
9.	Nickel	62	62
10.	Selenium	2	2
11.	Zinc	500	700

Table 3.2 - Maximum Concentration of Metals in Feedstock:

Item	Column 1	Column 2
	Metal	Feed for Category AA Compost
		mg/kg dry weight
1.	Arsenic	75
2.	Cadmium	20
3.	Chromium	1060
4.	Cobalt	150
5.	Copper	760
6.	Lead	500
7.	Mercury	5
8.	Molybdenum	20
9.	Nickel	180
10.	Selenium	14
11.	Zinc	1850

Table 3.3 - Maximum Concentration of Foreign Matter and Sharps in Compost:

Parameter	Category AA Compost	Category A Compost
Foreign matter	Total foreign matter greater than 3 mm shall not exceed 1.0%, calculated on a dry weight basis, and plastic cannot exceed 0.5%; and Compost shall not contain any foreign matter greater than 25 mm per 500 ml.	Total foreign matter greater than 3 mm shall not exceed 1.0%, calculated on a dry weight basis, and plastic cannot exceed 0.5%; and Compost shall not contain any foreign matter greater than 25 mm per 500 ml.
Sharp foreign matter	Compost shall contain no material of a size or shape that can reasonably cause human or animal injury.	Compost shall contain no material of a size or shape that can reasonably cause human or animal injury.

Table A1 - Baseline Sampling Frequency of Compost (Metals, Pathogens, Maturity and Foreign Matter):

Compost Produced Annually (wet tonnes)	Baseline Number of Samples (per year)
<5000	4
5000-15000	6
15000-50000	12
>50000	+ 2 more samples for every additional 10,000 tonnes above the 12 Baseline samples.

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

1. The reason for inclusion of the definitions is to define the specific meaning of terms and simplify the wording of conditions in this Approval.

2. The reason for Conditions 1(1), 1(2), 1(4) to 1(15) is to clarify the legal rights and responsibilities of the Owner and Operator under this Approval.

3. The reasons for Conditions 1(3), 2(2), 2(3), 5(1), 5(2), 6(4), 6(6), and 8(11) to 8(17) to are 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. Conditions 1(16), 1(17) and 1(18) are included, pursuant to subsection 197(1) of the EPA, 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.

5. The reasons for Condition 1(19) 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.

6. The reasons for Condition 1(20) 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 Approval.

7. The reason for Condition 1(21) is to ensure that the successor is aware of its legal responsibilities.

8. The reason for Condition 1(22) is to ensure that appropriate Ministry staff has ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Approval. This Condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the Act, the OWRA, the PA, the NMA and the SDWA.

9. The reason for Conditions 1(23) to 1(37) is to establish a forum for the exchange of information and public dialogue on activities carried out at the landfill Site. Open communication with the public and local authorities is important in helping to maintain high standards for Site operation and environmental protection.

10. The reasons for Conditions 2(1), 2(10), 2(11), 2(22) to 2(54), 6(7), 6(21) to 6(33), 6(69), 7(2) to 7(12), 8(7) to 8(10), and 8(65) are to ensure that the Site is operated and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.

11. The reasons for Condition 2(4) to 2(7) are to specify the hours of operation for the Site and a mechanism for amendment of the hours of operation, as required.

12. The reasons for Condition 2(8) and 2(9) are to ensure that the Site is supervised by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person and to ensure the controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site attendant is on duty.

13. The reason for Conditions 2(12), 2(13), and 2(14) is to ensure that users of the Site are fully aware of important information and restrictions related to Site operations and access under this Approval.

14. The reason for Conditions 2(15) to 2(20) is to ensure that only waste approved under this Approval are accepted at the Site and handled in an environmentally acceptable manner which does not result in a hazard or nuisance to the natural environment or any person.

15. The reason for Condition 2(21) is to ensure the timely submission by the Owner of a landscape plan for the Site.

16. The reason for Condition 2(55) is that open burning of municipal waste is unacceptable because of concerns with air emissions, smoke and other nuisance affects, and the potential fire hazard.

17. The reasons for Condition 2(56) are the protection of public health and safety and minimization of the potential for damage to environmental control, monitoring and other works at the Site. Scavenging is the uncontrolled removal of material from waste at a landfill site.

18. Conditions 3(1) to 3(7) are included to ensure that an Emergency Response and Contingency Plan is developed and maintained at the Site and that staff are properly trained in the operation of the equipment used at the Site and emergency response procedures, and to ensure that emergency situations are handled in a manner to minimize the likelihood of an adverse effect and to ensure public health and safety and environmental protection.

19. Conditions 3(8) to 3(10) are included to ensure that emergency situations are reported to the Ministry, local municipality and residents to ensure public health and safety and environmental protection.

20. The reason for Condition 4 is to ensure that any complaints regarding operations at this Site are responded to in a timely, efficient and effective manner.

21. Conditions 5(3) to 5(7) are included to ensure that personnel employed at the Site are fully aware and properly trained on the requirements and restrictions related to Site operations under this Approval.

22. The reason for Conditions 6(1) to 6(3), 6(5), and 7(1) is to specify the approved areas from which waste may be accepted at the Site, minimum buffer area, and the types and amounts of waste that may be accepted at the Site, based on the Owner's application and supporting documentation.

23. Conditions 6(8) to 6(13) have been included in order to ensure asbestos waste is handled and disposed of in accordance with Reg. 347 as amended from time to time. Proper handling and disposal of asbestos waste ensures that the asbestos waste does not cause an adverse impact on the environment and also does not affect human health.

24. The reasons for Conditions 6(14) to 6(19) are to ensure that landfilling operations are conducted in an environmentally acceptable manner. Daily and intermediate cover is used to control potential nuisance effects, to facilitate vehicle access on the Site, and to ensure an acceptable Site appearance is maintained. The proper closure of a landfill Site requires the application of a final cover which is aesthetically pleasing, controls infiltration, and is suitable for the end use planned for the Site.

25. The reason for Condition 6(20) is to specify the approval requirements for use of alternative cover material at the Site.

26. The reasons for Conditions 6(34) to 6(40) are to ensure that the leachate collection system is designed and built in accordance with Regulations and the ministry's requirements and to prevent off Site migration of leachate which may cause an adverse effect on the environment.

27. The reasons for Conditions 6(41) to 6(44) are to minimize the potential for clogging of leachate collection pipes and to ensure effective operation of the leachate collection system components for as long as they are required. Failure to clean out these components on a regular basis may result in a decrease in their service lives. Regular cleaning of the leachate collection pipes is especially important during stages of landfilling when the level of both organic and inorganic constituents in the leachate is high and, consequently, the potential for clogging due to encrustation is greatest. As the landfill reaches the more stable methane producing stage, pipe cleaning may be required less frequently.

28. Conditions 6(45) to 6(60) have been inserted in order to ensure that concentrations of landfill gas do not pose a hazard to human health or the environment and to ensure that landfill gas controls are built and managed in accordance with the Ministry's requirements and regulations and the proposed design.

29. The reasons for Conditions 6(61) to 6(62) are to ensure that landfill gas is properly managed and monitored.

30. The reason for Conditions 6(63) and 6(64) is to ensure that backup power is available so that all facilities remain operational during a power disruption thus preventing any adverse impacts on the environment.

31. The reasons for Conditions 6(65) to 6(67) are to ensure that final closure of the Site is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure the long-term protection of the health and safety of the public and the environment.

32. Condition 6(68) has been inserted in order to ensure proper public consultation about the end use of the Site is undertaken and that the end use activities are consistent with those identified during the EA process.

33. Conditions 8(1) to 8(4) are included to specify the approved Organic Waste receipt rate, the approved Organic Waste types and the service area from which the Organic Waste may be accepted at the Site based on the Owner's application and supporting documentation.

34. Conditions 8(5) and 8(6) are included to identify the maximum amounts of waste approved to be present at the Site at any one time within each storage location to prevent adverse impacts on the environment.

35. Conditions 8(18) to 8(20), and 8(42) are included to ensure that waste handling, processing and storage at the Site are undertaken in done in a way which does not result in an adverse environmental effect or a hazard to the environment or any person and are 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.

36. Conditions 8(21) to 8(38) are included to ensure that the Owner accepts and processes only the waste types that are approved in this Approval and that those wastes that are appropriate for Composting, and to ensure that the Owner regularly tests the incoming Organic Waste and the Finished Compost to verify compliance with the Compost Quality Standards and compatibility of Compost produced at the Site with its proposed final end use.

37. Conditions 8(39) to 8(41) are included to specify the Composting recipe criteria as per the consensus in the composting industry and the Ministry's requirements so that the operation for the Site does not result in an Adverse Effect or a hazard to the natural environment or any person.

38. Conditions 8(43) to 8(53) are included to specify the operating parameters and quality control required for a properly functioning Composting operation as per the consensus in the composting industry and the Ministry's requirements so that the operation for the Site does not result in an Adverse Effect or a hazard to the natural environment or any person.

39. Conditions 8(54) to 8(63) are included to identify the Compost Quality Standards that must be met before Finished Compost is considered suitable for its intended end use and to identify applicable regulatory compliance criteria for the wastes processed or generated at the Site to ensure that all outputs from waste management activities at the Site are properly managed, processed and disposed of in accordance with the Ministry's regulatory requirements and in a manner that protects the health and safety of the public and the

environment.

40. Conditions 8(66) to 8(67) are included to ensure that final closure of the Site is completed in accordance with Ministry's standards.

41. The reasons for Conditions 9(1) to 9(23) and 9(30) to 9(33) are to ensure: the Owner installs the environmental monitoring wells and conducts environmental monitoring at the Site in accordance with the Ministry's recommendations; the long-term health and safety of the public and the environment; to demonstrate that the Site is performing as designed and the impacts on the natural environment are acceptable; to provide a mechanism to permit changes to the monitoring program; and to ensure the Owner has a plan with an organized set of procedures for identifying and responding to potential issues relating to groundwater and surface water contamination at the Site's compliance points. Regular monitoring allows for the analysis of trends over time and ensures that there is an early warning of potential problems so that any necessary remedial/contingency action can be taken.

42. Reasons for Condition 9(24) to 9(29) are to ensure that off-Site migration of landfill gas is monitored and all buildings at the Site are free of any landfill gas accumulation, which due to a methane gas component may be explosive and thus create a danger to any persons at the Site; and and to ensure the Owner has a plan with an organized set of procedures for identifying and responding to potential issues relating to landfill gas migration at the Site's compliance point.

43. Conditions 10(1) to 10(7) are included to require the Site and equipment used for waste management and pollution control to be inspected and maintained thoroughly and on a regular basis to ensure that the operations at the Site are undertaken in a manner which does not result in an Adverse Effect or a hazard to the health and safety of the environment or any person.

44. Conditions 10(8) to 10(20) are included to ensure that detailed records of Site activities, inspections, monitoring and upsets are recorded and maintained for inspection and information purposes; to ensure that accurate waste records are maintained to ensure compliance with the conditions in this Approval (such as fill rate, site capacity, record keeping, annual reporting, and financial assurance requirements), the EPA and its regulations; and to ensure that regular review of Site development, operations and monitoring data is documented and any possible improvements to Site design, operations or monitoring programs are identified. Annual reports are an important tool used in reviewing Site activities and for determining the effectiveness of Site design.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A341508 issued on September 7, 2018

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 23rd day of June, 2023

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

NZ/
c: District Manager, MECP Peterborough
Michael Lord, D.M. Wills Associates Limited

APPENDIX A - II)

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL – 2231-8YCPHG ISSUED: SEPTEMBER 28, 2012

Content Copy Of Original

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 2231-8YCPHG
Issue Date: September 28, 2012

The Corporation of the City of Peterborough
500 George Street North
Peterborough, Ontario
K9H 3R9

Site Location: Peterborough Waste Management System
1260 Bensfort Road
City of Peterborough, County of Peterborough

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 stormwater management facilities and leachate management facilities to service the Peterborough Waste Management Facility (Bensfort Road Landfill Site) located on Part of Lots 14 and 15, Concession 13, Part of Lots 13, 14 and 15, Concession 14, County of Peterborough, comprising of 18 ha South Fill Area, 9.5 ha North Fill Area, and 15 ha groundwater easement zone within a total of landfill property area of 158 ha, consisting of the following:

PROPOSED SEWAGE WORKS:

modifications to the existing stormwater management facilities and leachate management facilities to service the Peterborough Waste Management Facility (Bensfort Road Landfill Site) located on Part of Lots 14 and 15, Concession 13, Part of Lots 13, 14 and 15, Concession 14, County of Peterborough, comprising of 18 ha South Fill Area, 9.5 ha North Fill Area, and 15 ha groundwater easement zone within a total of landfill property area of 158 ha, consisting of the following:

the realignment and lowering of three (3) sections of the existing 150 mm diameter Leachate Forcemain located along the east side of Bensfort Road, as part of the County Road No. 39 (Bensfort Road) Reconstruction, in the City of Peterborough, at the following three (3) separate locations along the east side of Bensfort Road: a 335 m long section from approx. 1,464 m north of Assumption Road to approx. 1,129 m north of Assumption Road, a 270 m long section from approx. 118 m south of Base Line Road to approx. 388 m south of Base Line Road and a 110 m long section from approx. 954 m north of Storell Road to approx. 844 m north of Storell Road;
the replacement of five (5) existing Forcemain Valve Chambers, as part of the County Road No. 39 (Bensfort Road) Reconstruction, in the City of Peterborough, at the following locations along the east side of Bensfort Road: Leachate Forcemain Chamber # 1 located approx. 857 m north of Storell Road, Leachate Forcemain Chamber # 2 located approx. 180 m south of Base Line Road, Leachate Forcemain Chamber # 4 located approx. 1,064 m north of Base Line Road, Leachate Forcemain Chamber # 5 located approx. 1,097 m south of Assumption Road and Leachate Forcemain Chamber # 6 located approx. 438 m south of Assumption Road;

all in accordance with the application dated January 12, 2012 and received January 16, 2012, including final plans and specifications prepared by the Peterborough County Public Works.

SEWAGE WORKS APPROVED ON SEPTEMBER 24, 2009:

establishment of stormwater management facilities and leachate management facilities to service the Peterborough Waste Management Facility (Bensfort Road Landfill Site) located on Part of Lots 14 and 15, Concession 13, Part of Lots 13, 14 and 15, Concession 14, County of Peterborough, comprising of 18 ha South Fill Area, 9.5 ha North Fill Area, and 15 ha groundwater easement zone within a total of landfill property area of 158 ha, consisting of the following:

establishment of leachate management facility to service the North Fill Area (**NFA**) of the Bensfort Road Landfill Site consisting of the following:

Leachate Collection System - NFA

- four (4) 200 mm diameter perforated HDPE leachate collection pipes with an approximate total length of 1,131 m serving Cell 4 of the North Fill Area, spaced at no more than 50 m within a 500 mm thick layer of 50 mm clear stone, enclosed between top and bottom geotextile layers, extending from 2,400 mm diameter manhole MHL8 and discharging by gravity to 2,400 mm diameter manhole MHL4;
- four (4) 200 mm diameter perforated HDPE leachate collection pipes with an approximate total length of 1,022 m serving Cell 3 of the North Fill Area, spaced at no more than 50 m within a 500 mm thick layer of 50 mm clear stone, enclosed between top and bottom geotextile layers, extending from 2,400 mm diameter manhole MHL7 and discharging by gravity to 3,000 mm diameter manhole MHL3;
- two (2) 200 mm diameter perforated HDPE leachate collection pipes with an approximate total length of 437 m serving Cell 2 of the North Fill Area, spaced at no more than 50 m within a 500 mm thick layer of 50 mm clear stone, enclosed between top and bottom geotextile layers, extending from 2,400 mm diameter manhole MHL6 and discharging by gravity to 2,400 mm diameter manhole MHL2;

three (3) 200 mm diameter perforated HDPE leachate collection pipes with an approximate total length of 600 m serving Cell 2 of the North Fill Area, spaced at no more than 50 m within a 500 mm thick layer of 50 mm clear stone, enclosed between a top and a bottom geotextile layers, extending from 2,400 mm diameter manhole MHL5 and discharging by gravity to 2,400 mm diameter manhole MHL1;

one (1) approximately 211 m long 200 mm diameter solid HDPE perimeter leachate collector pipe with a 0.5% horizontal slope, extending through four (4) 2.4 to 3.0 m diameter precast concrete manholes (MHL4, MHL3, MHL2, and MHL1), discharging collected leachate through 37 m long 300 mm diameter solid HDPE pipe to a leachate pumping station described below;

Leachate Pumping Station - NFA PS

one (1) leachate pumping station (NFA PS) consisting of 11.5 m deep 3.0 m diameter precast concrete wet well equipped with two (2) submersible pumps (one duty and one standby), each rated at 15.1 L/sec at 63.9 m TDH, located at the south east corner of the North Fill Area, equipped with one (1) 100 kw standby diesel generator, discharging through a meter chamber consisting of 4.9 m long x 2.6 m wide precast concrete chamber, one (1) 575 m long 150 mm diameter HDPE forcemain, and an existing 150 mm diameter South Fill Area leachate forcemain located on the east side of Bensfort Road to a manhole at Neal Drive and Bensfort Road where it reaches Peterborough sanitary sewage collection system for treatment at Peterborough Water Pollution Control Plant (WPCP); and

including all controls and associated appurtenances.

all in accordance with the Application for Approval of Municipal and Private Sewage Works submitted by The Corporation of the City of Peterborough dated July 2, 2009 and design specifications and drawings prepared by Urban & Environmental Management Inc., Consulting Engineers, Mississauga, Ontario.

SEWAGE WORKS APPROVED ON JULY 30, 2009:

establishment of stormwater management facilities to service the Bensfort Road Landfill Site (Peterborough Waste Management Facility) North Fill Area of an approximately 15.63 ha. drainage catchment for enhanced (80% SS removal) level of quality control and to provide quantity control of post development 2 to 100-year flows to predevelopment levels, consisting of the following:

Internal Peripheral Ditch/Grassed Swale:

approximately 270 m long (Ditch D6-D7), 1:2.5 side sloped triangular existing ditch to intercept storm drainage from the laydown area at the east of the landfill site, discharging via one (1) existing 600 mm diameter culvert under the service road to the main cell of the existing wet pond:

approximately 450 m long (Ditches D3-D4), 1:2.5 side sloped triangular ditch to intercept storm drainage from the western part of the landfill site to ditch D4-D5 as described below:

approximately 745 m long (Ditches D1-D2 and D4-D5), 1 m bottom width 1:2.5 side sloped trapezoidal ditch to intercept storm drainage from the eastern part of the landfill site, via two (2) 900 mm diameter culverts under the service road to a wet pond as described below:

Wet pond (approximate service area 14.23 ha.):

a wet pond with two (2) 900 mm diameter inlet pipes into a sediment forebay and an existing 600 mm diameter inlet pipe to directly discharge into the main cell consisting of 1870 m3 in permanent, 4070 m3 in extended detention and a total volume of 5,290 m3 at a depth of 2.34 m (100-yr HWL-bottom level), to store, attenuate and discharge stormwater into a tributary of an unnamed Creek of the Crystal Springs Wetland and Otonabee River via the following control outlet:

a 1500 mm diameter aluminized CSP riser perforated outlet control structure anchored on the pond bottom, surrounded with 50 mm diameter clear stone jacket with a 150 mm and a 200 mm diameter riser inlets to a 300 mm diameter outlet pipe and valve chamber to discharge via a rip rap splash pad to a 3.8 m wide 300 mm deep grassed outlet channel into the Creek,

a 600 mm deep by 7.4 m wide rip rap overflow channel located in the south embankment of the pond to discharge storm water into the Creek;

External Peripheral Ditch/Grassed Swale:

approximately 525 m long (Ditch D15-16), 1:2.5 side sloped triangular ditch to intercept storm drainage from the external drainage west of the landfill site and discharge overland via a rip-rap dispersion channel into the creek within the wooded area,

approximately 280 m long (Ditch D13-14), 1:2.5 side sloped triangular ditch to intercept storm drainage from the external drainage north of the site and discharge into Bensfort Road side ditches,

approximately 290 m long (Ditch D10-10), 1:2.5 side sloped triangular ditch to intercept storm drainage from the external drainage north of the site and discharge into an existing ditch as described below:

approximately 580 m long (Ditches D10-11 and D11-12), 1:2.5 side sloped existing triangular

ditches to intercept storm drainage from the external drainage east of the site and discharge into existing Bensfort Road side ditch,

approximately 126 m long (Ditch D8-D9), 1:3 side sloped triangular existing ditch to intercept storm drainage from the existing transfer station, parking and service area to an oil and grit separator as described below:

Oil and Grit Separator (approximate service area 1.4 ha.) **:**

one (1) manhole type oil/grit separator (Model Stormceptor STC-2000 or approved equivalent), located in the north-east corner of the site, rated at 30 L/s flow without by-passing, having a sediment storage capacity of 7.7 m3, oil storage capacity of 2890 L and a total volume of 11.0 m3, discharging via a 600 mm diameter existing storm sewer to the Creek via a 2.8 m wide 300 mm deep grassed swale;

all in accordance with the **Application for Approval of Municipal and Private Sewage Works, Stormwater Management Facility,** dated April 20, 2009, North Landfill Area Stormwater Management Pond Design Brief, prepared and submitted by Joe Ovcjak, P.Eng., Urban & Environmental Management Inc., Consulting Engineers.

SEWAGE WORKS APPROVED ON OR BEFORE DECEMBER 22, 1993 UNDER WASTE CofA# A341508:

establishment of leachate management facility to service the South Fill Area (**SFA**) of the Bensfort Road Landfill Site consisting of the following:

Leachate Pumping Station - SFA PS

one (1) leachate pumping station (SFA PS) consisting of a 2.5 m deep x 3.0 m wide x 7.3 m long precast concrete holding tank and wet well equipped with two (2) submersible pumps (one duty and one standby), each rated at 5.8 L/sec and combined capacity of 9.0 L/sec, located at the east side of the South Fill Area, discharging through a flow meter, one (1) 6,200 m long 150 mm diameter HDPE forcemain located on the east side of Bensfort Road to a manhole at Neal Drive and Bensfort Road where it reaches Peterborough sanitary sewage collection system for treatment at Peterborough Water Pollution Control Plant (WPCP);

all in accordance with the Application for Approval of Municipal and Private Sewage Works submitted by The Township of Otonabee dated August 1992 and design specifications and drawings prepared by Conestoga Rovers & Associates .

SEWAGE WORKS APPROVED ON OR BEFORE JULY 2, 1996:

establishment of stormwater management facilities to service the Bensfort Road Landfill Site (Peterborough Waste Management Facility) South Fill Area of an approximately 18 ha. drainage to provide quantity control of stormwater run-off by attenuating flows from storm events up to 1:100 year return frequency to predevelopment levels, consisting of the following:

construction and upgrading of drainage swales including temporary sediment traps, installation of culverts at internal road crossings and associated appurtenances;

all in accordance with the information submitted by the Conestoga-Rovers and Associates Limited, Consulting Engineers and the following list of documents containing the information relied upon in the issuance of this Approval of Approval No. 3-1516-91-966:

1. Application for the sewage works dated September 9, 1991, signed by the City of Peterborough

and Frederick Mosher, P. Eng., Conestoga-Rovers and Associates Limited.

2. Report entitled "Surface Water Study For the Continued Operation of the Bensfort Road Landfill Site" dated February 1991, prepared by Gartner Lee Limited.

3. Report entitled "Report on the Impact of Leachate Discharge from the Peterborough Landfill on the Peterborough WPCP City of Peterborough WPCP" revised dated February 1991, prepared by Gore & Storrie Limited.

4. Reports entitled "City of Peterborough Bensfort Road Landfill Site Application for Interim Expansion" Volumes 3 and 4 both dated March 1991, prepared by Conestoga-Rovers and Associates Limited.

5. Letter dated September 20, 1991, signed by Frederick Mosher, P. Eng., Conestoga-Rovers and Associates Limited addressed to Paul Nieweglowski, Ministry of Environment and Energy.

6. Letter dated April 14, 1992, signed by Frederick Mosher, P. Eng., Conestoga-Rovers and Associates Limited addressed to Ranee Mahalingham, P. Eng., Approvals Branch, Ministry of Environment and Energy.

7. Letter dated May 12, 1992, signed by Philip J. Bauer, B.A.Sc. Eng., Conestoga-Rovers and Associates Limited addressed to Ranee Mahalingham, P. Eng., Approvals Branch, Ministry of Environment and Energy.

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

" *Approval* " means this Environmental Compliance Approval and any Schedules to it, including the application and supporting documentation.

" *Director* " means any Ministry employee appointed by the Minister pursuant to section 5 of the Part II.1 of the Environmental Protection Act ;

" *District Manager* " means the District Manager of the Peterborough District Office of the *Ministry* ;

" *Ministry* " means the Ontario Ministry of the Environment;

" *Owner* " means The Corporation of the City of Peterborough and includes its successors and assignees;

"Previous Works" means those portions of the sewage works previously constructed and approved under an *Approval* ;

“Proposed Works ” means the sewage works described in the *Owner* 's application, this *Approval* and in the supporting documentation referred to herein, to the extent approved by this *Approval* ;

" *Works* " means the sewage works described in the *Owner* 's application, this *Approval* and in the supporting documentation referred to herein, to the extent approved by this *Approval* .

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

TERMS AND CONDITIONS

PART I - GENERAL

1. GENERAL PROVISIONS

(1) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval* , the application for approval of the *Works* and the submitted supporting documents and plans and specifications as listed in this *Approval* .

(2) Where there is a conflict between a provision of any submitted document referred to in this *Approval* and the Conditions of this *Approval* , the Conditions in this *Approval* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(3) Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

2. EXPIRY OF APPROVAL

(1) Construction, operation, maintenance and removal of such items are the responsibility of the *Owner* and shall be coordinated with appropriate authorities in a timely fashion and on a priority basis as set by the County and the City of Peterborough and / or the *Ministry* . The *Approval* issued by this *Approval* will cease to apply to those parts of the *Works* which have not been constructed within ten (10) years of the date of this *Approval.*

3. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within thirty (30) days of the change occurring:

(a) change of *Owner* ;

(b) change of address of the *Owner* ;

(c) change of partners where the *Owner* 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.B17 shall be included in the notification to the *District Manager* ; and

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act , R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager*

PART II - STORMWATER MANAGEMENT FACILITY

4. OPERATION AND MAINTENANCE

(1) The *Owner* shall ensure that the design minimum liquid retention volume in the wet pond is

maintained at all times .

(2) The *Owner* shall inspect the *Works* at least once a year and, if necessary, clean and maintain the *Works* to prevent the excessive build-up of sediments, and/or vegetation.

(3) The *Owner* shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook ready and updated for inspection by the *Ministry* . The logbook shall include the following:

(a) the name of the *Works* ; and

(b) the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed.

5. RECORD KEEPING

(1) The *Owner* shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this *Approval.*

6. EFFLUENT MONITORING

The *Owner* shall establish and carry out, upon commencement of operation of the *Works* , the following effluent monitoring program:

(1) one (1) grab sample of the effluent from the outlet of the pond shall be collected within four (4) hour following commencement of a storm event with at least one (1) sample per season and with a minimum of three (3) samples during summer months of June, July and August and analyzed for the Total Suspended Solids, Turbidity, Un-ionized ammonia, Oxygen level (O_2), Temperature, pH and Oil and Grease; together with the following as per the schedule therein:

Table 1 - Effluent Monitoring for SWMF Pond for Landfill Sites (Note-4)
Sampling Points: Pond Inlets (900 mm culverts from Landfill Site) and Pond Outlet

Effluent Parameter	Frequency	Sample Type
General Chemistry Note 1	Semi-annually	Grab
Volatile Organic Compounds (VOC) Note 2	Semi-annually	Grab
Metals Scan Note 3	Semi-annually	Grab

Note 1: General Chemistry - hardness, alkalinity, chloride, nitrite, nitrate, sulfate, ammonia, colour, Total Kjeldahl Nitrogen (TKN), total phosphorus, Dissolved Organic Carbon (DOC), phenols, Biological Oxygen Demand (BOD_5), Chemical Oxygen Demand (COD).

Note 2: Volatile Organic Compounds (VOC) - benzene, bromodichloromethan, bromoform, bromomethane, carbon tetrachloride, chlorobenzene, chlorethane, chloroform, chloromethane, dibromochloromethane, 1,2-dichlorbenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, trans-1,2-dichloroethylene, dichloromethane, 1,2-dichloropropane, cis-1,3-dichloropropene, ethylbenzene, styrene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, trichlorofluoromethane, vinyl chloride, m+p-zylene, o-xylene.

Note 3: Metals Scan - boron, calcium, magnesium, sodium, potassium, aluminium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, vanadium, silver, zinc.

Note 4: Grab samples of stormwater from the two (2) Inlet pipes from the Landfill Site shall be collected, mixed and analyzed for the parameters and frequency as outlined in Table 1, along with grab sample from the pond outlet pipe for a storm event which results in a discharge from the works while maintaining a minimum of thirty (30) days between two consecutive sampling events.

(2) Unless otherwise stated, the protocol for sampling and analysis shall be in accordance with the principles specified in the Ministry's publication titled " Protocol for the Sampling and Analysis of Industrial and Municipal Waste Water" dated August 1994, (ISBN 0-7778-1880-9), as revised from time to time by more recently published edition.

(3) After the owner obtains a minimum of three (3) years of monitoring results, the monitoring frequency and monitoring parameters specified in subsection (1) Table 1 may be modified by the *District Manager* if written request is made by the Engineer on behalf of the *Owner* .

7. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works.*

Table 2 - Pond Effluent Objectives

Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)
pH	6.5 - 8.5
Turbidity	25 NTU
Un-ionized ammonia	0.02 mg/L
Oil and grease	15 mg/L
Boron	0.2 mg/L
Iron	0.3 mg/L

(2) The *Owner* shall use best efforts to ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

PART III - LEACHATE COLLECTION AND DISPOSAL SYSTEM

8. OPERATION AND MAINTENANCE

(1) The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Approval* are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training.

(2) The *Owner* shall provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

(3) Any diversion of sewage flow from any portion of the *Works* is prohibited, except:

(a) where it is unavoidable in preventing loss of life, danger to public health, personal injury or severe property damage; or

(b) where it is necessary for the purpose of essential maintenance of the *Works* to assure their efficient operation, and the *District Manager* has given a prior written approval for the bypass.

9. MONITORING AND RECORDING

The *Owner* shall carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Approval* are to be taken at a time and in a location characteristic of the quality and quantity of leachate over the time period being monitored.

(2) For the purposes of this condition, Quarterly means once every three months.

(3) A composite sample shall be collected at the following sampling point at a **quarterly frequency (May, August, and October)** and analyzed for each parameter listed and all results recorded:

Table 3
Leachate Monitoring
Sampling Location: Neal Drive Manhole

Parameters	Parameters	Field Parameters
Alkalinity, Total (as CaCO3)	Cobalt	pH
Total Ammonia Nitrogen	Copper	Conductivity
Bromide	Iron	Temperature
CBOD5	Lead	
Chloride	Manganese	
Iron	Mercury	
pH	Molybdenum	
Phenolics (Total)	Nickel	
Potassium	Selenium	
Sodium	Silver	
Total Kjeldahl Nitrogen (TKN)	Strontium	
Total Suspended Solids (TSS)	Tin	
Total Phosphorus	Titanium	
	Vanadium	
	Zinc	
	Zirconium	

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of

precedence, to the methods and protocols specified in the following:

(a) the Ministry's Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions;

(5) The *Owner* shall install and maintain (a) flow measuring device(s), to measure the flow rate of leachate from the *Works* with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flow rate for the entire design range of the flow measuring device in order to measure and record:

(i) the quantity of leachate being conveyed through Leachate Pumping Station NFA PS;

(ii) the quantity of leachate being conveyed through the Leachate Pumping Station SFA PS;

(6) The *Owner* shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this *Approval* .

PART IV - GENERAL

10. REPORTING

(1) One week prior to the start up of the operation of the *Proposed Works* , the *Owner* shall notify the *District Manager* (in writing) of the pending start up date.

(2) The *Owner* shall report to the *District Manager* or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence.

(3) In addition to the obligations under Part X of the Environmental Protection Act , the *Owner* shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(4) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

(5) The *Owner* shall prepare and submit to the *District Manager* a performance report as part of the Annual Monitoring and Design and Operations Report for the Site by **May 15 th** each year, covering the preceding calendar year. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all stormwater monitoring data and a comparison to the effluent objectives outlined in Condition 7, including an overview of the success and adequacy of the *Works* ;

(b) a summary and interpretation of all leachate monitoring data and volume of leachate disposed off-site during the reporting period;

(c) a description of any operating problems encountered and corrective actions taken;

(d) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works* ;

(e) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(f) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and

(g) a description of efforts made and results achieved in meeting the Effluent Objectives under Condition 7.

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) any other information the *District Manager* requires from time to time.

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

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Approval* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to approved works and to ensure that subsequent owners of the works are made aware of the Approval and continue to operate the works in compliance with it.

4. Conditions 4 and 8 are included to require that the *Works* be properly operated and maintained such that the environment is protected .

5. Condition 5 is included to require that all records are retained for a sufficient time period to adequately evaluate the long-term operation and maintenance of the *Works* .

6. Conditions 6 and 9 are included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Approval,* so that the *Ministry* can work with the *Owner* in

resolving any problems in a timely manner.

7. Condition 7 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

8. Condition 10 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Approval,* so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 6802-7VFRUK issued on September 24, 2009.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review 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 shall state:

1. 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;
2. 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:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. 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:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal 's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or**

www.ert.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 28th day of September, 2012

Sherif Hegazy, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

KC/
c: District Manager, MOE Peterborough District Office
Pat Devlin, The Corporation of the City of Peterborough

APPENDIX A - III)

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL – 4156 – CRM7RY ISSUED: JUNE 30, 2023

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4156-CRM7RY
Issue Date: June 30, 2023

The Corporation of the City of Peterborough
500 George Street North
Peterborough, Ontario
K9H 3R9

Site Location: Peterborough Organics Facility
1923 Base Line 1260 Bensfort Road
Township of Otonabee-South Monaghan, County of Peterborough
K9J 1C5

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:

establishment, usage and operation of new municipal sewage works to service the proposed Peterborough Organics Facility located on 1260 Bensfort Road, southern half of Lot 16, Concession 14, City of Peterborough, for the collection and treatment of leachate from a total catchment area of 7.75 hectares, to provide enhanced level water quality protection and erosion control and to attenuate post-development peak flows to pre-development peak flows for all storm events up to and including the 100 year storm event, discharging via a storm water management wet pond to sanitary collection systems, ultimately to Peterborough Wastewater Treatment Plant (WWTP) for treatment and disposal, consisting the following:

Sanitary Sewers:

- internal sanitary sewers, approximately 500 metres in length, from the receiving building, office building, compost bunkers and stormwater management wet pond, discharging to the sanitary collection system within the Peterborough Waste Management Facility.

Storm Sewers:

- internal storm sewers, approximately 500 metres in length, from the parking areas, driveway area and the processing, storage and curing area, discharging to the proposed stormwater management wet pond.

Internal Peripheral Ditch/Grassed Swale:

- internal ditch located along the northern boundary of the Site, approximately 290 metres in length, discharging to the proposed 375 mm internal storm sewer located under the processing, storage and curing area;
- internal ditch located along the southern boundary of the Site, approximately 240 meters in length, discharging to the main cell of the proposed stormwater management wet pond;
- internal ditch located along the eastern boundary of the Site, approximately 200 meters in length, discharging via one proposed 675 mm diameter culvert, under the emergency access driveway to the main cell of the proposed stormwater management wet pond.

Stormwater Management Works:

stormwater management facility (catchment area: 7.75 hectares, imperviousness 90 %): one (1) wet pond, with sediment forebay, located on the southern half of Lot 16, Concession 14 of the Otonabee Ward, receiving runoff through 525 millimetre diameter storm sewer, 675 millimetre culvert and ditches, having a permanent pool installed with aeration fountain with permanent storage volume of 6,409 cubic metres, an extended detention volume of 8,198 cubic metres, and a total storage volume of 14,607 cubic metres including the permanent pool, at a total depth of 2 metres, complete with two stage outlet structure comprised of a 900 millimetre diameter riser pipe connected with 450 millimetre diameter reverse slope inlet to 200 millimetres diameter outlet with an 50 millimetre diameter equivalent valve opening and 8 meter long Broad Crested Emergency Overflow Weir, allowing a maximum discharge of 5 litres per second under the 100-year storm event via sanitary collection systems, ultimately discharging to Peterborough Wastewater Treatment Plant (WWTP);

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted application and supporting documents listed in Schedule A forming part of this Approval.

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

1. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;

2. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

3. "District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;

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

5. "Existing Works" means those portions of the Works included in the Approval that have

been constructed previously;

6. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;

7. "Licensed Engineering Practitioner" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act,* R.S.O. 1990, c. P.28;

8. "Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;

9. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

10. "Owner" means The Corporation of the City of Peterborough and its successors and assignees;

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

12. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;

13. "Works" means the approved sewage works, and includes Proposed Works, Existing Works and modifications made under Limited Operational Flexibility.

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

TERMS AND CONDITIONS

1. GENERAL CONDITION

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

4. The issuance of, and compliance with the conditions of, this Approval does not:

a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to construct or operate the Works; or

b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. EXPIRY OF APPROVAL

1. This Approval will cease to apply to those parts of the Works which have not been constructed within five (5) years of the date of this Approval.

2. In the event that completion and commissioning of any portion of the Works is anticipated to be more than five (5) years, the Owner shall submit an application for extension at least twelve (12) months prior to the end of the five (5) years from the day of issuance of this Approval. The application shall include the reason(s) for the delay, whether there is any design change(s) and a review of whether the standards applicable at the time of Approval of the Works are still applicable at the time of request for extension, to ensure the ongoing protection of the environment.

3. CHANGE OF OWNER

1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

    a. change of address of Owner;

    b. change of Owner, including address of new owner;

    c. change of partners where the Owner 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; or

    d. change of name of the corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C39* shall be included in the notification.

2. In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.

3. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

4. CONSTRUCTION OF PROPOSED WORKS

1. Upon the construction of the Works, the Owner shall prepare a statement, certified by a Licensed Engineering Practitioner, that the Works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

2. Within one (1) year of the construction of the Proposed Works, a set of as-built drawings showing the Works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the Works for the operational life of the Works.

5. OPERATION AND MAINTENANCE

1. The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety, health or flooding hazard to the general public.

2. The Owner shall undertake an inspection of the condition of the Works, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the Works to prevent the excessive build-up of sediment, oil/grit, debris and/or decaying vegetation, to avoid reduction of the capacity and/or permeability of the Works, as applicable. The Owner shall also regularly inspect and clean out the inlet to and outlet from the Works to ensure that these are not obstructed.

3. The Owner shall construct, operate and maintain the Works with the objective that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.

4. The Owner shall operate the wet pond with the outlet valve in a "normally closed position" during normal operation of the wet pond;

5. The Owner shall ensure the immediate clean-out of the Works after a fuel or oil spill capture.

6. The Owner shall ensure that equipment and material for the containment, clean-up and disposal of fuel and oil and materials contaminated with such, is on hand and in good repair for immediate use in the event of:

    a. loss of fuel or oil to the Works; or

    b. a spill within the meaning of Part X of the EPA.

7. The Owner shall prepare an operations manual prior to the commencement of operation of the

Works that includes, but is not necessarily limited to, the following information:

a. operating and maintenance procedures for routine operation of the Works;

b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;

d. contingency plans and procedures for dealing with potential abnormal situations and for notifying the District Manager; and

e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.

8. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

9. The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the Works for inspection by the Ministry. The logbook shall include the following:

a. the name of the Works;

b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the Works; and

c. the date of each spill within the catchment area, including follow-up actions and remedial measures undertaken.

10. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this Approval.

6. TEMPORARY EROSION AND SEDIMENT CONTROL

1. The Owner shall install and maintain temporary sediment and erosion control measures during construction and conduct inspections **once every two (2) weeks** and after each significant storm event (a significant storm event is defined as a minimum of 25 millimetres of rain in any 24 hours period). The inspections and maintenance of the temporary sediment and erosion control measures shall continue until they are no longer required and at which time they shall be removed and all disturbed areas reinstated properly.

2. The Owner shall maintain records of inspections and maintenance which shall be made available for inspection by the Ministry, upon request. The record shall include the name of the inspector, date of inspection, and the remedial measures, if any, undertaken to maintain the temporary sediment and erosion control measures.

7. MONITORING

1. The Owner shall, upon commencement of operation of the Works, carry out a monitoring program, and all samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

2. Samples shall be collected and analyzed at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the monitoring tables in **Schedule B**.

3. The methods and protocols for sampling, analysis, toxicity testing, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

    a. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;

    b. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition) as amended from time to time by more recently published editions;

    c. for any parameters not mentioned in the documents referenced in Paragraphs 3.a and 3.b, the written approval of the District Manager shall be obtained prior to sampling.

4. The measurement frequencies specified in the effluent monitoring table in Schedule B in respect of any parameter are minimum requirements which may, after **six months** of monitoring in accordance with this Condition, be modified by the Director in writing from time to time.

5. The Owner shall compare the monitoring results obtained under Condition 7.2 for each trigger parameter with its corresponding trigger level listed in Table 3 under Schedule B to identify any potential leachate impact to stormwater run-off from the site;

6. In the event that a monitoring result for any of the parameters listed in Table 3 exceeds 75% of the PWQO during three consecutive monitoring events except for parameters where concentrations at POF-SW1 are historically above PWQO, POF-SW2 shall be sampled within one week to verify the exceedance and a water quality assessment shall be completed within 90 days;

7. In the event that a monitoring result for any of the parameters listed in Table 3 exceed the 75th percentile of historical background concentrations (POF-SW1), POF-SW2 shall be sampled

within one week to verify the exceedance and a water quality assessment shall be completed within 90 days;

8. In the event that the trigger level concentration exceedance of any parameter of concern is not confirmed after the second round of sampling, then normal monitoring shall be resumed;

9. In the event that the trigger level concentration exceedance of any parameter of concern is confirmed after the second round of sampling, the following actions shall occur:
   a. Investigation into potential leakages of the catchment system;
   b. A corrective Action Plan should be implemented to prevent future water quality trigger criteria exceedances at the Subject Site's boundary;
   c. Remedial activities as deemed necessary.

10. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. REPORTING

1. **One (1) week** prior to the start-up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.

2. The Owner shall, upon request, make all reports, manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

3. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within **fifteen (15) days** of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.

4. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

   a. a summary and interpretation of all monitoring data, including an overview of the success and adequacy of the Works;

   b. a description of any operating problems encountered and corrective actions taken;

   c. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works, including an estimate of the quantity of

any materials removed from the Works;

d. a summary of any complaints received during the reporting period and any steps taken to address the complaints;

e. a summary of all spill or abnormal discharge events; and

f. any other information the District Manager requires from time to time.

9. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Works", included under Schedule C of this Approval, as amended.

2. Works under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.

3. The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.

4. For greater certainty, the following are **not** permitted as part of Limited Operational Flexibility:

    a. Modifications to the Works that result in an increase of the approved capacity of the Works;

    b. Modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

    c. Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;

    d. Modifications to the Works approved under s.9 of the EPA, and

    e. Modifications to the Works pursuant to an order issued by the Ministry.

5. Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.

6. If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, provide a

revised copy of this plan to the local fire services authority prior to implementing Limited Operational Flexibility.

7. For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the Environmental Protection Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Lake Simcoe Protection Act and Greenbelt Act.

8. At least **thirty (30) day**s prior to implementing Limited Operational Flexibility, the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the District Manager.

9. The Owner shall not proceed with implementation of Limited Operational Flexibility until the District Manager has provided written acceptance of the Notice of Modifications or a minimum of **thirty (30) days** have passed since the day the District Manager acknowledged the receipt of the Notice of Modifications.

10. SPILL CONTINGENCY PLAN

1. Within **six (6) months** from the issuance of this Approval, the Owner shall implement a spill contingency plan - that is a set of procedures describing how to mitigate the impacts of a spill within the area serviced by the Works. The Owner shall, upon request, make this plan available to Ministry staff. This plan shall include as a minimum:

    a. the name, job title and location (address) of the Owner, person in charge, management or person(s) in control of the facility;

    b. the name, job title and 24-hour telephone number of the person(s) responsible for activating the spill contingency plan;

    c. a site plan drawn to scale showing the facility, nearby buildings, streets, catch-basins and manholes, drainage patterns (including direction(s) of flow in storm sewers), any receiving body(ies) of water that could potentially be significantly impacted by a spill and any features which need to be taken into account in terms of potential impacts on access and response (including physical obstructions and location of response and clean-up equipment);

    d. steps to be taken to report, contain, clean up and dispose of contaminants following a spill;

    e. a listing of telephone numbers for: local clean-up company(ies) who may be called upon to assist in responding to spills; local emergency responders including health institution(s); and Ministry Spills Action Centre 1-800-268-6060;

    f. Safety Data Sheets (SDS) for each hazardous material which may be transported or stored

within the area serviced by the Works;

g. the means (internal corporate procedures) by which the spill contingency plan is activated;

h. a description of the spill response training provided to employees assigned to work in the area serviced by the Works, the date(s) on which the training was provided and by whom;

i. an inventory of response and clean-up equipment available to implement the spill contingency plan, location and, date of maintenance/replacement if warranted; and

j. the date on which the contingency plan was prepared and subsequently, amended.

2. The spill contingency plan shall be kept in a conspicuous, readily accessible location on-site.

3. The spill contingency plan shall be amended from time to time as required by changes in the operation of the facility.

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

1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. Condition 1.4 is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance and operation of the Works. The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this Approval doesn't limit the authority of the Ministry to require further information.

2. Condition 2 is included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

4. Condition 4 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works "as constructed" are maintained for future references.

5. Condition 5 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the Works are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the Works. The Condition also ensures that adequate storage is maintained in the Works at all times as required by the design. Furthermore, this Condition is included to ensure that the Works are operated and maintained to function as designed.

6. Condition 6 is included as installation, regular inspection and maintenance of the temporary sediment and erosion control measures is required to mitigate the impact on the downstream receiving watercourse during construction until they are no longer required.

7. Condition 7 is included to require the Owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved Works is consistent with the design and effluent objectives specified in the Approval and that the approved Works does not cause any impairment to the receiving watercourse.

8. Condition 8 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.
9. Condition 9 is included to ensure that the Works are operated 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. These Conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, Ministry’s policies, guidelines, and industry engineering standards and best management practices.

10. Condition 10 is included to ensure that the Owner will implement the Spill Contingency Plan, such that the environment is protected and deterioration, loss, injury or damage to any person(s) or property is prevented.

Schedule A

1. Environmental Compliance Approval Application for Sewage Works submitted by D.M. Wills Associates Limited, dated September 16, 2022, and signed by James Istchenko P.Eng., Manager, Environmental Services, City of Peterborough, and all supporting documentation and information.

Schedule B

Surface Water Monitoring

Table 1	
Sampling Frequency	Twice annually
Sampling Type	Grab Sample
Sampling Locations	POF-SW1 (Background), POF-SW2 (Trigger Location)
Sampling Parameters	**Field Parameters**: Conductivity, pH, Water Temperature **General Parameters**: Total Dissolved Solids, Total Suspended Solids **Major and Minor Ions**: Alkalinity, Chloride, Sulphate **Nutrients/Organic Indicators**: Ammonia+Ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals**: Barium, Boron, Cadmium, Copper, Lead, Mercury, Nickel, Iron, Zinc

Leachate Monitoring

Table 2	
Sampling Frequency	Thrice annually
Sampling Type	Grab Sample
Sampling Locations	Leachate Collection system
Sampling Parameters	**Field Parameters**: Conductivity, pH, Water Temperature **General Parameters**: Total Dissolved Solids, Total Suspended Solids **Major and Minor Ions**: Alkalinity, Calcium, Chloride, Magnesium, Sodium, Sulphate **Nutrients/Organic Indicators**: Ammonia+Ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals**: : Barium, Boron, Cadmium, Copper,

	Lead, Nickel, Iron, Zinc

Trigger Parameters and Trigger Levels for POF-SW2

Table 3	
Parameter	**Trigger Level**
Alkalinity	Shall not be decreased by more than 25% of natural concentration.
Ammonia+ammonium, Total Suspended Solids	75% of historical concentration at background (POF-SW1)
Boron	75% of Canadian Council for Ministers of the Environment Water Quality Guideline for the Protection of Aquatic Life
Unionized Ammonia, Cadmium, Copper, Lead, Mercury, Nickel, pH, Total Iron, Total Phosphorus, Zinc	75% of PWQO

Schedule C

Limited Operational Flexibility Criteria for Modifications to Works

1. The modifications to Works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the Works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

    a. Sewage Pumping Stations

        i. Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.

        ii. Forcemain relining and replacement with similar pipe size where the nominal diameter is not greater than 1,200mm.

    b. Sewage Treatment Process

        i. Installing additional chemical dosage equipment including replacing with alternative chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no modifications of treatment processes or other modifications that may alter the intent of operations and may have negative impacts on the effluent quantity and quality.

        ii. Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent's land.

        iii. Optimizing existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where no land acquisition is required.

        iv. Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the Works that result in an increase of the approved Rated Capacity, and may have adverse effects to the effluent quality or location of the discharge.

        v. Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of

equipment is kept the same. For clarity purposes, the following equipment can be considered under this provision: pumps, screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

c. Sewage Treatment Plant Outfall

    i. Replacement of discharge pipe with similar pipe size provided that the outfall location is not changed.

d. Stormwater Management System

    i. Modifications of Works to service the existing approved drainage area located within the site, provided that there is no increase in the average impervious area established in the original design and the discharges from the site will not exceed the attenuated flows established in the original design.

    ii. Installation of new oil grit separators.

e. Sanitary Sewers

    i. Pipe relining and replacement with similar pipe size within the Sewage Treatment Plant site, where the nominal diameter is not greater than 1,200mm.

f. Pilot Systems

    i. Installation of pilot systems for new or existing technologies provided that:

        - any effluent from the pilot system is discharged to the inlet of the sewage treatment plant or hauled off-site for proper disposal,

        - any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and

        - the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and District Manager three months after completion of the pilot project.

2. Works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility.

3. Normal or emergency operational modifications, such as repairs, reconstructions, or other

improvements that are part of maintenance activities, including cleaning, renovations to existing approved Works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.

4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

Ontario

Ministry of the Environment, Conservation and Parks

Form 1
Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE DISTRICT MANAGER

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO license Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. The modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the Environmental Assessment Act.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

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.

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.olt.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 30th day of June, 2023

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

SN/
c: District Manager, DWECD, MECP Peterborough
Michael Lord, D.M. Wills Associates Limited

APPENDIX B

City's By-Law Number 07-027

THE CORPORATION OF THE CITY OF PETERBOROUGH

BY-LAW NUMBER 07-027
Amended by 09-108, 14-095, 15-132

BEING A BYLAW FOR THE PURPOSE OF REGULATING THE DISPOSAL OF WASTE, INCLUDING ESTABLISHING OF TIPPING FEES FOR THE PETERBOROUGH COUNTY-CITY WASTE MANAGEMENT FACILITY

WHEREAS Council of the City of Peterborough wishes to enact a By-law for the purposes of regulating the disposal of waste;

AND WHEREAS Section 391 of the *Municipal Act, 2001* provides that a municipality may pass by-laws imposing fees or charges;

AND WHEREAS solid waste tipping fees will be included in the By-law;

AND WHEREAS the City of Peterborough held a public meeting on December 11, 2006 at City Hall, 500 George Street North, Peterborough, in accordance with Regulation 244/02 under the *Municipal Act, 2001*;

NOW THEREFORE the Council of the City of Peterborough enacts as follows:

1. INTERPRETATION

In this By-law:

"City" means the City of Peterborough;

"Director" means the Director of Utility Services for the City of Peterborough and where applicable includes a person designated by the Director to perform a task or exercise a power in his or her place and stead;

"garbage" means dry waste other than recyclable materials, organic materials and hazardous waste;

"green waste" has the meaning set out in Schedule "A";

"hazardous waste" means hazardous waste as defined in R.R.O. 1990, Regulation 347, as amended from time to time, pursuant to the Environmental Protection Action, R.S.O 1990, cE19, which includes:

a) hazardous industrial waste;
b) acute hazardous waste chemical;
c) hazardous waste chemical;
d) severely toxic waste;
e) ignitable waste;
f) corrosive waste;
g) reactive waste;
h) radioactive waste, except radioisotope wastes disposed of in a landfilling site in accordance with the written instructions of the Atomic Energy Control Board or the Canadian Nuclear Safety Commission;
i) pathological waste;
j) leachate toxic waste;
k) PCB waste as defined in Regulation of 362 of Revised Regulations of Ontario, 1990;

"recyclable materials" means those materials set out in Schedule "A";

"waste" means anything for which the holder has no further use and which the holder has discarded and includes, but is not limited to garbage and recyclable material;

"waste management facility" means the Peterborough County/City Waste Management Facility, formerly known as Bensfort Landfill Site, located at 1260 Bensfort Road, Township of Otonabee, South Monaghan, County of Peterborough. For the purpose of this by-law, the waste management facility includes the landfill site and the Public Drop-off Depot.

2. GENERAL PROVISIONS AND PROHIBITIONS

2.1 No person shall, at the waste management facility:

(a) deposit waste outside the posted hours of operation;

(b) deposit waste or recyclable materials at any place other than the place respectively designated for the receipt of such waste;

(c) deposit hazardous waste;

(d) deposit any waste which originated from outside the County or City of Peterborough. If requested, the person shall provide proof of the origin of the waste prior to depositing the waste;

(e) refuse to remove, at the person's expense, any waste which has been deposited by the person which is not in compliance with this by-law;

(f) remove or scavenge any deposited waste without the prior written approval of the Director;

(g) deposit waste which has been transported to the facility except when such waste has been properly secured or covered in canvas, tarpaulins or nets, so fastened down around the edges as to prevent any of the contents from leaving the vehicle during transport.

2.2 Not withstanding Section 2.1 (b), any load which contains less than 10% by volume of recyclable materials may be deposited at the place designated for the receipt of garbage.

3. FEES

3.1 No person shall deposit waste at the waste management facility without paying the appropriate fee for that type of waste, as set out in Schedule "B".

3.2 If any cheque provided in payment of a fee payable under Subsection 3.1 is returned marked "Not Sufficient Funds", the amount of the fee shall remain unpaid, and together with the administrative charge for NSF cheques, determined in accordance with the City's Financial Policies shall be a debt to the City owing by that person recoverable by action or other means open to the City.

4. ENFORCEMENT PROCEDURES

4.1 In the event that a person deposits, or attempts to deposit waste, not in compliance with this by-law:

(a) The person may be refused access to the waste management facility;

(b) The person shall receive a written warning on the first such occasion;

(c) The person shall pay surcharges in the following amounts on any subsequent occasions:

(i) $100 on the first subsequent occasion;

(ii) $200 on the second subsequent occasion;

(iii) $300 on the third and any other subsequent occasions.

5. **SCHEDULES**

The following Schedules attached hereto form a part of this By-law:

Schedule “A” –Recyclable Materials; and
Schedule “B” – Waste Management Tipping Fees.

6. **PENALTY**

Any person who contravenes this by-law is guilty of an offence and, upon conviction, is liable to a fine or penalty provided for in the ***Provincial Offences Act***, as amended.

7. **EFFECTIVE DATE**

This By-law shall come into force and take effect on Thursday, March 1, 2007.

By-law read a first, second and third time this 26th day of February, 2007.

(Sgd.) D. Paul Ayotte, Mayor

(Sgd.) Nancy Wright-Laking, City Clerk

SCHEDULE "A"

TO BY-LAW 07 -027
RECYCLABLE MATERIALS

The following materials are banned from disposal at the waste management facility but are accepted for recycling at the facility's Public Drop-off Depot:

"blue box materials" means recyclable materials as collected in the City of Peterborough Blue Box Collection program, as amended from time to time, namely:

a) clear and coloured glass from food & beverage bottles and jars; aseptic containers;
b) metal cans and foil; including food & beverage cans, aluminum foil & trays;
c) empty metal paint and aerosol cans;
d) gable top drink cartons and tetra paks including milk and juice cartons and tetra pack containers for juice, milk, soup;
e) plastic soft drink and water containers made out of polyethylene terephthalate (PET or PETE #1);
f) plastic bottles and jugs made out of high density polyethylene (HDPE #2);
g) tubs and lids (#5);
h) polystyrene and styrofoam containers (#6) including clear trays and clamshells marked with the #6 only; plant pots up to 12 inches in size, cell-paks, carrying flats; foam meat trays, plates, cups, take-out containers and egg cartons only;
i) film plastic bags including bread, milk , fresh and frozen produce bags, bulk food, dry cleaning, toilet-tissue packaging, and cereal box liners;
j) boxboard, including cereal, crackers, detergent, toothpaste, shoe boxes;
k) corrugated cardboard consisting of triple-layer cardboard boxes. Waxed, stained, painted or contaminated cardboard must be discarded as garbage;
l) paper including envelopes, direct mail advertising, paper egg cartons, greeting cards and all remaining paper and paper products generated by households
m) newspapers & magazines, including inserts, catalogues, white envelopes, computer paper; writing papers, telephone directories, manuals & softcover books;

"clean wood waste" includes untreated lumber and wood products such as pallets and raw lumber, but does not include painted wood, paneling, pressboard or similar treated products;

"drywall" includes drywall scraps or drywall material, which may contain paint and screws, segregated from supporting building material;

"green waste" means leaves, grass clippings; trees, excluding stumps; garden roots and cuttings; hedge and shrub trimmings; brush cuttings; twigs and branches; natural Christmas trees; other plant material;

"scrap metal" includes metal auto parts, large appliances, bicycles, tools, etc; and

"tires" means tires without wheel rims.

SCHEDULE "B"

TO BY-LAW 07-027
WASTE MANAGEMENT TIPPING FEES

1. GARBAGE

		Rate
a)	**Load of 100 kg or less**	$5.00 flat rate
b)	**Load over 100 kg**	$90.00 per metric tonne

2. RECYCLABLE MATERIALS

All loads of recyclable materials must be segregated and cannot contain garbage.

		Rate
a)	**Load of 100 kg or less**	FREE
b)	**Load over 100 kg**	$45.00 per metric tonne
c)	**On-road tires** (tire diameter:124cm/49 inches or less)	
	- up to 5 tires in a load	$3 surcharge per tire
	- more than 5 tires in a load	$225 per metric tonne
d)	**Off-road tires** (tire diameter:127 cm/ 50" or more)	
	- up to 5 tires in a load	$40 surcharge per tire
	- more than 5 tires in a load	$225 per metric tonne
e)	Freon-containing appliances	$15 surcharge per appliance

3. UNCONTAMINATED GRANULAR MATERIAL AND NON-HAZARDOUS CONTAMINATED SOIL TIPPING FEE

		Rate
a)	Granular materials determined by the Director to be suitable as cover material at the waste management facility, and deposited in the area specified by the Director, for such use;	FREE
b)	Non-hazardous contaminated soil, tested for suitability by owner of the material and determined by the Director to be suitable as cover material at the waste management facility, and deposited in the area specified by the Director for such use.	$20.00 per metric tonne

THE CORPORATION OF THE CITY OF PETERBOROUGH

BY-LAW NUMBER 09-108

BEING A BY-LAW TO AMEND BY-LAW 07-027 FOR THE PURPOSE OF REGULATING THE DISPOSAL OF WASTE, INCLUDING ESTABLISHING OF TIPPING FEES FOR THE PETERBOROUGH COUNTY-CITY WASTE MANAGEMENT FACILITY

WHEREAS the Council of the City of Peterborough passed By-law 07-027 being a by-law for the purpose of regulating the Disposal of Waste, including establishing of Tipping Fees for the Peterborough County-City Waste Management Facility;

AND WHEREAS the Council of the City of Peterborough deems it expedient to amend Schedule "B" of By-law 07-027 to reflect changes in Tipping Fees;

THEREFORE the Council of the Corporation of the City of Peterborough enacts as follows:

1. That Section 1 of Schedule "B" of By-law 07-027 be amended by adding the following:

	Rate
"c) Asbestos	$200.00 per metric tonne"

2. That Section 2 of Schedule "B" of By-law 07-027 be amended by replacing items c) and d) with the following:

	Rate
"c) On-road tires	Free
d) Off-road tires	Free"

3. That Schedule "B" of By-law 07-027 be amended by adding the following Section.

"4. Electronic or Hazardous Waste

All loads of waste electronics and electrical equipment or municipal hazardous or special waste must be taken to the Household Hazardous Waste Drop-off Depot for recycling or proper disposal.

	Rate
a) Monitors	Free
b) Fluorescent Light Tubes	Free"

4. That this By-law shall come into effect on Tuesday, September 1, 2009.

By-law read a first, second and third time this 10th day of August, 2009.

(Sgd.) D. Paul Ayotte, Mayor

(Sgd.) Kevin Arjoon, Deputy Clerk

The Corporation of the City of Peterborough

By-Law Number 14-095

Being a By-law to amend By-law 07-027 Being a By-law for the purpose of regulating the Disposal of Waste, including establishing of Tipping Fees for the Peterborough County-City Waste Management Facility

Whereas the Council of the City of Peterborough passed By-law 07-027 being a by-law for the purpose of regulating the Disposal of Waste, including establishing of Tipping Fees for the Peterborough County-City Waste Management Facility;

And Whereas the Council of the City of Peterborough deems it necessary to amend Schedule “A” of By-law 07-027 to reflect changes in acceptable recyclable materials;

Now Therefore, The Corporation of the City of Peterborough by the Council thereof hereby enacts as follows:

1. That Schedule “A” of By-law 07-027 be amended by adding the following Recyclable Materials:

   “boxsprings” of all sized, must be clean

   “mattresses: of all sizes, including futons; must be clean

2. That this By-law shall come into effect on Tuesday, September 2, 2014.

By-law read a first, second and third time this 5th day of August, 2014.

(Sgd.) Daryl Bennett, Mayor

(Sgd.) Natalie Garnett, Deputy City Clerk

The Corporation of the City of Peterborough

By-Law Number 15-132

Being a By-law to amend By-law 07-027 Being a By-law for the purpose of regulating the Disposal of Waste, including establishing of Tipping Fees for the Peterborough County-City Waste Management Facility

Whereas the Council of the City of Peterborough passed By-law 07-027 being a by-law for the purpose of regulating the Disposal of Waste, including establishing of Tipping Fees for the Peterborough County-City Waste Management Facility;

And Whereas the Council of the City of Peterborough deems it necessary to amend Schedule “B” of By-law 07-027 to reflect changes in the tipping fee for Garbage, loads over 100 kg;

Now Therefore, The Corporation of the City of Peterborough by the Council thereof hereby enacts as follows:

1. That Schedule “B” of By-law 07-027 be amended by changing the tipping fee for 1.b) Garbage – Loads over 100 kg to $90.00 per metric tonne:

2. That this By-law shall come into force and effect on Tuesday, September 8, 2015.

By-law read a first, second and third time this 8th day of September, 2015.

(Sgd.) Daryl Bennett, Mayor

(Sgd.) John Kennedy, City Clerk

APPENDIX C

Leachate Collection System, Water Balance and Leachate Quality

LEACHATE COLLECTION SYSTEM, WATER BALANCE AND LEACHATE QUALITY

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1.0 Leachate Management

One of the primary operations at the Peterborough County/City Waste Management Facility (PCCWMF) is the management and disposal of leachate. Leachate is the infiltration water collected after passing through the waste. A multi-component leachate collection and pumping system has been designed and constructed to collect and dispose of leachate generated at the PCCWMF. In addition to handling and disposing of collected leachate it is also important to monitor leachate levels and inspect areas of the Site under interim or final cover for evidence of leachate seepage as part of the overall landfill and surface water management strategy.

All cells referenced in this text are based on the historical site cell designations to assist in explaining the system development and operations. These historical cell designations can be found on Figure 2.3.

The leachate collection and pumping system is a combination of gravity drainage systems to pumping stations that discharge leachate via forcemains to the City's sanitary sewer system for subsequent treatment.

1.1 Leachate Collection System Overview

Leachate and potentially impacted surface water/groundwater are directed into the leachate collection system from a number of separate areas and conveyed to a common holding area/pumping station in either the North Fill Area (NFA) or South Fill Area (SFA). Figure C.1 provides a layout of the various leachate collection piping systems at the Site. From each pumping station, collected liquids are pumped through a forcemain to the City's Sanitary Sewer System via a sanitary sewer manhole located at Neal Drive and Bensfort Road. The leachate pumping system schematic for the SFA is shown on Figure C.2. Final treatment of the leachate takes place at the City's Wastewater Treatment Plant. Table C.1 presents historical leachate/groundwater volumes discharged to the forcemain.

The combination of leachate and potentially impacted surface water and groundwater is collected at the Site using differing systems and sub-systems that correspond to the following areas:

i) Cell 1 – South (above former Phase 1 Area and former Cells A to D);

ii) West Portion of Cell 1 – North (some new areas and areas above former Phase 2 Area);

iii) East Portion of Cell 1 – North (former Cells G, H, I &J);

iv) Cell 1 – West A;

v) Cell 1 – West B;

vi) Groundwater Interceptor Trench to the east of the fill area adjacent to Bensfort Road;

vii) Cell 2 in the NFA;

viii) Cell 3 in the NFA; and

ix) Cell 4 in the NFA.

x) Peterborough Organics Facility (POF)

1.2 Cell 1 – South

A toe drain is installed along the south and east perimeter of former Cells A to D, which collects leachate from the base of the former cells. The toe drain conveys collected leachate by gravity from the base of former Cells A to D and the collection system in Phase 1 and Cell 1 West A area to the SFA pumping station. The toe drain is accessed by manholes MH-A0, MH-A1, MH-B1, MH-C1 and MH-D2.

The leachate collection system on the upper portion of Cell 1 - South (Phase 1) is comprised of perforated underdrain piping installed in conjunction with a stone drainage blanket on the prepared base of the cell. The combination of the leachate collection system and cell base grading direct leachate to a perforated header installed along the inside base of the eastern perimeter berm. Leachate collected from Phase 1 is directed by gravity to the toe drain manholes that drain to the SFA pumping station.

1.3 West Portion of Cell 1 – North

The leachate collection system on the West Portion of Cell 1 – North (former Phase 2) is comprised of perforated underdrain laterals installed in conjunction with a stone drainage blanket on the prepared base of the cells. Leachate drains from the underdrain laterals to manholes MHT7-94, MHT8-94, and MHT9-94, which flow by gravity through the perimeter leachate header to MH-J3. MH-J3 acts as a lift station in which the leachate level is continuously monitored and pumped to the SFA pumping station when it reaches pre-set elevations.

1.4 East Portion of Cell 1 – North

The network of leachate collection piping for the east portion of Cell 1 – North, the area above former Cells G to J, is comprised of perforated underdrain laterals installed in conjunction with a stone drainage blanket on the prepared base of the cells. The leachate drains from the laterals to manholes MH-I2 to MH-J3 and then it drains by gravity through the perimeter leachate header to MH-J3.

Leachate collected in the toe drain at the base of former Cell G drains via MH-G, located centrally near the north perimeter of the SFA, into the perimeter header where it drains to MH-J3. This piping section also collects and transports leachate and surface water from the Phase 2 Area.

Leachate collected from former Cell H drains to MH-D2 and then through 250 mm solid piping to the SFA pumping station. There is a hydraulic connection between former Cells H and J that was documented during construction of the Cell J underdrain system. The majority of leachate from the former Cell H drains directly into the former Cell J leachate collection system.

1.5 Cell 1 – West (A & B)

The leachate collection system for Cell 1 West is comprised of a perforated underdrain pipe and a stone drainage blanket on the base of the cell.

Leachate in Cell 1 – West A is directed via the underdrain pipe to manhole TDCO-A1 where it drains to the toe drain and subsequently the SFA pumping station. An isolation valve is located at TDCO-A1.

Leachate in Cell 1 – West B is similarly directed by the underdrain pipe to manhole MHT10-07. An isolation valve is located at this manhole. Solid pipe connects MHT10-07 to MHT9-94, from where leachate drains through the outside perimeter header, to MH-J3.

1.6 Groundwater Interceptor Trench

The groundwater interceptor trench is located between the fill area and Bensfort Road. The groundwater interceptor constructed of perforated pipe in a stone trench captures groundwater migrating laterally in the underlying till beneath former Cells A to D and Phase 1. This system is intended to act as a hydraulic barrier to capture potentially contaminated groundwater flowing beneath the landfill, and prevent its discharging to the intermittent stream, which flows across the southeast corner of the PCCWMF. Groundwater is intercepted and drains north from MH-1 to MH-4, and south from MH-6 to MH-4. MH-4 acts as a lift station, pumping collected groundwater to the SFA pumping station.

1.7 Cell 2 – NFA

The leachate collection system for Cell 2 in the NFA is comprised of perforated underdrain pipes and a stone drainage blanket on the base of the cell.

The leachate collection system directs leachate to MHL2. A 200 mm diameter HDPE solid pipe directs leachate from MHL2 to the NFA pumping station which conveys collected leachate through a meter chamber and ultimately discharges into the City sanitary sewer.

1.8 Cell 3 – NFA

The construction of a leachate collection system for Cell 3 in the NFA was completed in December 2015. Similar to Cell 2, the leachate collection system is comprised of perforated underdrain pipes and a stone drainage blanket on the base of the cell.

The leachate collection system directs leachate to MHL3 located in the southeast corner of Cell 3. A 200 mm diameter HDPE solid pipe directs leachate from MHL3 to MHL2 in Cell 2, which drains to the NFA pumping station.

1.9 Cell 4 – NFA

The construction of a leachate collection system for Cell 4 in the NFA was completed in December 2022. Similar to Cells 2 and 3, the leachate collection system is comprised of perforated underdrain pipes and a stone drainage blanket on the base of the cell.

The leachate collection system directs leachate to MHL4 located in the southeast corner of Cell 4. A 200 mm diameter HDPE solid pipe directs leachate from MHL4 to MHL3 in Cell 3, which drains to Cell 2 and then the NFA pumping station.

1.9 Peterborough Organics Facility

Construction of the POF was substantially completed in June 2024. However, components of the facility were completed earlier to allow processing of material starting February 2024.

A 200mm diameter gravity sanitary sewer was constructed to service the office and maintenance building, receiving building, bio-filter sump, and leachate from the Gore Composting System aeration bunkers. The sanitary sewer connects to the existing leachate collection system at MHG1 which outlets to the NFA leachate pumping station.

In addition, the stormwater management pond for the POF is also connected to the existing leachate collection system at MHG1 through a manual control valve. When the NFA pump station has capacity available, the control valve is opened to allow contact stormwater to drain at a controlled rate through the leachate collection system. When the NFA pump station does not have capacity available, the control valve remains closed and contact stormwater is detained in the stormwater management pond.

2.0 Water Balance Analysis

Table C.1 presents historical leachate/groundwater volumes discharged to the forcemain. These data were compared to environmental data to examine the overall water balance at the Site. 84,259 m^3 of leachate was collected at the site in 2024.

The volume of leachate produced at the Site is dependent on the area of the refuse areas, the proportion of the net surplus that infiltrates into the waste, and amount of groundwater inflow.

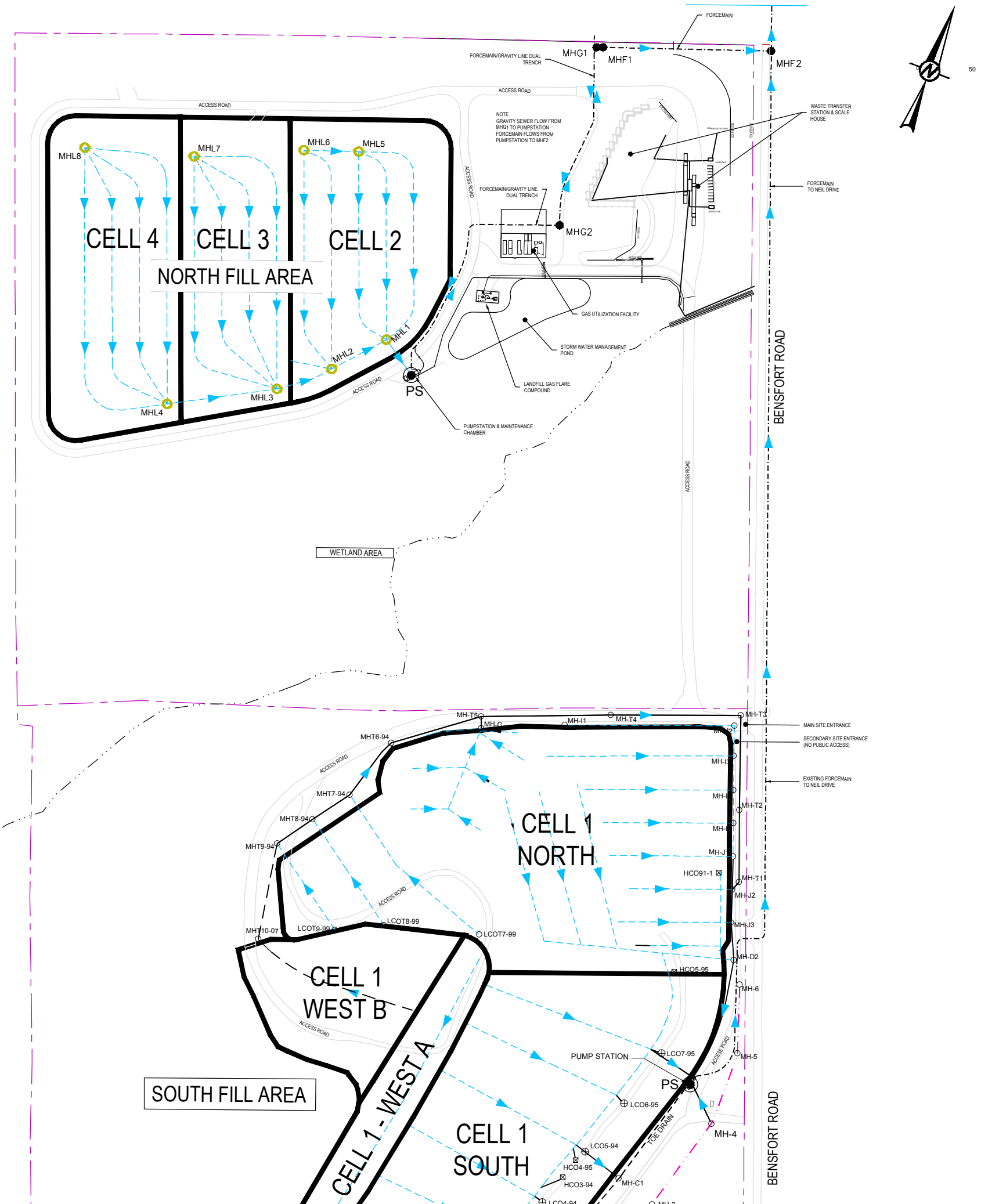
Table C.2 summarizes the interpreted volumes attributed to leachate production from precipitation and groundwater inflow, in 2024.

As shown in Table C.1, the total volume of leachate collected in 2024, 84,259 m^3, was 8.5% lower than the volume of 91,727 m^3 collected in 2023. The decrease in the volume of leachate is attributed to lower amount of precipitation received in 2024. The precipitation received in 2024 was 6.5% lower than the amount of precipitation received in 2023, for the Peterborough Airport climate station.

As shown in Table C.2, approximately 44% of the collected leachate within the SFA is attributed to precipitation infiltration through the landfill cap and refuse, with the remaining portion attributed to groundwater inflow at various locations surrounding the cell. It is interpreted that approximately 11,606 m^3 of groundwater inflow occurs within the NFA, based on the surrounding groundwater levels in 2024, which represents 25% of the total leachate collected from the NFA. The remaining 75% of leachate production in the NFA is attributed to precipitation infiltration through the refuse for Cells 2 and 3, and direct precipitation collection in Cell 4. Precipitation and infiltration represent a larger portion of the leachate production within the NFA, since the cells are still operational.

Figure C.3 provides a comparison between the monthly 2024 precipitation totals and the historical monthly averages obtained from the Peterborough Airport climate station from 1991-2020. The total precipitation received at the Peterborough Airport in 2024 was measured to be 763.8 mm, which was less than the historical climate normal of 839.8 mm.

Figure C.4 provides a comparison between the weekly precipitation and the volume of leachate discharged to the forcemain. As shown in the figure, leachate production within the NFA is noticeably influenced by precipitation events, which is not unexpected, since Cell 2 and 3 are partially under final cover and Cell 4 is has recently been constructed and is essentially a collection basin for precipitation until final contours are reached. As a result of the construction of Cell 4 in December 2022, volumes of leachate production are expected to increase in the NFA until waste elevation reach final contours and final cover placement begins. Construction and operation of the POF in 2024 is also expected to increase leachate production in the NFA.



LEGEND

- PROPERTY LINE
- LIMIT OF CELL
- NON-PERF. PIPE
- PERFORATED PIPE
- TDCO-A3 — TOE DRAIN CLEANOUT
- LCO3-94 — LATERAL CLEANOUT
- HCO2-94 — HEADER CLEANOUT
- MH-D2 / MHL1 — LEACHATE COLLECTION SYSTEM TIE-IN (SFA/NFA)
- TOE DRAIN PIPING
- INTERCEPTOR PIPING
- LEACHATE FORCEMAIN
- LEACHATE FORCEMAIN & GRAVITY SEWER DUAL TRENCH
- MHG1 — GRAVITY SEWER MANHOLE (NFA)
- MHF1 — FORCEMAIN SERVICE MANHOLE
- PS — PUMPSTATION

0 100 200
1:4,000 METRES

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

CONSULTANT
wsp

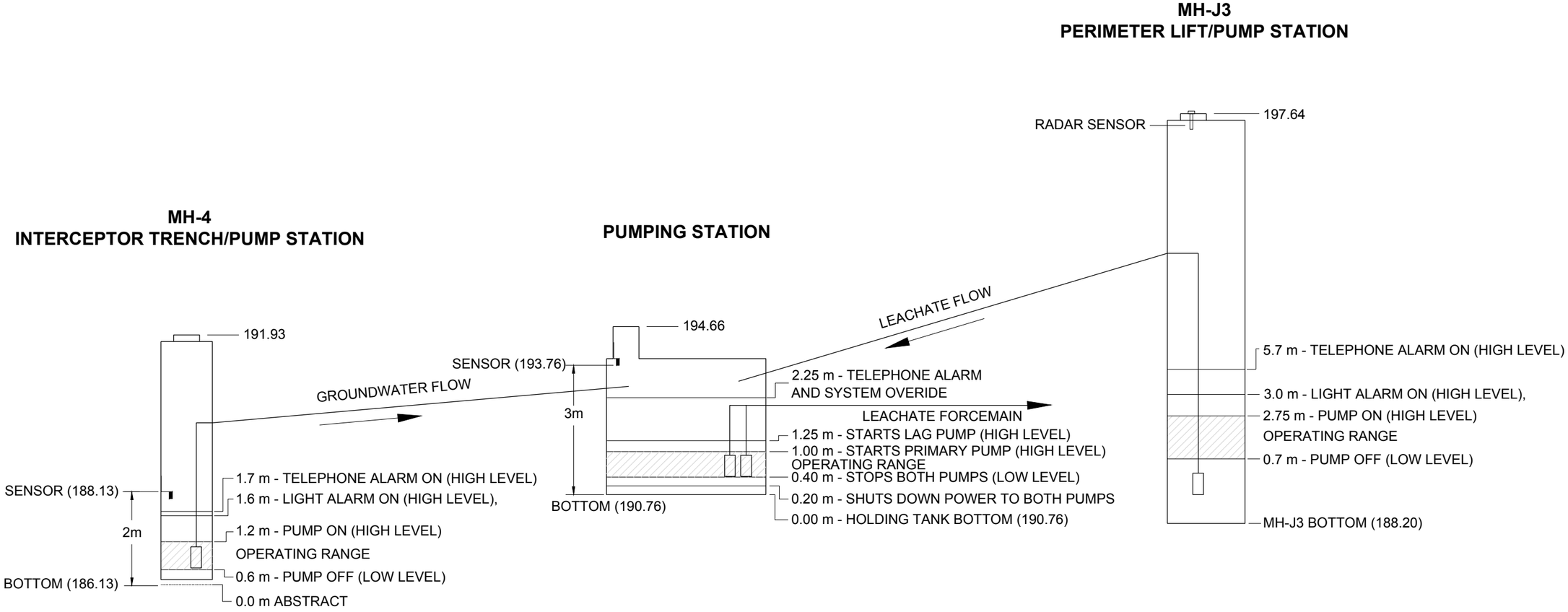
YYYY-MM-DD	2024-12-09
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
LEACHATE COLLECTION SYSTEM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	C-1

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



NOTES:

1. ONCE ALARM HAS BEEN ACTIVATED IT CAN ONLY BE DEACTIVATED BY RESETTING THE MILLTRONICS CONTROLLER.
2. MH4 AND PUMP STATION HAVE ULTRA SONIC LEVEL SENSORS. RADAR SENSOR INSTALLED IN MH-J3 IN JUNE 2007.
3. DRAWING BASED ON CRA 2007 ANNUAL MONITORING REPORT, FIGURE E.1.

0 25 50 75 m

1:1250

PLOTTED 11X17" TABLOID

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
2024 ANNUAL MONITORING REPORT
PETERBOROUGH COUNTY / CITY
WASTE MANAGEMENT FACILITY

TITLE
AUTOMATED LEACHATE PUMPING SYSTEM DIAGRAM SOUTH FILL AREA

CONSULTANT

YYYY-MM-DD	2024-12-09
DESIGNED	
PREPARED	JPR
REVIEWED	TLM
APPROVED	

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0002	----	C-2

Path: \\corp.pbwan.net\CA\CAMIS300\CTX_Data\SIM\Clients\City_of_Peterborough\Peterborough_Landfill\99_PROJ\CA0008825_191740_PROD\0002-2024.AMR\ | File Name: CA0008825-0002-CHI-0012.dwg | Last Edited By: gld_jregier Date: 2024-12-09 Time:3:59:09 PM | Printed By: gld_jregier Date: 2024-12-10 Time:2:54:45 PM
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
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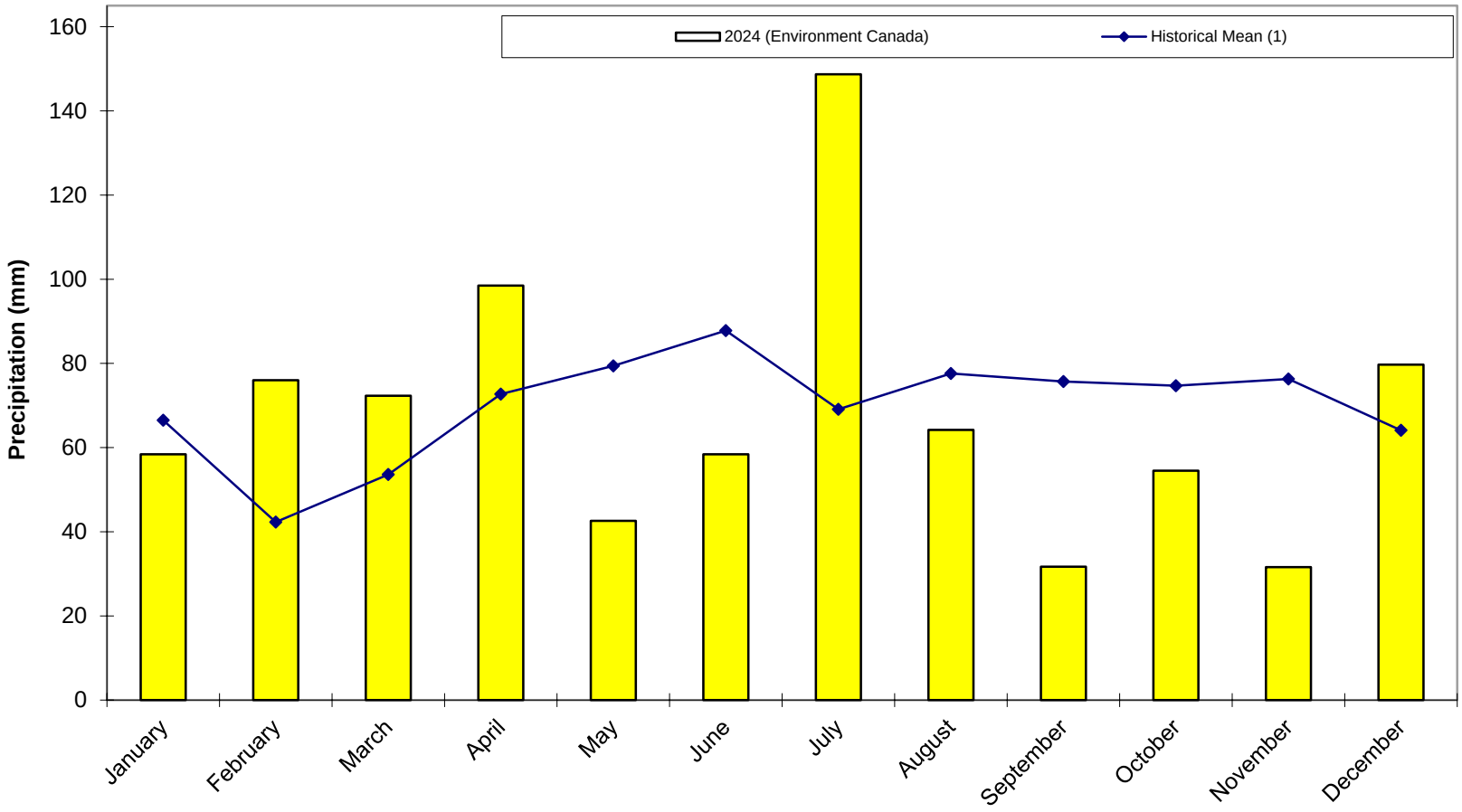
Figure C.3
Precipitation Comparison – Peterborough Airport (2024) vs. Historical Mean
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility



Notes:
(1) Historical monthly averages are obtained from Environment Canada, Canadian Climate Normals from 1991-2020 Peterborough Airport Station Data.

FIGURE C.4
COMPARISON OF WEEKLY PRECIPITATION TO LEACHATE DISCHARGED TO FORCEMAIN

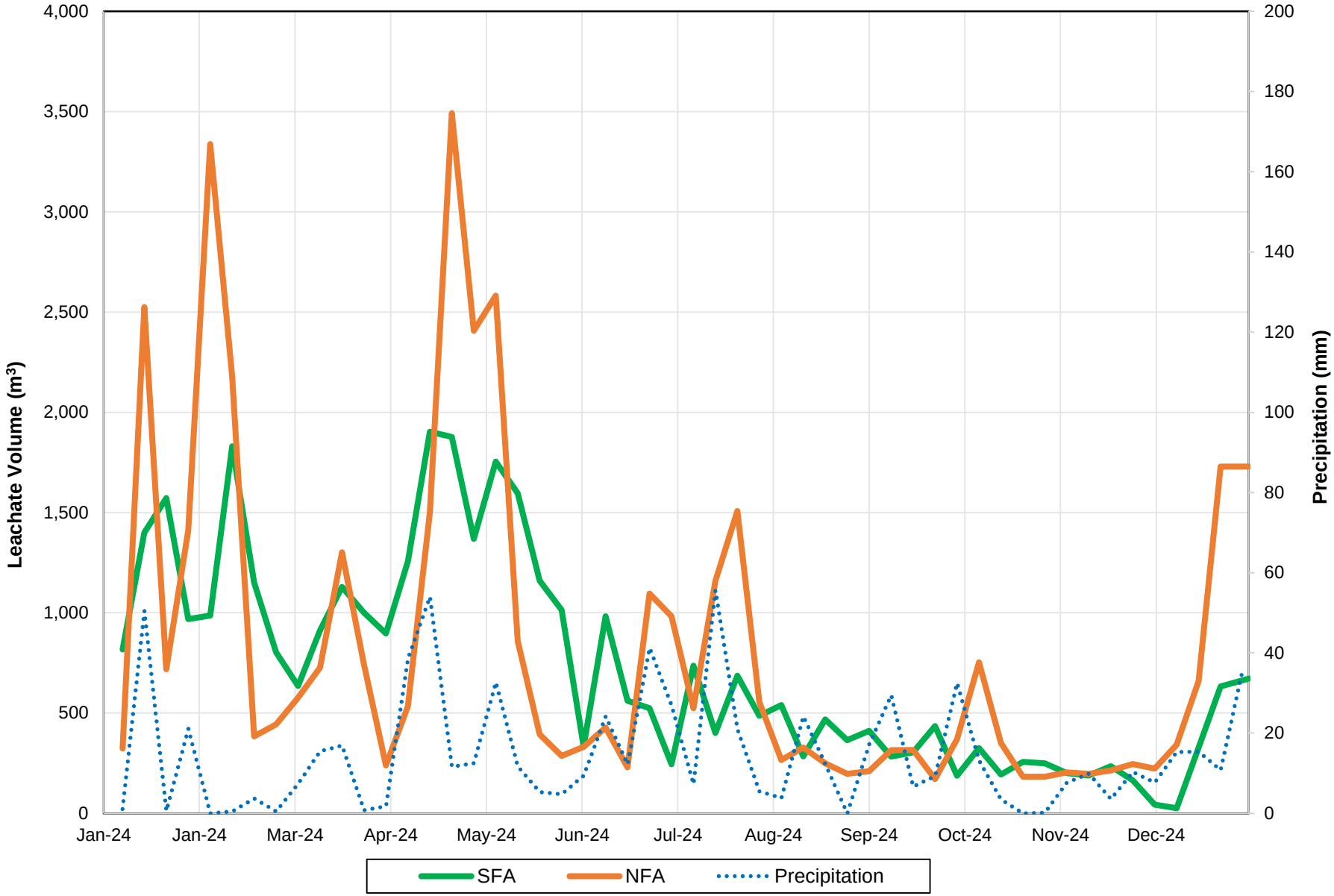


TABLE C.1
Historical Leachate/Groundwater Volumes
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Averaged Annual Trucking Records[1]	Metered Truck Records		Forcemain Records											
	1987 to 1990 (m^3)	1991 (m^3)	1992 (m^3)	1993 (m^3)	1994 (m^3)	1995 (m^3)	1996 (m^3)	1997 (m^3)	1998 (m^3)	1999 (m^3)	2000 (m^3)	2001 (m^3)	2002 (m^3)	2003 (m^3)	2004 (m^3)
January	2,233	6,236	4,397	9,601	2,337	8,923	9,283	7,879	6,336	4,365	4,159	6,501	4,094	1,924	5,724
February	2,158	6,502	3,257	4,246	3,813	6,083	10,583	6,233	5,058	6,054	4,004	4,209	3,199	1,481	3,476
March	3,872	9,362	7,114	9,622	5,800	10,949	9,412	8,476	12,921	6,910	5,116	6,955	10,648	3,374	8,585
April	3,795	10,253	7,094	8,231	6,353	5,423	14,116	11,477	6,586	4,821	6,569	12,412	11,533	10,859	4,443
May	3,430	5,445	4,768	5,901	5,708	8,312	8,088	8,098	3,938	3,304	7,841	4,974	8,432	6,616	9,120
June	2,659	3,573 [2]	3,502	6,162 [3]	6,279	7,045	9,349	5,976	4,782	3,398	10,930	4,969	6,405	5,596	5,775
July	2,024	2,924	2,551	4,084	5,310	4,702	7,946	4,385	3,667	2,941	6,880	3,948	5,339	1,967	6,481
August	1,643	1,789	3,499	2,900	3,420	4,154	3,781	4,511 [5]	3,788	2,477	4,362	2,372	5,238	3,702	6,185
September	1,798	1,469	4,463	2,174	4,135	9,062	6,447	4,066	4,133	3,215	5,800	951	2,688	3,220	7,489
October	3,766	1,693	3,944	3,018 [4]	1,777	7,748	6,708	3,629	2,164	4,691	3,590	7,379	2,851	5,660	3,701
November	4,900	1,682	8,332	3,018 [4]	3,820	11,483	4,583	4,383	2,145	9,257	3,240	3,465	4,974	3,087	3,849
December	4,135	3,273	6,330	5,303	7,330	8,866	7,789	4,777	5,703	6,760	4,602	11,111	5,057	10,281	7,617
Totals	**36,413**	**54,201**	**59,251**	**64,260**	**56,081**	**92,750**	**98,085**	**73,890**	**61,221**	**58,193**	**67,093**	**69,246**	**70,455**	**57,766**	**72,443**

Month	Forcemain Records														
	2005 (m^3)	2006 (m^3)	2007 (m^3)	2008[7] (m^3)	2009 (m^3)	2010 (m^3)	2011 (m^3)	2012 (m^3)	2013 (m^3)	2014 (m^3)	2015 (m^3)	2016 (m^3)	2017 (m^3)	2018 (m^3)	2019 (m^3)
January	11,174	15,846	6,316	13,120	4,713	5,217	5,509	11,387	9,959	5,537	4,418	9,595	11,314	6,673	4,267
February	5,391	10,819	4,465	10,530	6,900	3,803	6,315	7,641	5,252	2,352	3,252	10,849	8,584	9,565	3,531
March	4,603	8,815	6,831	13,215	12,757	8,064	13,505	10,130	8,449	8,089	6,035	12,459	12,628	5,778	4,966
April	11,658	7,755	8,659	12,787	10,422	5,485	7,697	9,113	12,462	18,568	11,017	12,187	13,722	13,584	10,671
May	5,818	8,063	5,881	9,384	8,552	2,966	8,623	5,675	6,760	9,153	4,605	7,065	12,004	5,943	14,262
June	3,387	4,672	2,605	7,851	6,320	4,292	10,615	5,410	6,274	5,150	8,720	4,329	8,795	3,572	8,061
July	1,908	4,445	4,257	6,295	3,927	2,720	7,679	4,734	4,317	3,853	4,851	3,016	12,832	2,410	3,614
August	2,375	1,814	2,750	6,564	3,629	2,607	12,983	3,147	4,301	4,448	4,034	2,610	7,204	3,410	2,836
September	1,605	3454 [6]	2,843	7,910	2,427	2,239	6,225	4,230	3,633	3,379	3,472	2,180	4,251	2,714	1,898
October	2,611	4249 [6]	2,784	4,907	4,188	1,901	10,075	5,550	4,894	6,706	3,326	1,859	4,368	2,003	2,780
November	10,607	7475 [6]	4,083	5,624	5,060	2,529	6,693	5,281	8,324	8,520	3,876	1,937	6,114	5,711	4,496
December	15,034	4555 [6]	7,221	6,340	11,033	8,909	12,063	8,058	3,697	5,349	6,722	2,728	3,397	6,827	6,184
Totals	**76,172**	**81,963**	**58,696**	**104,527**	**79,928**	**50,733**	**107,981**	**80,355**	**78,322**	**81,104**	**64,327**	**70,813**	**105,213**	**68,190**	**67,566**

	Forcemain Records				
Month	2020 (m^3)	2021 (m^3)	2022[8] (m^3)	2023 (m^3)	2024 (m^3)
January	10,205	4,983	4,340	11,456	12,309
February	5,731	2,738	5,730	13,579	9,199
March	12,540	6,661	7,690	13,762	7,406
April	8,558	6,302	7,585	11,663	15,288
May	5,979	4,623	3,728	8,590	9,405
June	3,739	2,700	4,369	7,715	5,298
July	2,851	3,822	1,911	7,954	6,223
August	2,927	2,824	1,706	4,735	2,888
September	2,537	6,523	1,997	2,440	3,210
October	2,382	6,331	2,321	2,256	1,977
November	2,577	5,471	1,744	2,249	1,669
December	7,341	9,319	4,483	5,328	9,385
Totals	**67,366**	**62,297**	**47,603**	**91,727**	**84,259**

Notes:
[1] Averaged monthly trucking records through 4 year period as measured by the truckload.
[2] Leachate trucking flowmeter installed at loading station.
[3] Leachate forcemain installation and commissioning.
[4] Leachate volumes for October and November were prorated over a two month period.
[5] Installation of replacement flow meter.
[6] Flow estimated due to broken flow meter (September 14, 2006).
[7] Flowmeter malfunction in November 2008, flow estimated by using the average from October and December 2008.
[8] Flow estimated in April and September 2022 in the SFA due to SCADA system malfunction. Volumes were estimated based on 3 year average from 2019-2021.

FIGURE C.5
Historical Annual Leachate Volumes
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

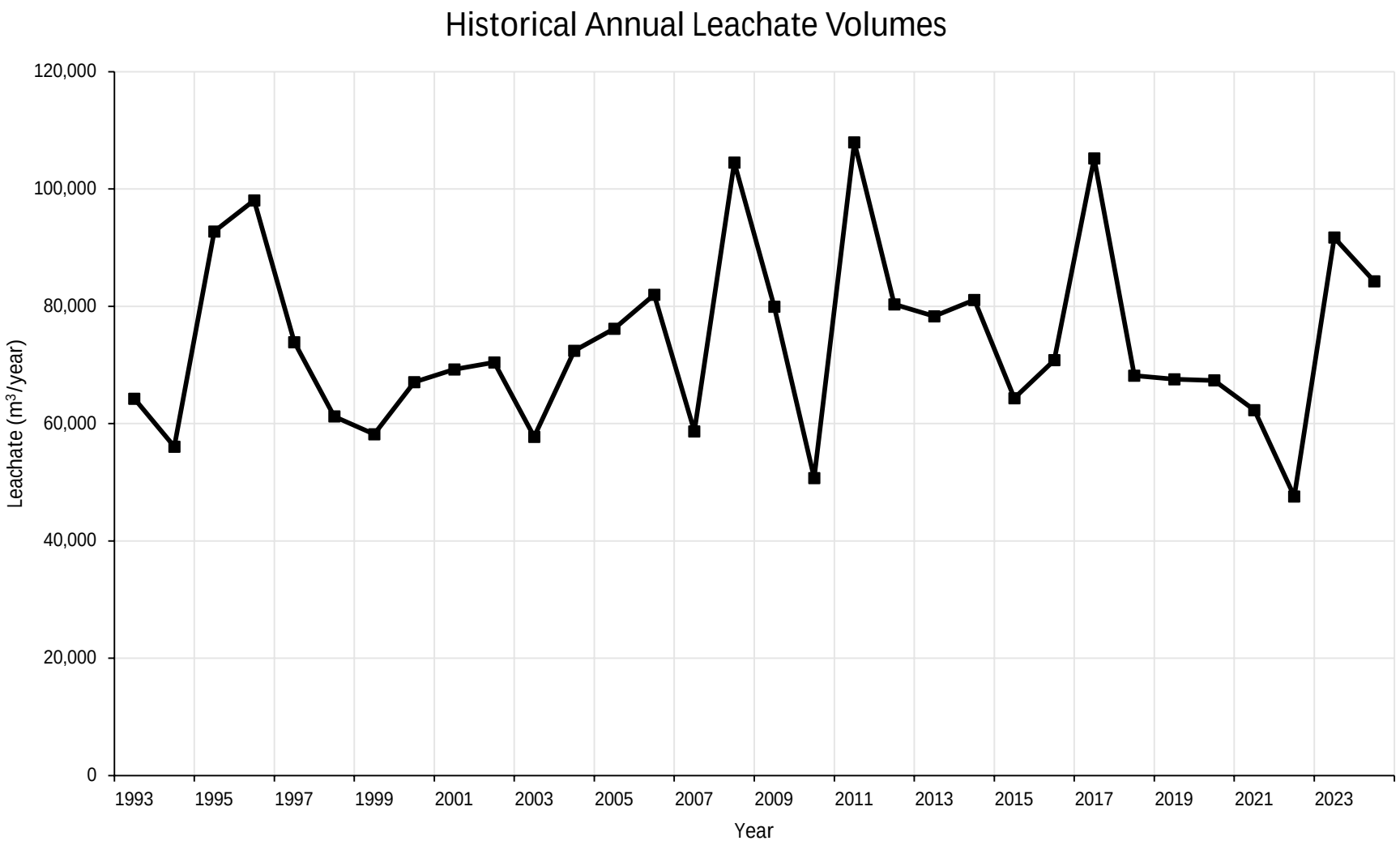
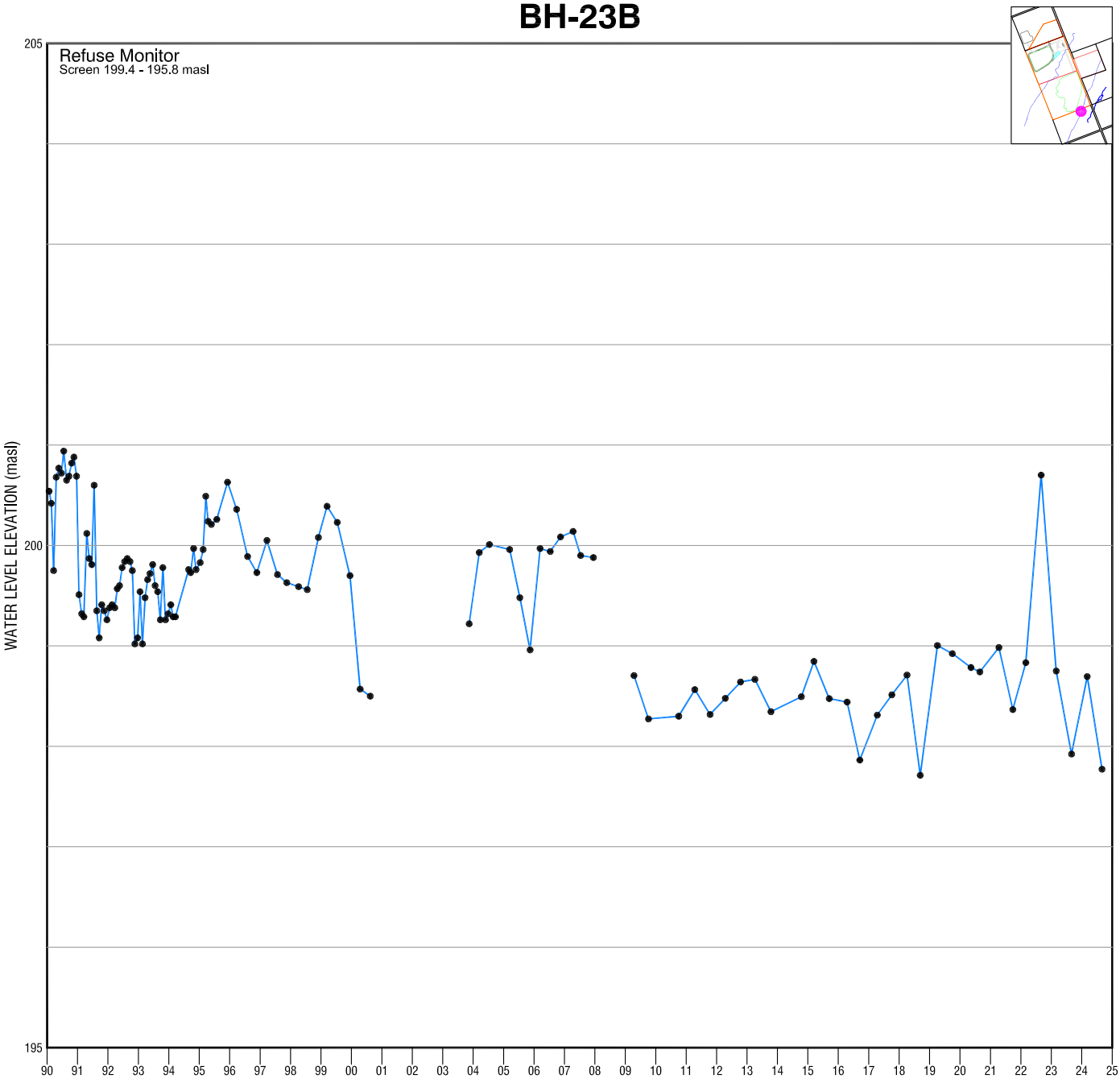


Table C.2
Leachate Production Summary - 2024
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Landfill Area ID	Area (m^2)	Leachate Produced From Infiltration (m^3)	Leachate Produced from Groundwater Inflow (m^3)	Total Leachate Production (m^3)
Cell 1 (SFA)	181,759	16,681	-	
Uphill Edge of Landfill (1)	-	-	4,500	
Influx of Groundwater (2)	-	-	500	37,881
Interceptor Trench (3)	-	-	1,200	
Interceptor Trench (4)	-	-	15,000	
Cell 2 (5)	32,000		4,324	
Cell 3 (6)	28,000	34,772	2,633	46,378
Cell 4 (7)	34,726		4,649	
Totals	**276,485**	**51,453**	**32,806**	**84,259**

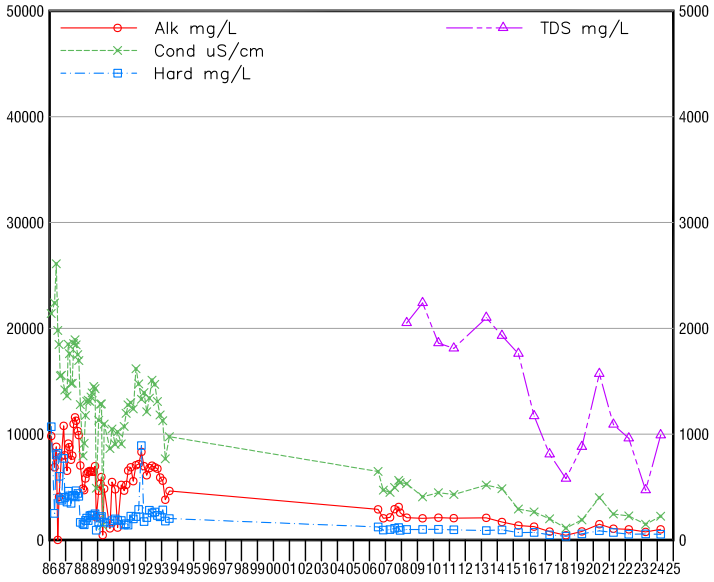
NOTES (1) Includes horizontal flow into Cell 1-South and part of Cell 1-North.
(2) Includes upflow into former Cell I and J.
(3) Includes groundwater flow into the trench from bedrock.
(4) Includes groundwater flow into trench shortcircuiting from overburden unit and surface water.
(5) Areas of Cell 2 were placed under final cover in late 2015.
(6) Cell 3 became operational in December 2015.
(7) Cell 4 became operational on December 22, 2022.

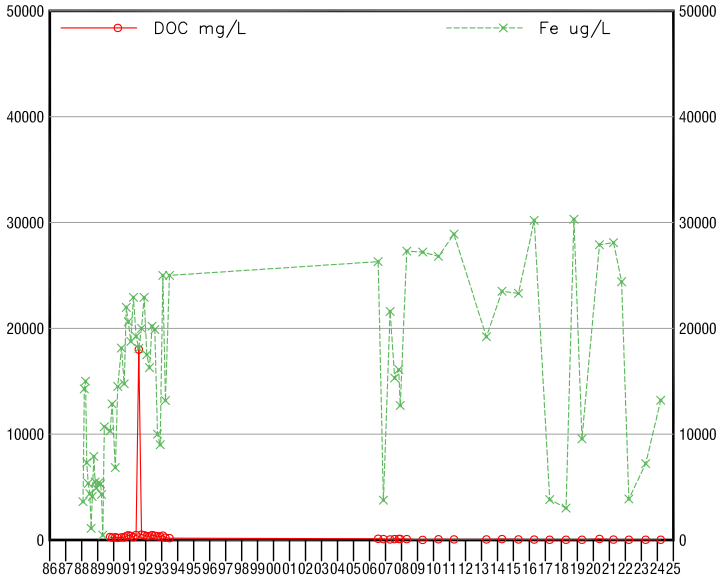
BH-23B

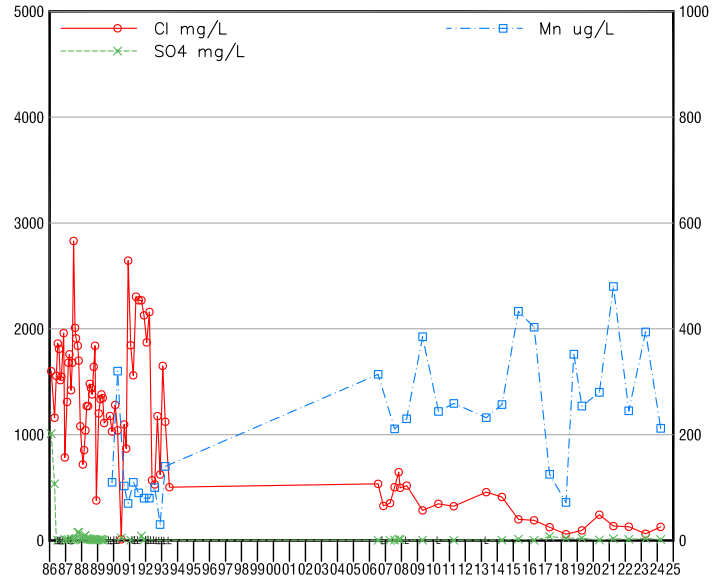


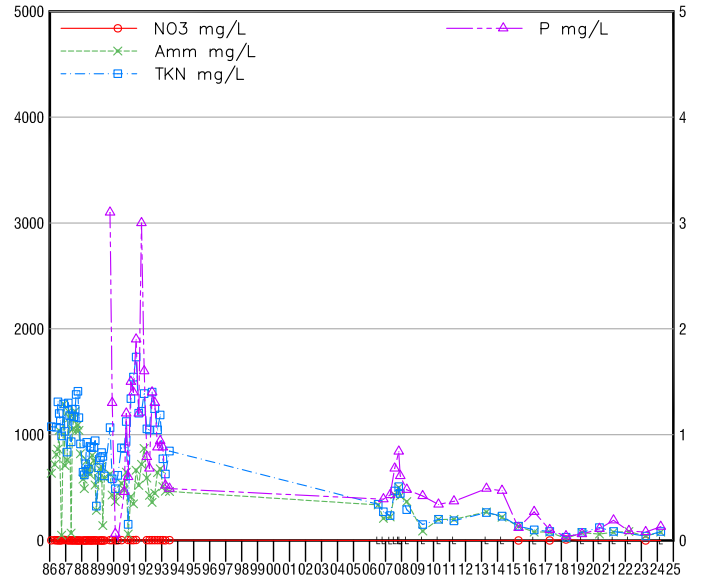
MP Elevation 207.40 masl
Grade 206.8 masl

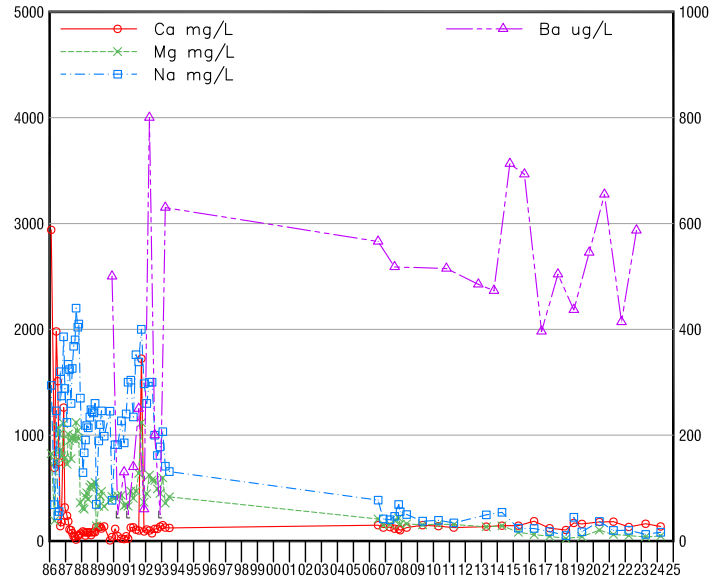
DATE	ELEVATION	DATE	ELEVATION	DATE	ELEVATION	DATE	ELEVATION	DATE	ELEVATION	DATE	ELEVATION
25-Jan-90	200.54	18-Sep-91	199.08	20-May-93	199.72	31-Jul-95	200.26	15-Jul-05	199.48	16-Apr-16	198.44
20-Feb-90	200.42	18-Oct-91	199.41	21-Jun-93	199.81	06-Dec-95	200.63	15-Nov-05	198.96	16-Sep-16	197.86
20-Mar-90	199.75	18-Nov-91	199.35	20-Jul-93	199.60	25-Mar-96	200.36	15-Mar-06	199.97	13-Apr-17	198.31
20-Apr-90	200.68	20-Dec-91	199.26	20-Aug-93	199.54	03-Aug-96	199.89	15-Jul-06	199.94	05-Oct-17	198.51
21-May-90	200.77	21-Jan-92	199.38	21-Sep-93	199.26	22-Nov-96	199.73	15-Nov-06	200.09	05-Apr-18	198.71
22-Jun-90	200.72	20-Feb-92	199.41	21-Oct-93	199.78	23-Mar-97	200.05	15-Apr-07	200.14	11-Sep-18	197.71
19-Jul-90	200.94	23-Mar-92	199.38	22-Nov-93	199.26	28-Jul-97	199.71	15-Jul-07	199.90	05-Apr-19	199.00
23-Aug-90	200.65	22-Apr-92	199.57	23-Dec-93	199.32	17-Nov-97	199.63	15-Dec-07	199.88	01-Oct-19	198.92
20-Sep-90	200.69	19-May-92	199.60	24-Jan-94	199.41	07-Apr-98	199.59	15-Apr-09	198.71	12-May-20	198.79
22-Oct-90	200.82	19-Jun-92	199.78	21-Feb-94	199.29	20-Jul-98	199.56	06-Oct-09	198.27	26-Aug-20	198.74
19-Nov-90	200.88	20-Jul-92	199.84	21-Mar-94	199.29	01-Dec-98	200.08	04-Oct-10	198.30	12-Apr-21	198.98
20-Dec-90	200.69	20-Aug-92	199.87	26-Aug-94	199.76	15-Mar-99	200.39	15-Apr-11	198.57	26-Sep-21	198.37
18-Jan-91	199.51	22-Sep-92	199.84	20-Sep-94	199.73	15-Jul-99	200.23	15-Oct-11	198.32	01-Mar-22	198.83
20-Feb-91	199.32	20-Oct-92	199.75	25-Oct-94	199.97	15-Dec-99	199.70	15-Apr-12	198.48	01-Sep-22	200.70
18-Mar-91	199.29	19-Nov-92	199.02	24-Nov-94	199.76	15-Apr-00	198.57	15-Oct-12	198.64	01-Mar-23	198.75
22-Apr-91	200.12	22-Dec-92	199.08	12-Jan-95	199.83	15-Aug-00	198.50	05-Apr-13	198.67	01-Sep-23	197.92
21-May-91	199.87	20-Jan-93	199.54	17-Feb-95	199.96	15-Nov-03	199.22	15-Oct-13	198.35	07-Mar-24	198.70
21-Jun-91	199.81	18-Feb-93	199.02	20-Mar-95	200.49	15-Mar-04	199.93	15-Oct-14	198.49	01-Sep-24	197.77
19-Jul-91	200.60	22-Mar-93	199.48	18-Apr-95	200.24	15-Jul-04	200.01	15-Mar-15	198.85		
20-Aug-91	199.35	21-Apr-93	199.66	26-May-95	200.21	15-Mar-05	199.96	15-Sep-15	198.48		









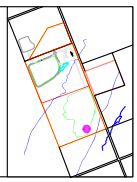


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-23B

Refuse Monitor

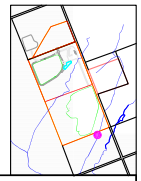
Screen 199.4 - 195.8 masl

CA008825	wsp	C24G001
19 Mar 25		

BH-23B

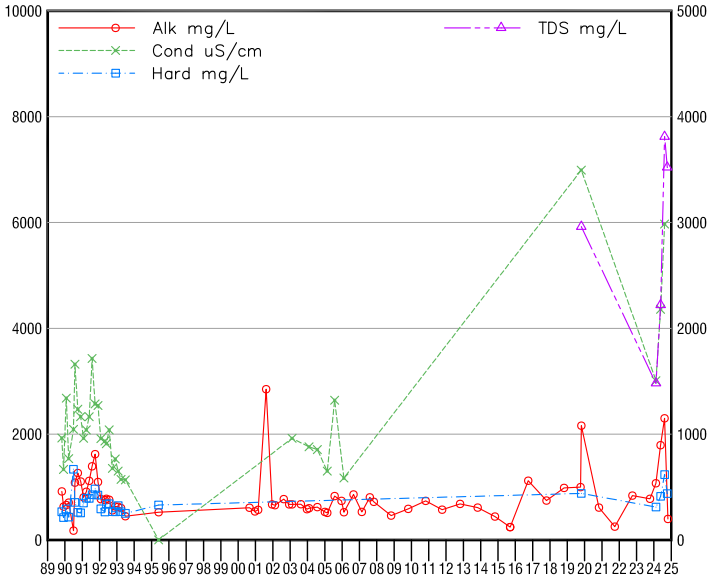
Refuse Monitor

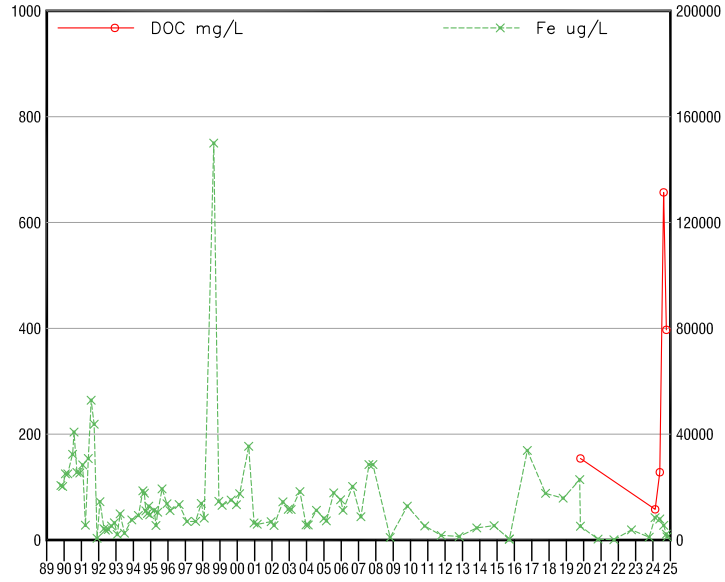
Monitoring Well
Screen 199.4 - 195.8 masl

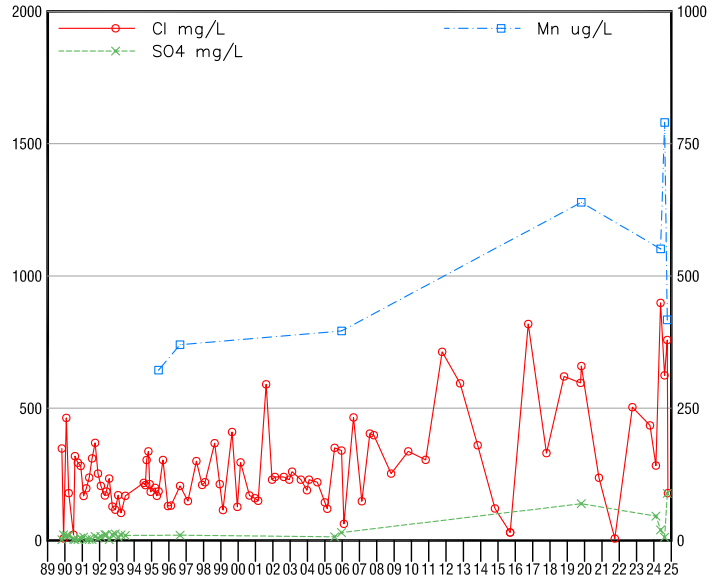


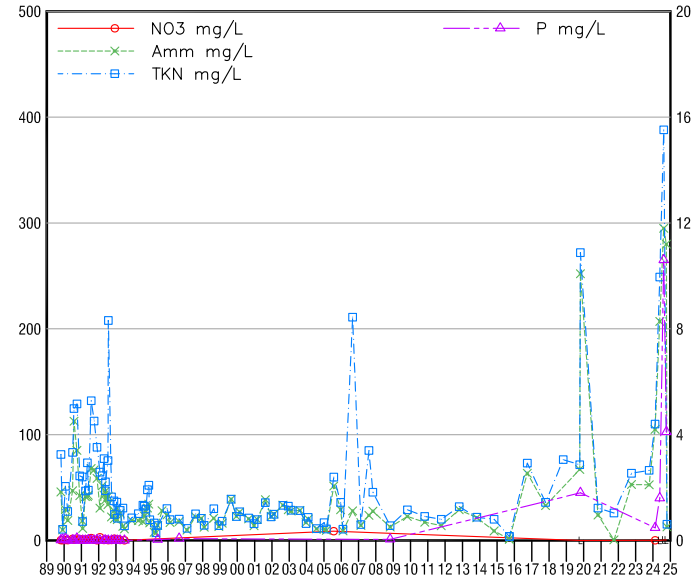
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	ODWS					250	500			200					10	1		
28-May-92	HRF4089	7026	15100	2555	7.6	**568**	<5	73	576	**1500**	1273	1.4	61.5	1401.88	3.7		360.51	
28-Jul-92	HRF4090	6873	14700	2647	7.5	**530**	<5	115	573	**1000**	1111	1.3	1041	1245.65	3.4		446	
28-Sep-92	HRF4091	6735	13080	2317	7.8	**1175**	<1	114	493	**808**	963	0.88	903	1045.49	3.4		641.15	
28-Nov-92	HRF4092	5896	11810	2192	8.0	**623**	<1	136	450	**889**	684	0.94	768	1186.61	3.2		678.09	
28-Jan-93	HRF4093	5606	11270	2832	7.7	**1650**	<1	150	597	**1033**	970	0.88	718	771.61	3.1		509.74	
28-Mar-93	HRF4094	3794	7670	1789	8.0	**1122**	<1	126	358	**706**	500	0.52	434	628.15	2.2		465.4	
28-Jun-93	HRF4095	4637	9760	2024	7.8	**503**	<1	123	417	**656**	444	0.49	447	845.24	2.4		463.54	
18-Jul-06	37158	2900	6470	1229		**535**	2	149	208	**386**	225		397	342	<0.5	<0.5	336	
14-Nov-06	39478	2040	4710	932		**326**	<0.3	126	150	**209**	157	0.39	270	271	<0.5	<0.5	209	
16-Apr-07	42336	2140	4490	978		**352**	2	131	158	**201**	151	0.43	265	235	<0.05	<0.05	222	
30-Jul-07	44180	2910	4960	1101		**504**	4	116	197	**233**	176	0.68	388	468	<0.5	<0.5	433	
31-Oct-07	45936	3120	5630	1172		**645**	11	113	216	**345**	239	0.84	426	508	<0.5	<0.5	500	
04-Dec-07	46504	2580	5420	903		**497**	7	101	158	**277**	211	0.61	326	444	<0.5	<0.5	422	
30-Apr-08	49008	2110	5320	986		**518**	<3	126	163	**250**	179	0.48	312	291	<0.5	<1	367	2050
30-Apr-09	55467	2040	4080	998	7.2	**284**	3	149	152	187	129	0.42	159	151	<0.5	<1	89.5	2240
26-Apr-10	62090	2100	4470	1003	6.9	**346**	<3	141	158	195	148	0.34	188	200	<0.5	<0.5	198	1860
13-Apr-11	67487	2060	4300	960	6.9	**323**	2	127	156	171	141	0.37	196	186	<0.5	<0.5	200	1810
24-Apr-13	81859	2090	5190	891	6.9	**456**	<3	136	134	**247**	155	0.49	270	264	<0.5	<0.5	269	2100
16-Apr-14	89111	1700	4840	955	7.0	**412**	3	145	144	**271**	157	0.47	220	230	<1.25	<1.25	220	1930
27-Apr-15	96622	1370	2920	703	6.8	199	12	145	82.7	121	79.0	0.12	120	135	0.3	<0.05	133	1760
20-Apr-16	103799	1260	2650	716	7.2	191	2	187	60.6	118	66.2	0.27	130	100	<0.05	<0.05	79.5	1170
09-Apr-17	112144	787	2000	486	7.0	125	38	120	45.3	90	54.1	0.1	60	85.1	0.3	0.05	79.5	810
17-Apr-18	121642	446	1120	352	7.1	59	21	104	22.4	51	21.5	0.04	40	31.6	9.0	0.60	18.2	580
14-Oct-18	127097							170		**224**								
16-Apr-19	131148	809	1900	574	6.9	95	22	161	41.7	87	37.3	0.06	50	76.6	<0.5	<0.5	74.3	880
19-May-20	141001	1490	4000	869	7.0	244	4	180	102	185	99.7	0.11	180	122	<0.5	<0.5	60.3	1570
06-Apr-21	149003	1060	2450	706	6.8	136	16	182	61.2	100	56.9	0.19	100	85	<0.5	<0.5	78.1	1090
22-Mar-22	159169	1010	2270	543	6.8	130	11	133	51.3	101	53.4	0.09	80		<0.5	<0.5	84.3	960
11-Apr-23	169537	756	1480	567	6.6	63	20	163	38.9	63	34.6	0.08	50	42.1	0.2	<0.05	42.1	470
20-Mar-24	179419	996	2240	539	6.9	129	9	137	47.8	83	49.4	0.13	90	85.4	<0.05	<0.05	78.4	990
TOTAL SAMPLES		80	80	80	74	81	78	81	80	81	80	43	76	78	76	58	80	16
AVERAGE 2024																		

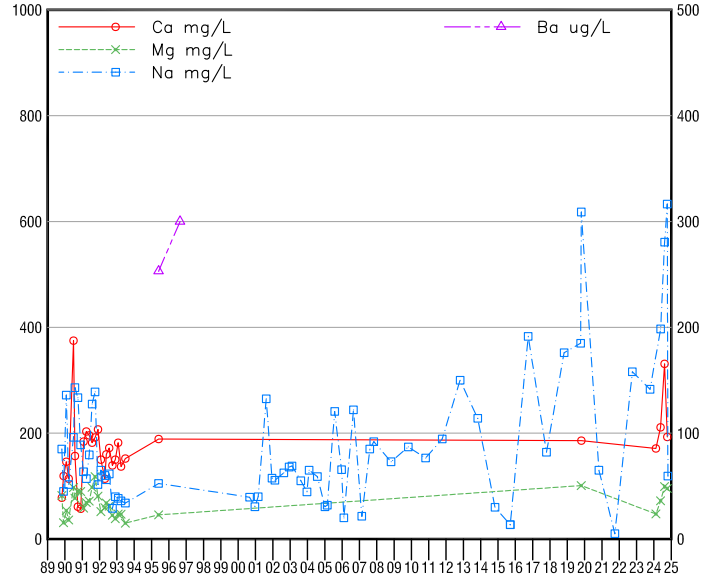
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



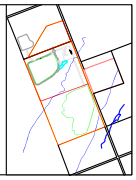








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

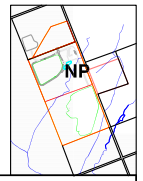
BENSFORT LANDFILL & ORGANICS FACILITY

MH4

CA008825 19 Mar 25	wsp	C24G002

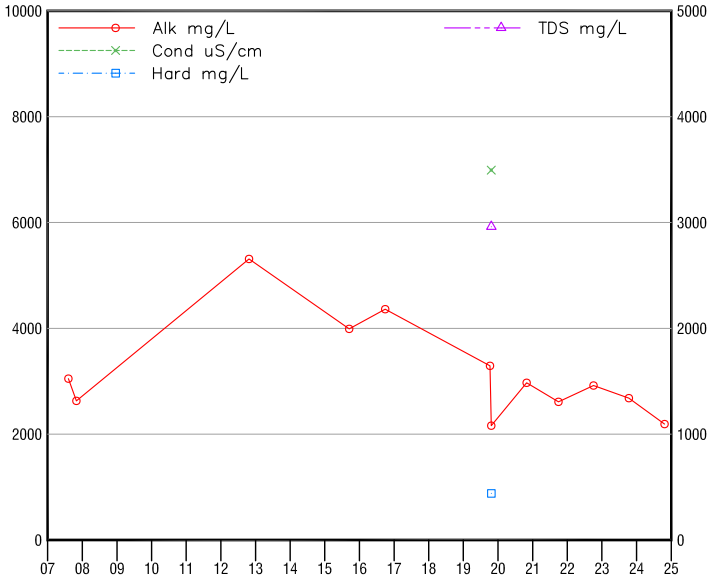
MH4

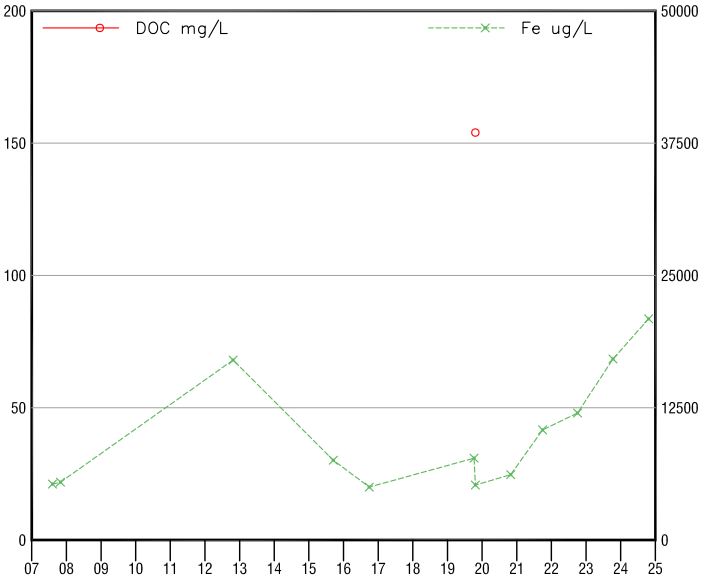
Storm Water Management

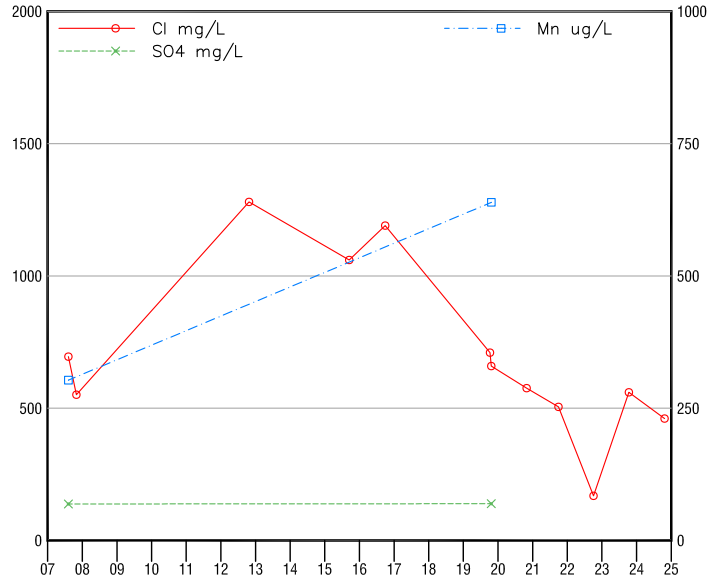


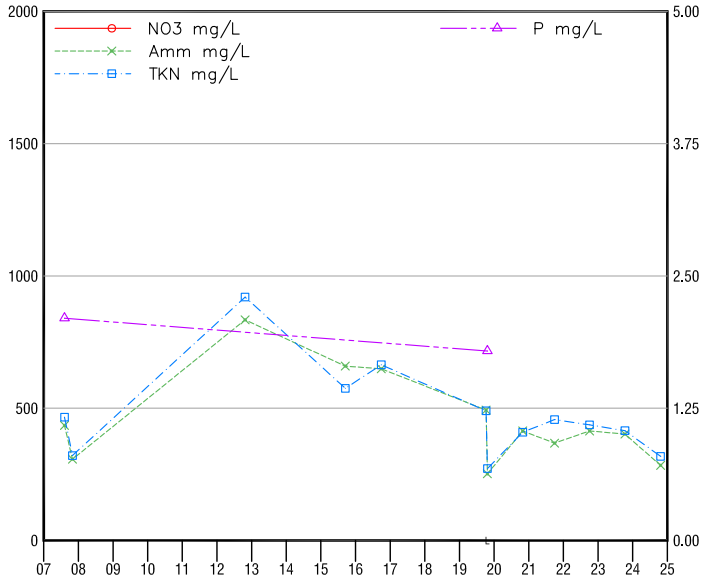
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
22-Feb-05	HLCH071	512	1302		7.4	120				64	17.4			10.9			9.5	
28-Jul-05	HLCH072	830	2640		7.6	350	14			241	58.6			59.9	8.8	0.30	51.4	
20-Dec-05	HLCH073	739			7.8	340	30			131	32.3			36			29.1	
07-Feb-06	HLCH074	524	1170		7.6	63				40	20.5			10.7			9.1	
29-Aug-06	HLCH075	859				465				244	31.2			211			28	
20-Feb-07	HLCH076	529				148				43	16.5			15			14.3	
08-Aug-07	44365	805				404				170	28.4			85			23.7	
31-Oct-07	45934	721				398				184	29.0			45.6			27.7	
29-Oct-08	HLCH080	462				253				146	15.2	**0.04**		14			12.7	
27-Oct-09	HLCH081	587				337				174	27.1			29			22.7	
28-Oct-10	HLCH082	738				305				153	27.4			22.8			17.3	
12-Oct-11	HLCH083	574				713				189	22.0			20			14	
24-Oct-12	78165	682				594				300	33.8			32			29.1	
30-Oct-13	HLCH085	613				360				228	21.5			22			21.5	
30-Oct-14	HLCH086	442				121				60	11.5			20			9	
15-Sep-15	HLCH087	244				30				27	5.2			3.8			1.3	
16-Sep-15	99646	244				30				27	5.2			3.8			1.3	
29-Sep-16	107706	1120				818				383	61.9			73.1			63.5	
19-Oct-17	HLCH089	745				330				164	28.3			36			33	
26-Oct-18	HLCH090	985				620				352	58.3			76.4				
09-Oct-19	HLCH091	1000				596				370	51.6			71.6			67.2	
29-Oct-20	145375	611				237				130	22.2			30.6			24	
30-Sep-21	154272	251				7				10	3.8			26			0.6	
04-Oct-22	22MISD05	838				504				316	48.1			63.5			52.9	
12-Oct-23	2023A037	778				435				283	50			66.3			52.6	
14-Feb-24	178409	1070	3010	622	7.4	283	92	171	47.3		78.9	**0.48**	200	110	0.2	0.07	105	1480
22-May-24	181219	1790	4360	824	7.4	898	40	211	72.2	397	141	**1.6**	450	249	<0.05	<0.05	207	2220
14-Aug-24	183621	2300	5970	1235	7.4	624	12	331	99.2	561	294	**10.6**	3320	388	<0.5	<0.5	295	3810
09-Oct-24	185155			876		758	178	193	95.6	633	243	**4.1**	5760		<0.5	<0.5	280	3520
22-Oct-24	185531	398				179				119	17			15.4			12.8	
TOTAL SAMPLES		67	33	28	76	90	30	28	28	67	68	30	36	98	28	27	99	4
AVERAGE 2024		1390	4447	889	7.4	548	81	227	78.6	428	155	4.20	2433	191	<0.5	<0.5	180	2758

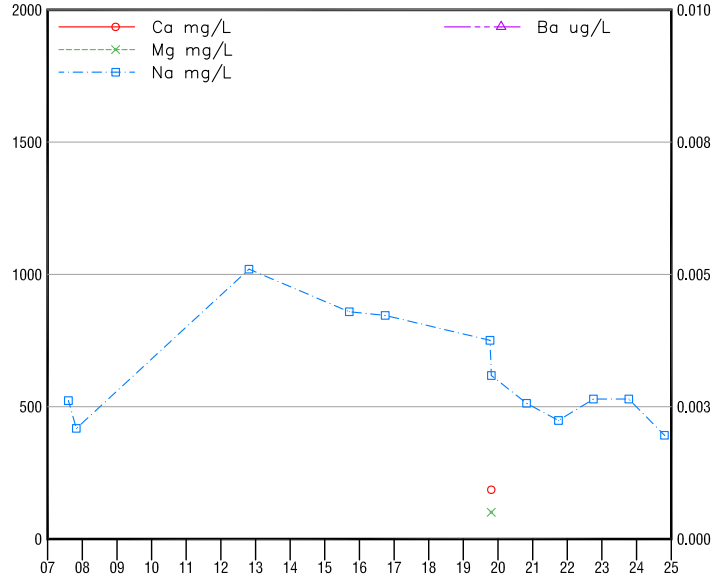
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









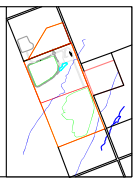


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted

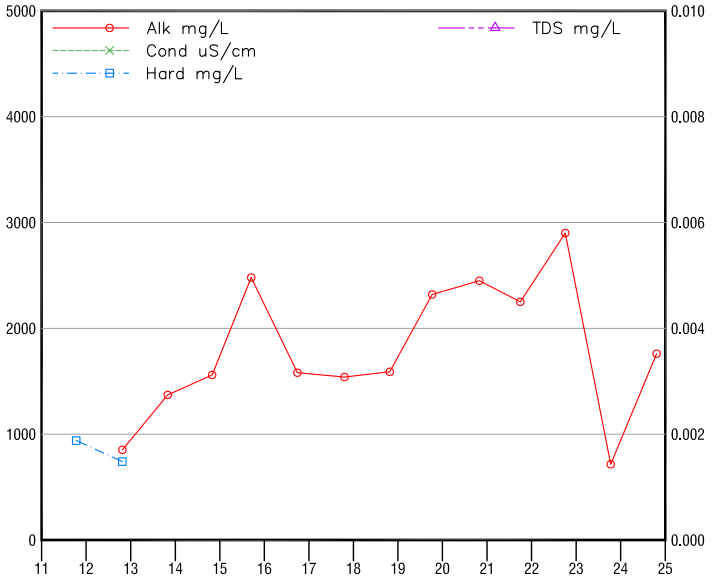


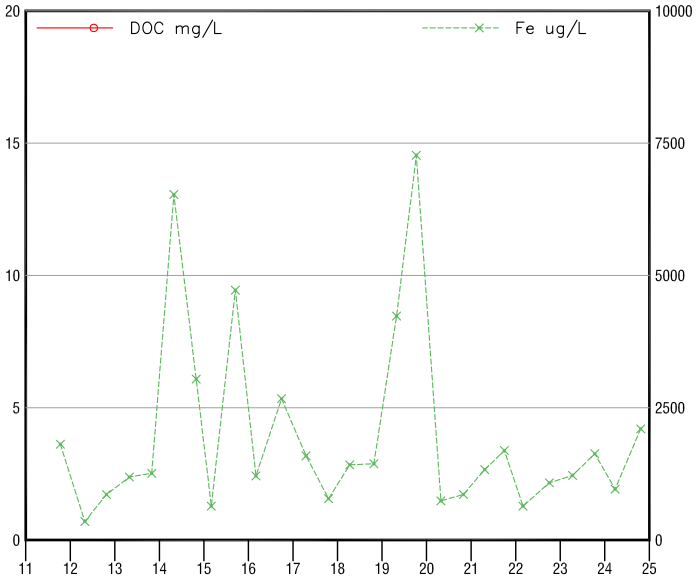
CITY OF PETERBOROUGH

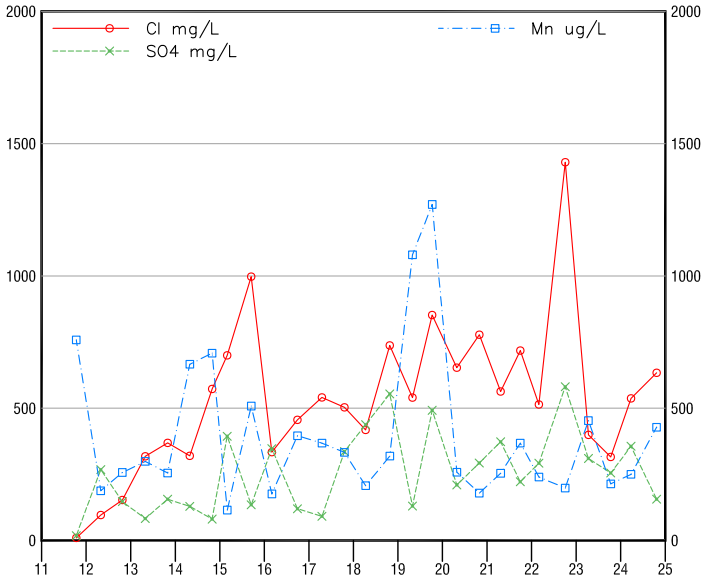
BENSFORT LANDFILL & ORGANICS FACILITY

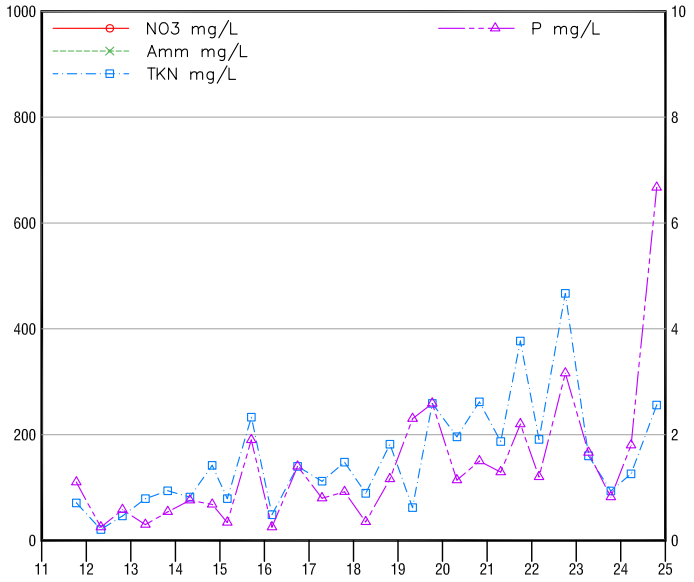
MH6-94

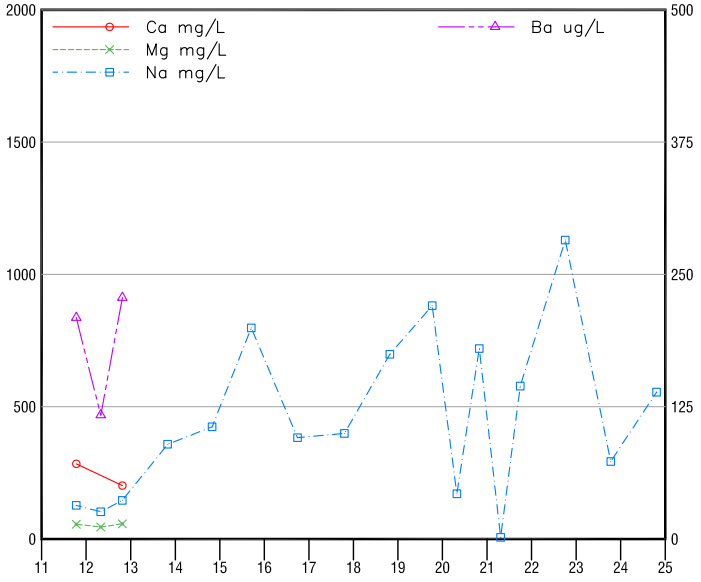
CA008825 19 Mar 25	wsp	C24G003



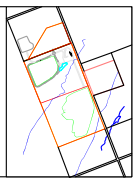








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

NFA TANK

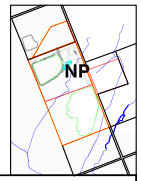
Landfill Leachate

CA008825 19 Mar 25	wsp	C24G004

NFA TANK

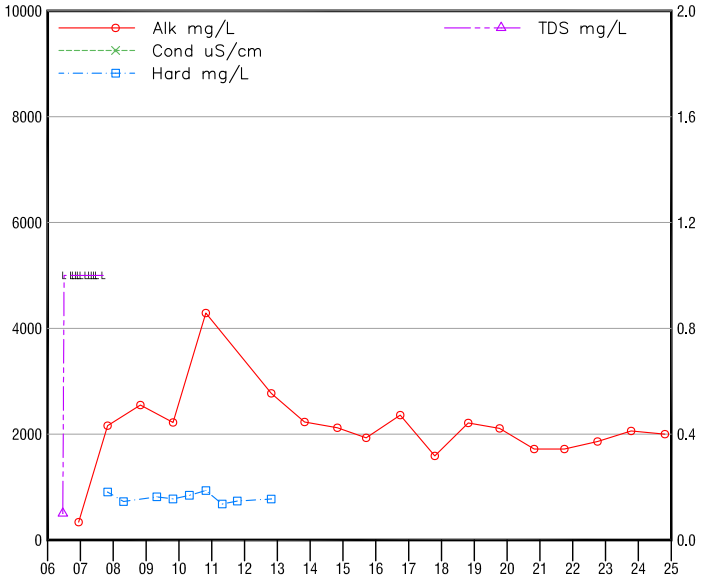
Landfill Leachate

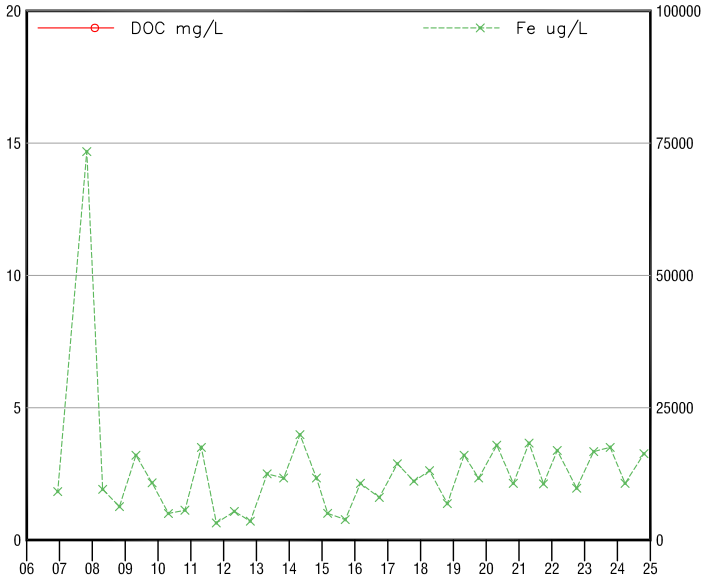
Leachate Monitor

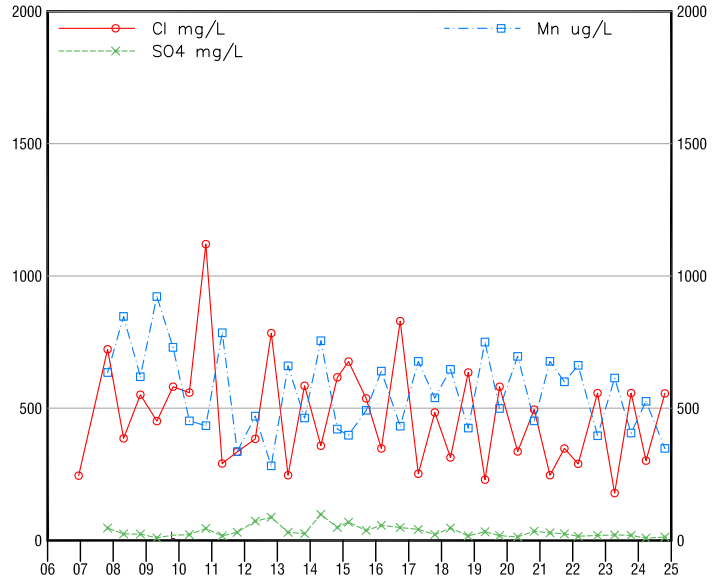


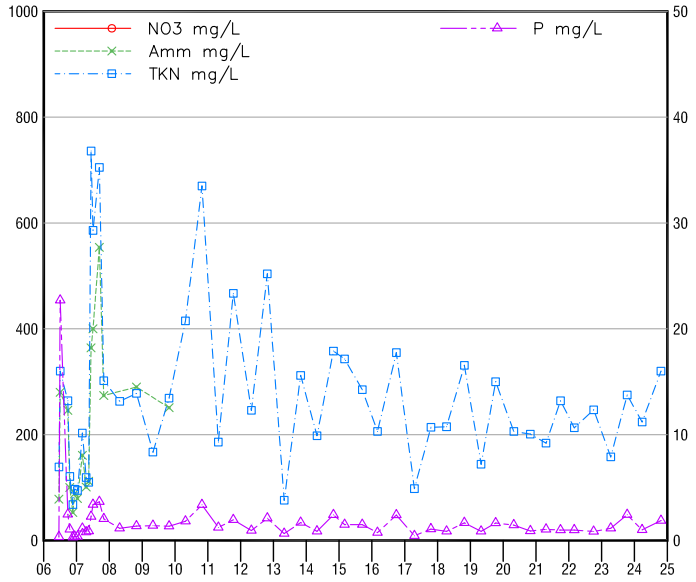
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
12-Oct-11	2011C2050			939	6.5	9.7	18.4	284	55.7	127	52.2	1.1	1270	71				
30-Apr-12	2012C2051				7.0	96	268		45.4	103	38	0.25	50	20.8				
24-Oct-12	78168	852		741	7.1	153	147	202	57.4	146	50.7	0.58	80	46.4				
30-Apr-13	2013C2052				6.8	318	82.8					0.3	730	79				
30-Oct-13	2013C2053	1370			7.0	369	156			358	122	0.54	420	94				
30-Apr-14	2014C2054				7.0	320	129					0.76	1070	82				
30-Oct-14	2014C2055	1560			7.3	573	80.8			424	150	0.68		142				
03-Mar-15	95411				7.7	700	394					0.34	220	79				
16-Sep-15	99645	2480			7.3	997	135			798	262	1.9	1250	233				
03-Mar-16	102731				7.2	334	347					0.25	180	48.7				
29-Sep-16	107709	1580			7.1	456	120			383	128	1.4	530	140				
18-Apr-17	2017C2056				7.2	541	91.4					0.8	920	112				
19-Oct-17	2017C2057	1540			7.6	503	336			399	120	0.92	300	148				
11-Apr-18	121440				7.5	418	438					0.35	150	89.2				
26-Oct-18	2018C2058	1590			7.8	737	554			698	196	1.16	1010	182				
30-Apr-19	131411				7.7	540	130					2.3	1510	62.1				
09-Oct-19	2019C2059	2320			7.8	852	492			882	249	2.59	1110	259				
28-Apr-20	2020C2060				7.9	653	210			171		1.14	630	196				
29-Oct-20	145378	2450			7.9	778	293			720	265	1.5	900	262				
22-Apr-21	2021C2061				7.8	563	373			6		1.29	310	187				
30-Sep-21	154275	2250			7.9	718	222			578	212	2.2	500	377				
02-Mar-22	158402				8.0	514	292					1.2	180	191				
04-Oct-22	2022C2062	2900			8.2	1430	581			1130	392	3.16	790	467				
12-Apr-23	2023A002				7.5	399	310					1.66	580	160				
12-Oct-23	2023A040	716			7.7	316	255			293	101	0.82	220	93.5				
26-Mar-24	179606				7.8	537	356					1.8	480	126				
22-Oct-24	185528	1760			7.43	634	156			555	282	6.67	2440	256				
TOTAL SAMPLES		13	0	2	27	27	27	2	3	17	15	27	26	27	0	0	0	0
AVERAGE 2024					7.6	586	256					4.24	1460	191				

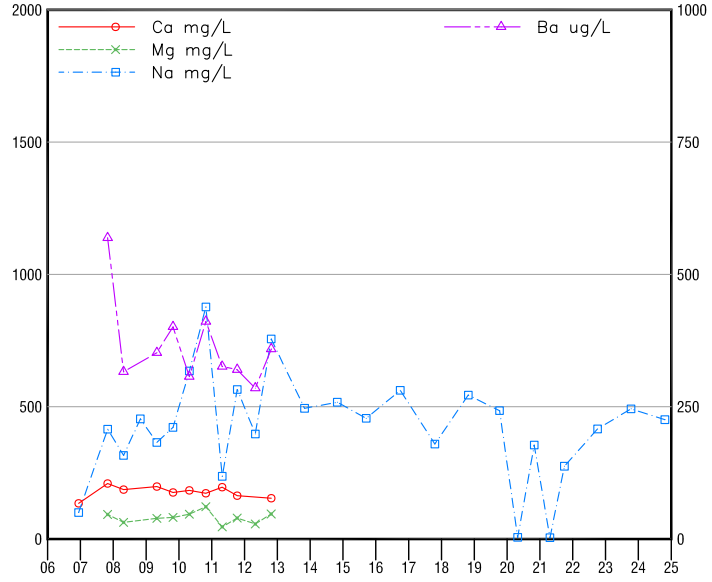
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



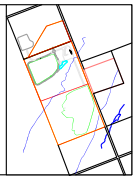








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SFA TANK

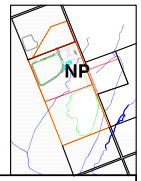
Landfill Leachate

CA008825 19 Mar 25	wsp	C24G005

SFA TANK

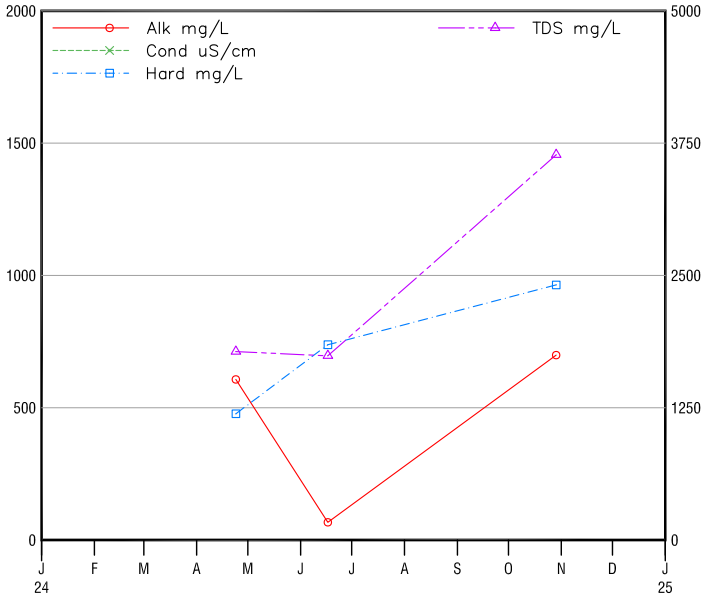
Landfill Leachate

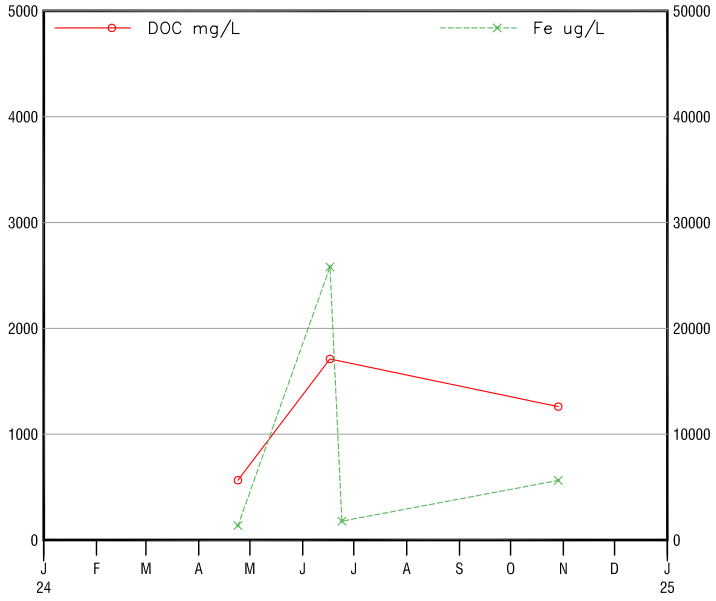
Leachate Monitor

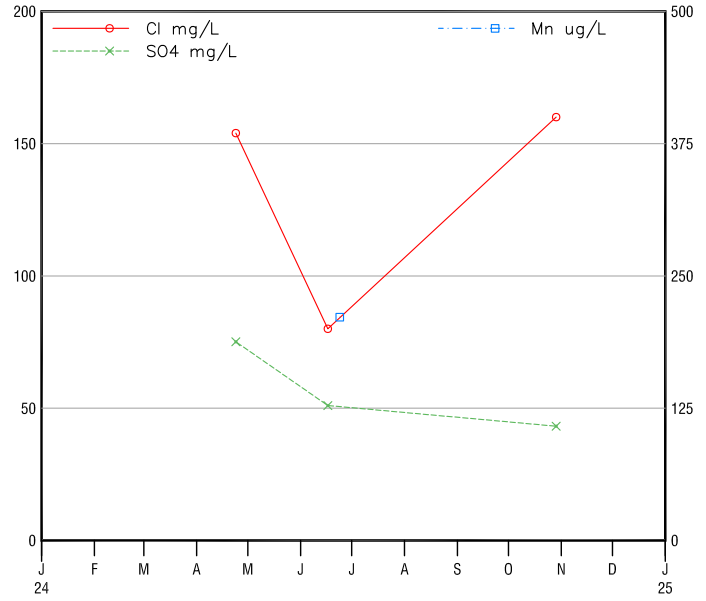


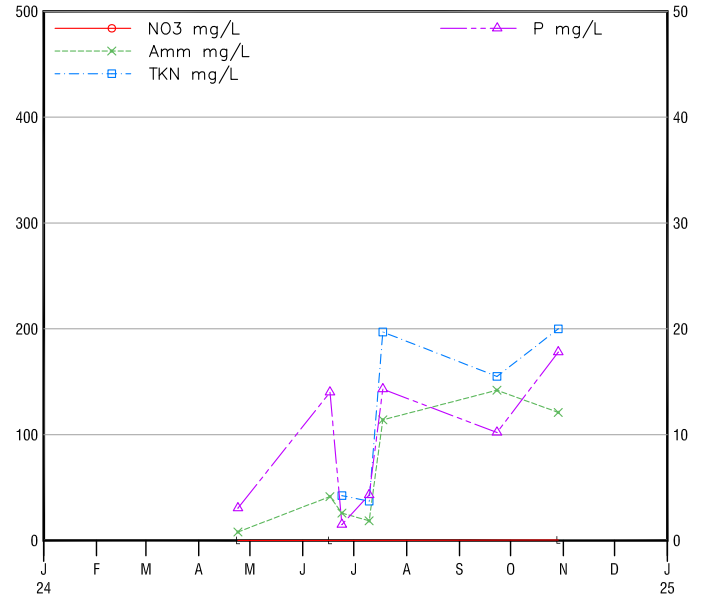
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
27-Apr-10	2010C2004			845	7.1	559	22.1	184	93.7	635	244	1.81		415				
28-Oct-10	2010C2005	4290		934		1120	45.2	173	122	877	337	3.37	1070	670				
28-Apr-11	2011C2006			679	6.6	291	17.6	196	46	237	103	1.23		186				
12-Oct-11	2011C2007			736	7.5	335	30.9	164	79.2	565	223	1.95	910	467				
30-Apr-12	2012C2008				7.3	384	73		56.8	397	165	0.94	310	246				
24-Oct-12	78167	2770		774	7.6	784	88	154	94.5	756	269	2.1	680	504				
30-Apr-13	2013C2009				6.8	247	30.7					0.65	210	76				
30-Oct-13	2013C2010	2230			6.9	585	26			494	170	1.69	510	312				
30-Apr-14	2014C2011				6.8	358	98.4					0.87	320	198				
30-Oct-14	2014C2012	2120			7.0	617	49.3			517	194	2.42		358				
03-Mar-15	95410				7.0	676	69					1.5	550	343				
16-Sep-15	99644	1930			6.9	537	38			456	154	1.5	470	285				
03-Mar-16	102732				6.8	348	57					0.74	290	206				
29-Sep-16	107708	2360			7.3	829	49			562	195	2.4	560	355				
18-Apr-17	2017C2013				6.8	252	41.9					0.44	120	98				
19-Oct-17	2017C2014	1590			7.1	484	22.3			359	99.9	1.08	320	214				
11-Apr-18	121439				6.6	314	47					0.86	280	215				
26-Oct-18	2018C2015	2210			7.2	635	17.3			544	159	1.67	300	331				
30-Apr-19	131410				6.7	230	33					0.86	190	144				
09-Oct-19	2019C2016	2110			7.2	581	18.5			485	160	1.65	440	300				
28-Apr-20	2020C2017				6.8	336	13.6			6		1.46	310	206				
29-Oct-20	145377	1720			6.7	495	35			355	106	0.9	270	201				
22-Apr-21	2021C2018				6.8	247	28.9			5		1.05	230	184				
30-Sep-21	154274	1720			7.1	348	25			275	97.2	0.98	270	264				
02-Mar-22	158401				6.7	290	16					0.99	240	213				
04-Oct-22	179605	1860			7.1	557	19.1			416	137	0.85	320	247				
12-Apr-23	2023A001				6.7	179	20.7					1.15	200	158				
12-Oct-23	2023A039	2060			7.0	557	19.6			492	165	2.43	400	275				
26-Mar-24	179605				6.9	302	9					1.0	270	224				
22-Oct-24	185529	2000			7	556	12.9			451	149	1.88	360	320				
TOTAL SAMPLES		18	0	9	32	36	35	10	10	26	23	48	41	48	0	0	16	13
AVERAGE 2024					7	429	11.0					1.44	315	272				

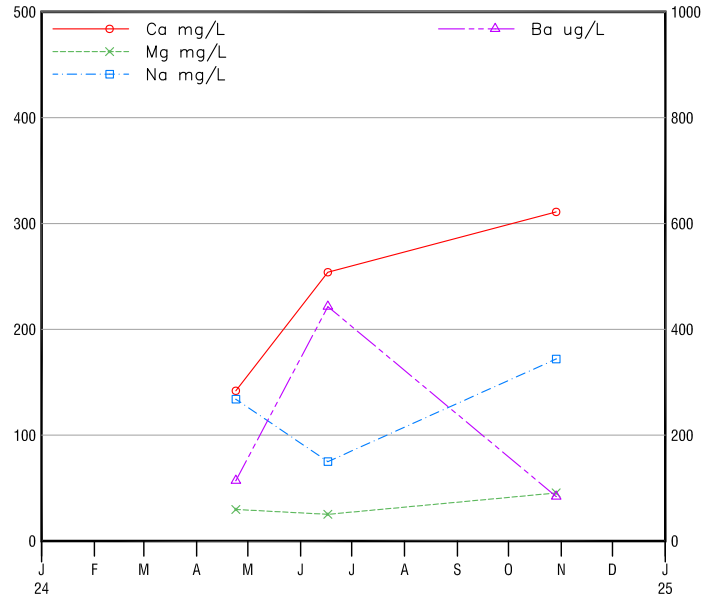
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



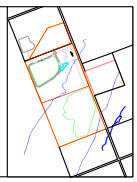








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

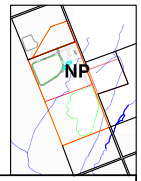
BENSSOLCH

Leafate

CA008825 19 Mar 25	wsp	C24G006

BENSSOLCH

Leafate

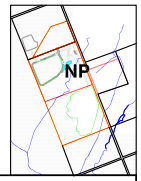


DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
24-Apr-24	180400	607		477	7.7	154	75.1	142	29.8	134		3.06	1640		<0.05		8	1780
17-Jun-24	182019	67		738	6.7	80	51	254	25.2	75		14.0	3020		<0.05		41.5	1740
29-Oct-24	185689	699		964	6.2	160	43.2	311	45.4	172		17.8	4200	200	<0.5		121	3640
TOTAL SAMPLES		3	0	3	3	3	3	3	3	3	0	3	3	1	3	0	3	3
AVERAGE 2024		458		726	6.9	131	56.4	236	33.5	127		11.6	2953		<0.5		57	2387

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MH6-94

Storm Water Management



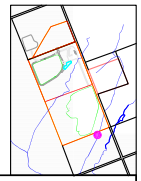
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
08-Aug-07	44369	3050				695	138			523	247	**2.1**		466			435	
31-Oct-07	45935	2630				551				418	163			321			307	
24-Oct-12	78166	5310				1280				1020	433			920			834	
16-Sep-15	99647	3990				1060				859	339			575			659	
29-Sep-16	107707	4360				1190				845	376			664			649	
09-Oct-19	TCGRPH19	3290				710				751	256			490			493	
29-Oct-20	145376	2970				576				513	209			409			414	
30-Sep-21	154273	2610				505				448	187			457			368	
04-Oct-22	22MISD06	2920				169				529	220			437			414	
12-Oct-23	2023A038	2680				560				529	220			415			402	
22-Oct-24	185530	2190				461				392	164			318			284	
TOTAL SAMPLES		11	0	0	0	11	1	0	0	11	11	1	0	11	0	0	11	0
AVERAGE 2024																		

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-23B

Refuse Monitor

Monitoring Well
Screen 199.4 - 195.8 masl

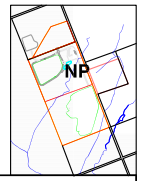


DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
31-Oct-07	45936								**16100**				<10					
04-Dec-07	46504								**12700**				7					
30-Apr-08	49008								**27300**		**230**		12		7			
30-Apr-09	55467								**27200**		**385**		7					
26-Apr-10	62090								**26800**		**244**		<1					
26-Oct-10	64871	50	515	<1	1910	<1	9	<5		<20		<5			10	46		<30
13-Apr-11	67487								**28900**		**259**		16					
24-Oct-12	78164	41	485	<0.2	1540	0.7	4.1	<0.4		7.1		<5			2.2	30		9.6
24-Apr-13	81859								**19200**		**232**		17					
15-Oct-13	85692	40	473	<1	1530	2	5	<5		**50**		<5			3	29		<30
16-Apr-14	89111								**23500**		**257**		16					
14-Oct-14	92948	50	713	<1	1730	1	6	<5		<10		<5			10	46		<30
27-Apr-15	96622								**23300**		**433**		12					
11-Sep-15	99543	<25	693	<0.1	1350	<0.1	5.5	<0.5		<0.5		0.8			7.3	30		6.2
20-Apr-16	103799								**30200**		**403**		10					
07-Oct-16	107991	73	396	<0.1	1590	<0.1	5.6	0.7		2.9		2			5.7	20		18.4
09-Apr-17	112144								**3810**		**125**		2					
16-Oct-17	117175	40	504	<1	1570	5	3	<5		3.7		<5			9	33		<20
17-Apr-18	121642								**3020**		**72**		<1					
14-Oct-18	127097	30	437	<1	1480	1	2	<5	**30300**	<10	**352**	<5			8	30		<10
16-Apr-19	131148								**9560**		**254**		3					
01-Oct-19	135643	40	545	<1	1520	<1	1	16		10		<5			7	35		<10
19-May-20	141001								**27900**		**280**		4					
13-Sep-20	144112	32	655	<0.5	1580	<0.1	5.9	<0.5		<0.5		0.7			8.1	26		2.8
06-Apr-21	149003								**28100**		**480**		7					
07-Oct-21	154494	<25	414	<0.5	1050	<0.1	3.1	0.5	**24400**	<0.5		<0.5			3.9	14		1.7
22-Mar-22	159169								**3870**		**245**		2					
14-Sep-22	164295	<25	587	<0.5	1390	<0.1	4.5	<0.5		<0.5		<0.5			6.9	18		2
11-Apr-23	169537								**7220**		**394**		2					
20-Mar-24	179419								**13200**		**212**		3					
TOTAL SAMPLES		25	25	25	24	25	25	25	63	25	30	25	45	0	26	25	13	25
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MH4

Storm Water Management

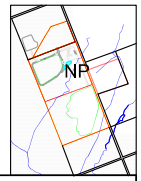


DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
28-Jul-05	HLCH072								**17800**				**22**					
20-Dec-05	HLCH073								**15200**		396		**4**					
07-Feb-06	HLCH074								**11200**				**8**					
29-Aug-06	HLCH075								**20200**									
20-Feb-07	HLCH076								**8770**				0.5					
08-Aug-07	44365								**28500**									
30-Aug-07	44873												<1					
31-Oct-07	45934								**28500**				<10					
29-Oct-08	HLCH080								**940**									
27-Oct-09	HLCH081								**12800**									
28-Oct-10	HLCH082								**5270**									
12-Oct-11	HLCH083								**1720**									
24-Oct-12	78165								**1310**				**2**					
30-Oct-13	HLCH085								**4560**									
30-Oct-14	HLCH086								**5420**									
15-Sep-15	HLCH087								290									
16-Sep-15	99646								290				**8**					
29-Sep-16	107706								**33800**				**6**					
19-Oct-17	HLCH089								**17600**									
26-Oct-18	HLCH090								**15800**									
09-Oct-19	HLCH091								**22800**									
29-Oct-20	145375								300				<1					
30-Sep-21	154272								80				<1					
04-Oct-22	22MISD05								**3820**				**6**					
12-Oct-23	2023A037								**1060**				**2**					
14-Feb-24	178409	42		<1	**2000**	<1	16	**6**	**8440**	<10			**8**	<10				20
22-May-24	181219	**114**		<1	**3480**	<1	33	**6**	**7910**	<10	551	<5	**83**	<10	**8**	**35**	10	20
14-Aug-24	183621	**484**		<1	**3870**	<1	53	**15**	**5500**	<10	790	<5	**437**	<10	**11**	**44**	16	**90**
09-Oct-24	185155	**347**		<1	**5640**	<1	101	**13**	**2180**	<10	417	<5		<10	**14**	**66**	29	**70**
22-Oct-24	185531								**1180**				<1					
TOTAL SAMPLES		6	2	6	5	6	6	6	91	6	6	5	79	7	5	5	5	6
AVERAGE 2024		247		<1	3748	<1	51	10	5042	<10	586	<5	132	<10	11	48	18	50

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MH6-94

Storm Water Management



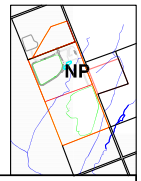
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
08-Aug-07	44369	**160**				<1	39	<5	**5280**	**20**	303	13		<10	**7**	**59**	10	**50**
30-Aug-07	44876												**18**					
31-Oct-07	45935								**5460**				**118**					
24-Oct-12	78166								**17000**				**940**					
16-Sep-15	99647								**7530**				**62**					
29-Sep-16	107707								**5000**				**26**					
09-Oct-19	TCGRPH19								**7730**				**10**					
29-Oct-20	145376								**6170**				**6**					
30-Sep-21	154273								**10400**				**7**					
04-Oct-22	22MISD06								**12000**				**6**					
12-Oct-23	2023A038								**17100**				**2**					
22-Oct-24	185530								**20900**				**5**					
TOTAL SAMPLES		1	0	0	0	1	1	1	11	1	1	1	11	1	1	1	1	1
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

NFA TANK

Landfill Leachate

Leachate Monitor



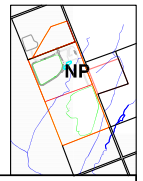
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
12-Oct-11	2011C2050	110	209	<1	1320	<1	25	<5	1810	<20	758	<5		<10	2	16	3	<30
30-Apr-12	2012C2051	50	117	<1	680	<0.3	6	<5	350	4.2	188	<5	3	<10	<2	10	<2	<30
24-Oct-12	78168	76	228	<0.2	1740	0.4	12.3	2.1	860	2.6	257	<5		<2	0.9	15	3	22.1
30-Apr-13	2013C2052	110				<1	12	<5	1190	<10	299	<5	325	<10	<2	21	6	20
30-Oct-13	2013C2053	320				<1	21	<5	1260	36.6	255	<5	114	<10	3	38	6	60
30-Apr-14	2014C2054	1030				<1	23	<5	6530	10	666	<5		<10	6	36	7	110
30-Oct-14	2014C2055	1000				<1	38	<5	3040	<10	708	<5		<10	3	43	11	160
03-Mar-15	95411	260				<1	16	<5	640	<10	115	<5	43	<10	5	62	8	60
16-Sep-15	99645	380				<1	43	13	4720	20	508	<5	366	<10	9	82	24	70
03-Mar-16	102731	<20				<1	12	8	1210	<10	176	<5	292	40	11	40	6	<30
29-Sep-16	107709	250				<1	63	6	2670	<10	396	18	183	<10	6	82	16	<20
18-Apr-17	2017C2056	150				<1	37	6	1590	2.2	368	<5	828	<10	4	48	31	30
19-Oct-17	2017C2057	60				<1	31	<5	780	<1.5	333	<5	14	<10	5	48	18	<20
11-Apr-18	121440	60				<1	19	5	1420	3.2	207	<5	1	<10	5	40	6	30
26-Oct-18	2018C2058	130				<1	44	<5	1440	<10	319	<5	3	<10	9	73	18	20
30-Apr-19	131411	400				<1	66	5	4230	<10	1080	<5	130	<10	9	41	16	260
09-Oct-19	2019C2059	3010				<1	134	17	7270	30	1270	10	74	<10	15	102	38	170
28-Apr-20	2020C2060	333				<1	61	14	740	<10	258	8	171	<10	8	54	16	50
29-Oct-20	145378	257				<1	71	16	860	<10	179	12	46	<10	11	73	14	180
22-Apr-21	2021C2061	116				<1	60	20	1330	<10	254	12	6	<10	9	57	12	70
30-Sep-21	154275	319				<1	95	7	1690	<10	368	<5	9	<10	12	65	23	30
02-Mar-22	158402	102				<1	54	9	640	<10	240	<5	9	<10	9	50	11	30
04-Oct-22	2022C2062	211				<1	181	22	1080	<10	198	15	9	<10	24	139	36	70
12-Apr-23	2023A002	225				<1	70	5	1220	<10	453	<5	91	<10	9	50	12	40
12-Oct-23	2023A040	170				<1	40	14	1630	<10	214	<5	<2	<10	7	36	10	20
26-Mar-24	179606	171				<1	55	9	960	<10	250	<5	24	<10	11	53	11	40
22-Oct-24	185528	514				<1	77	16	2100	<10	428	<5	440	<10	13	61	16	200
TOTAL SAMPLES		27	3	3	3	27	27	27	27	27	27	27	23	27	27	27	27	27
AVERAGE 2024		343				<1	66	13	1530	<10	339	<5	232	<10	12	57	14	120

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SFA TANK

Landfill Leachate

Leachate Monitor

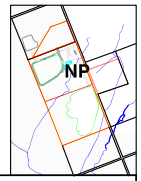


DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
27-Apr-10	2010C2004	130	307	<1	4390	<1	34	<5	5010	<20	452	<5	12	<10	13	48	4	50
28-Oct-10	2010C2005	310	411	<1	6840	<1	59	<5	5620	<20	434	<5		<10	19	80	<20	80
28-Apr-11	2011C2006	80	326	<1	2310	4	18	<5	17500	<20	785	<5	23	<10	7	24	5	<30
12-Oct-11	2011C2007	110	320	<1	5060	<1	45	<5	3210	<20	336	<5		<10	16	51	8	<30
30-Apr-12	2012C2008	60	285	<1	2560	0.6	21	<5	5400	2.6	470	<5	10	<10	8	30	5	<30
24-Oct-12	78167	210	359	<0.2	5310	0.3	52.7	2	3540	<1.5	282	<5		<2	17.7	63	14	68.1
30-Apr-13	2013C2009	50				<1	11	<5	12500	<10	660	8	11	<10	<2	18	3	10
30-Oct-13	2013C2010	290				<1	34	<5	11700	60.3	463	<5	44	<10	11	45	7	80
30-Apr-14	2014C2011	70				1	21	<5	19900	10	755	<5		<10	9	32	4	30
30-Oct-14	2014C2012	800				<1	55	10	11700	<10	421	<5		<10	10	55	12	30
03-Mar-15	95410	130				<1	39	<5	5040	<10	398	<5	12	<10	14	40	9	60
16-Sep-15	99644	70				<1	33	<5	3840	10	492	<5	10	<10	11	35	7	<30
03-Mar-16	102732	<20				<1	19	<5	10700	<10	640	<5	9	30	20	26	4	<30
29-Sep-16	107708	80				<1	53	<5	8040	<10	432	<5	9	<10	17	55	9	<20
18-Apr-17	2017C2013	30				<1	6	<5	14400	4.9	677	<5	3	<10	5	20	<2	<20
19-Oct-17	2017C2014	40				<1	26	<5	11100	2.7	539	<5	4	<10	9	37	5	20
11-Apr-18	121439	90				<1	17	<5	13100	4.1	647	<5	4	<10	7	24	3	40
26-Oct-18	2018C2015	70				<1	39	<5	6870	<10	425	<5	5	<10	13	47	7	10
30-Apr-19	131410	40				<1	10	<5	16000	<10	750	<5	9	<10	5	16	2	80
09-Oct-19	2019C2016	70				<1	40	<5	11700	20	499	<5	9	<10	13	51	6	<10
28-Apr-20	2020C2017	46				1	20	<5	17900	<10	696	<5	6	<10	7	27	3	20
29-Oct-20	145377	52				2	25	<5	10700	20	452	<5	5	<10	7	33	4	20
22-Apr-21	2021C2018	57				<1	14	<5	18300	<10	677	<5	5	<10	6	23	3	20
30-Sep-21	154274	50				<1	18	<5	10600	<10	600	<5	3	<10	7	25	4	<10
02-Mar-22	158401	54				<1	15	<5	16900	<10	662	<5	5	<10	6	24	<2	<10
04-Oct-22	179605	46				<1	21	<5	9790	<10	396	<5	4	<10	9	38	3	60
12-Apr-23	2023A001	61				<1	10	<5	16700	<10	614	<5	<2	<10	4	15	2	10
12-Oct-23	2023A039	98				<1	28	<5	17500	<10	406	<5	<2	<10	11	47	5	10
26-Mar-24	179605	35				<1	16	<5	10700	<10	526	<5	3	<10	7	24	3	<10
22-Oct-24	185529	216				<1	24	9	16300	<10	348	<5	4	<10	10	35	5	100
TOTAL SAMPLES		36	10	11	10	36	36	36	36	36	35	36	32	36	36	36	36	36
AVERAGE 2024		126				<1	20	<5	13500	<10	437	<5	4	<10	9	30	4	50

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BENSSOLCH

Leafate



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
24-Apr-24	180400		114		100	<1		42	1360	<10						17		40
17-Jun-24	182019		443		138	1		199	25800	88.1						41		1600
29-Oct-24	185689		84		180	<1		68	5630	10						32		610
TOTAL SAMPLES		0	3	0	3	3	0	3	3	3	0	0	0	0	0	3	0	3
AVERAGE 2024			214		139	<1		103	10930	32.7						30		750

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

APPENDIX D

Impact of Leachate from Peterborough County/City Waste Management Facility on Peterborough Waste Water Treatment Plant in 2024

IMPACT OF LEACHATE FROM PETERBOROUGH COUNTY/CITY WASTE MANAGEMENT FACILITY ON PETERBOROUGH WASTE WATER TREATMENT PLANT IN 2024

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- 4.2 Leachate Loading on the WWTP....2

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1.0 Introduction

This Appendix was prepared to update the annual assessment of leachate quality from the South Fill Area (SFA) and North Fill Area (NFA) of the Peterborough County/City Waste Management Facility (PCCWMF), specifically with respect to its expected impact on the operation of the Peterborough Waste Water Treatment Plant (WWTP).

Leachate collected from the SFA and NFA flows to a respective pump station. From the pump stations, leachate is directed through 150 mm diameter forcemains to the City of Peterborough's (City) sanitary sewer at Neil Drive. Leachate and the raw wastewater collected in the municipal system subsequently drain by gravity to the WWTP.

The potential impact of the quantity and quality of leachate discharge from the landfill forcemain on the WWTP was assessed based on available data.

2.0 Data Reviewed

Totalizer readings from a flow meter on the leachate forcemain are recorded on a regular basis. Leachate quantities discharged to the City's sanitary sewer were based on records collected by City Staff.

The analytical data reviewed were based on leachate holding tank samples collected by the City's Environmental Sampling Crew. Collected samples were analyzed at the WWTP laboratory or sent to a third-party Canadian Association of Environmental Analytical Laboratories (CAEAL) accredited laboratory for analysis.

All samples collected were grab samples. Samples were collected in March and October 2024 for analysis and comparison to select parameters in the City of Peterborough Sewer Use By-Law No.15-075 (By-Law).

3.0 Leachate Quantity Assessment

The 2024 monthly recorded leachate flow rates from the holding tank are presented in Table D.1. Based on these recorded readings the following was observed:

- April had the highest average daily flow of leachate with 510 cubic metres per day (m^3/d).
- November had the lowest average daily flow rate of leachate with 56 cubic metres per day (m^3/d).
- The average daily leachate flow rate in 2024 was 230 m^3/d. This was a 9% decrease from 2023.

The 2024 average daily influent sewage flow to the Peterborough WWTP, from all sources, was 42,945 m^3/d (compared to the average design capacity of 54,500 m^3/d). During 2024, the average influent volume from the PCCWMF to the WWTP was 0.51% of the total influent flow volume, which is considered insignificant in terms of hydraulic load. January 2024 had the highest fraction of influent leachate at the WWTP with leachate providing 0.86% of the total WWTP influent hydraulic load.

4.0 Leachate Quality Assessment

4.1 By-Law Criteria

The City of Peterborough regulates discharges to the sanitary sewer system under City By-Law 15-075. Analytical results for the 2024 leachate samples are compared with By-Law limits in Table C.3 (in Appendix C). The concentrations of general chemistry, metal, and VOC parameters for the 2024 samples were all below the By-Law criteria with the exceptions of:

- Total Kjeldahl Nitrogen (TKN) in the SFA and NFA holding tanks sampled both in March and October 2024.
- Biochemical Oxygen Demand (BOD_5) in the NFA holding tank sampled October 2024.

4.2 Leachate Loading on the WWTP

The loading of leachate contaminants on the WWTP was reviewed for key parameters based on two sampling events in 2024 and the recorded leachate flow to the sanitary sewer for the months of the sampling events. The overall loading on the WWTP from all sources was estimated from available monthly flow data and influent concentrations. Table D.2 provides the leachate contaminant loadings on the WWTP for these key parameters.

Review of both the leachate discharge and the WWTP influent for both sample collection dates indicates that:

- Total Suspended Solids (TSS) from landfill leachate contributed 0.07% in March 2024 and 0.03% in October 2024 of the TSS loading treated by the WWTP;
- Phosphorus from landfill leachate contributed 0.21% in March 2024 and 0.16% in October 2024 of the phosphorus loading treated by the WWTP;
- Chemical Oxygen Demand (COD) from landfill leachate contributed 0.50% in March 2024 and 0.45% in October 2024 of the overall COD loading treated by the WWTP;
- BOD_5 from landfill leachate contributed 0.12% in March 2024 and 0.55% in October 2024 of the BOD_5 loading treated by the WWTP; and
- TKN from landfill leachate contributed 3.1% in March 2024 and 1.3% in October 2024 of the TKN loading treated by the WWTP.

Based on the above, the loading from the landfill leachate to the WWTP generally represents a small portion of the total contaminant loading.

In general, the range of leachate flows and organic loadings discharged to the WWTP represent only a small fraction of the plant's total capacity. Considering that the WWTP is reportedly operating in compliance with its approvals criteria, leachate does not create any WWTP compliance issues. In accordance with the Environmental Compliance Approval for the Site, the potential impact of leachate on the City's WWTP should continue to be evaluated.

5.0 Summary and Recommendations

Landfill leachate from the Site that is discharged via the forcemain along Bensfort Road to the City of Peterborough sanitary sewer system:

- Is considered insignificant with respect to leachate hydraulic loading on the WWTP, as even during the peak leachate discharge periods the leachate flow accounts for less than 1 percent of the overall average sewage flow;
- All leachate samples were below the By-Law criteria with the exceptions of TKN in the SFA and NFA holding tanks sampled both in March and October 2024, BOD_5 in the NFA holding tank sampled in October 2024.
- BOD_5, TSS, phosphorus and COD loads on the WWTP from landfill leachate are low and represent only a small portion of the WWTP capacity; and
- TKN load on the WWTP appears to be in the range of 1.3% and 3.1%, which is still considered significantly low.

The potential impact of landfill leachate on the WWTP should continue to be evaluated on an annual basis.

TABLE D.1
2024 Leachate and Peterborough WWTP Flow Rates
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

Month	Monthly Leachate Volume to Sewer from PCCWMF	Average Daily Leachate Flow from PCCWMF	Total WWTP Influent Flow	% Leachate of WWTP Influent	Total Monthly Preciptation
	(m^3/month)	(m^3/d)	(m^3/d)	(%)	(mm)
January	12,309	397	45,938	0.86%	73.3
February	9,199	317	46,233	0.69%	11.7
March	7,406	239	44,939	0.53%	35.4
April	15,288	510	59,606	0.85%	141.9
May	9,405	303	48,116	0.63%	38.7
June	5,298	177	42,806	0.41%	104.6
July	6,223	201	42,153	0.48%	93.2
August	2,888	93	36,631	0.25%	53.7
September	3,210	107	38,634	0.28%	78.0
October	1,977	64	35,229	0.18%	24.4
November	1,669	56	34,390	0.16%	31.7
December	9,385	303	40,668	0.74%	77.2
Total Volume (m^3)	84,259				
Maximium	15,288	510	59,606	0.86%	141.9
Minimum	1,669	56	34,390	0.16%	11.7
Average	7,022	230	42,945	0.51%	63.7
Historical Range (1990-2024)		31-485			

Table D.2
Leachate Loading on WWTP 2024
2024 ANNUAL MONITORING REPORT
Peterborough County/City Waste Management Facility

		March-24							
		WWTP			Leachate			Loading as a Percentage of WWTP loading	Sewer Use Bylaw Criteria (mg/L)
ANALYTE	UNIT	Conc. (mg/L)	Flow (ML/d)	Loading (kg/d)	Conc. (mg/L)	Flow (ML/d)	Loading (kg/d)		
TSS	mg/L	235	44.939	10,561	28.7	0.239	6.9	0.07%	350
Phosphorous	mg/L	3.40	44.939	153	1.34	0.239	0.3	0.21%	10
COD	mg/L	385	44.939	17,302	362	0.239	86.4	0.50%	
BOD-5	mg/L	188	44.939	8,449	43.2	0.239	10.3	0.12%	300
TKN	mg/L	31.4	44.939	1,411	***181.2**	0.239	43.3	3.1%	100

		October-24							
		WWTP			Leachate			Loading as a Percentage of WWTP loading	Sewer Use Bylaw Criteria (mg/L)
ANALYTE	UNIT	Conc. (mg/L)	Flow (ML/d)	Loading (kg/d)	Conc. (mg/L)	Flow (ML/d)	Loading (kg/d)		
TSS	mg/L	***412**	35.229	14,514	67.7	0.064	4.3	0.03%	350
Phosphorous	mg/L	4.84	35.229	171	4.21	0.064	0.3	0.16%	10
COD	mg/L	548	35.229	19,305	1370	0.064	87.4	0.45%	
BOD-5	mg/L	255	35.229	8,983	***767.8**	0.064	49.0	0.55%	300
TKN	mg/L	41.3	35.229	1,455	***292**	0.064	18.6	1.3%	100

Notes: 1. WWTP loads based on flow and concentrations measured on or near specified date.
2. Leachate load based on quality sampling results from specified date and monthly average leachate flow rate.
3. Leachate data taken from NFA and SFA samples. Samples proportioned 46.3% SFA and 43.7% NFA for March 2024 and 51.4% SFA and 48.6% NFA for October 2024, based on leachate quantities pumped in 2024.
4. * indicates exceedances from the Sewer Use Bylaw Criteria.

APPENDIX E

Hydrogeologic Details

Table E.1
Groundwater Monitor Details
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
3-I	185		190.98	190.98	183.88	183.88	188.91			bedrock piezometer
3-II	185	0.70	190.26	189.56	185.48	185.48	183.28			overburden standpipe
5-IV	185	0.70	196.30	195.60	181.78-182.54	181.78-183.58	183.58-195.6		181.58-181.78	deep bedrock piezometer
5-V			187.98		183.325					bedrock piezometer
5-VI			194.05		189.264					overburden standpipe
8-I	95	1.12	199.90	198.78	183.81	183.81	197.23			bedrock piezometer
8-II	185	1.09	199.87	198.78	191.85	191.85	190.4			overburden piezometer
8-III	185	0.65	199.53	198.88	192.84-197.41	192.84-197.78	197.78-198.88			overburden standpipe
10-I	185	0.25	231.23	230.98	213.28	213.28	230.43			overburden piezometer
10-II	185	0.27	231.22	230.95	219.25	219.25	218.82			overburden standpipe
13	185	0.21	238.96	238.75	225.95	225.95	236.68			perched sand standpipe
15A	185	0.44	189.78	189.34	184.86	184.86				overburden piezometer
15B	185	0.58	189.80	189.22	185.38	185.38				overburden standpipe
15-I	185	0.78	190.12	189.34	183.41-183.94	183.41-183.86	183.86-187.82			bedrock piezometer
16A	94	0.95	196.78	195.83	184.95	184.95				bedrock piezometer
16C	185	0.78	196.64	195.97	186.08-193.7	186.08-193.7	193.7-195.97			overburden standpipe
17A	94	0.77	193.31	192.54	183.88-184.34	183.88-184.94	184.94-186.34			bedrock piezometer
17B	185	0.76	193.33	192.57	186.63-190.17	186.63-190.77	190.77-191.37			overburden standpipe
17-I	185	0.75	193.17	192.42	179.1-179.86	179.1-180.47	180.47-192.42		178.8-179.1	deep bedrock piezometer
18A	94	0.58	189.86	189.28	183.82-184.08	183.82-184.68	184.68-186.28			bedrock piezometer
18B	185	0.61	189.86	189.25	186.25-188.65	186.25-188.85	188.85-189.25			overburden standpipe
19A	94	0.46	193.87	193.41	184.51-185.21	184.51-185.01	185.31-185.81			bedrock piezometer
19B	185	0.54	193.84	193.30	186.56-190.1	186.56-190.1	190.1-191.6			overburden standpipe
20A	94	0.61	190.95	190.34	183.85-184.14	183.85-185.14	185.14-186.14			bedrock piezometer
20B	185	0.67	190.71	190.04	186.93-189.44	186.93-189.54	189.54-190.04			overburden standpipe
21A	94	0.28	194.05	193.77	185.78	185.78				bedrock piezometer
21B	185	0.72	194.66	193.94	190.13	190.13				overburden standpipe
21C	185	0.12	193.94	193.82	188.03	188.03				overburden piezometer
22		0.66	207.47	206.81	193.4	193.4				refuse standpipe
23A	185	0.64	207.45	206.81	193.09-193.7	193.09-194.31	194.31-194.62			overburden piezometer
23B	185	0.65	207.40	206.75	195.78-199.43	195.78-205.99	205.99-206.75			refuse standpipe
24A	185	0.61	208.67	208.06	194.25-194.86	194.25-195.56	195.56-197.09			overburden piezometer
24B	185	0.50	208.37	207.87	196.29-200.86	196.29-207.11	207.11-207.41			refuse standpipe
28	94	0.62	193.86	193.24	185.16-185.77	185.16-185.86	185.86-186.05			bedrock piezometer
30-I	94	0.72	190.26	189.54	182.32-183.02	182.32-184.88	184.88-185.24	186.49-189.54		bedrock piezometer
30-II	105	0.87	190.45	189.58	185.56-188.50	185.56-188.67	188.67-189.58			overburden standpipe

Table E.1
Groundwater Monitor Details
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
31-I	94	0.89	190.29	189.40	175.90-176.64	175.90-178.70	178.70-189.40			bedrock piezometer
31-II	105	1.02	190.42	189.40	184.85-187.68	184.85-188.8	188.8-189.4			overburden standpipe
33-I	94	0.83	196.96	196.13	182.47-183.23	182.47-183.48	183.48-196.13			deep bedrock piezometer
33-II	185	1.13	197.16	196.03	186.74-187.50	186.74-188.28	188.28-189.18	190.32-196.03		overburden piezometer
33-III	185	1.07	197.10	196.03	192.78-195.75	192.78-195.75	195.75-196.03			overburden standpipe
37-I	94	0.97	195.88	194.92	181.12-181.92	181.12-184.18	184.22-194.92			bedrock piezometer
37-II	185	0.92	195.97	195.04	191.64-194.24	191.64-194.24	194.24-195.04		188.94-191.64	overburden standpipe
38-I	94	0.68	198.33	197.65	180.60-181.04	180.60-181.04	181.04-191.55			deep bedrock piezometer
38-II	185	0.96	198.74	197.78	187.52-188.28	187.52-189.71	189.71-192.45	193.21-197.78		overburden piezometer
38-III	185	0.99	198.77	197.78	193.21-196.26	193.21-196.88	196.88-197.78			overburden standpipe
40-I	94	0.99	196.25	195.27	181.37-182.07	181.37-182.87	182.87-195.27			bedrock piezometer
40-II	105	0.97	196.24	195.27	190.67-193.77	190.67-194.47	194.47-195.27			overburden standpipe
41-I	94	0.79	198.05	197.27	179.90-180.66	179.90-181.27	181.27-192.39	196.66-197.27		deep bedrock piezometer
41-II	94	0.81	198.19	197.39	184.44-185.20	184.44-185.93	185.93-195.56	196.78-197.39		bedrock piezometer
41-III	185	0.81	198.08	197.27	192.76-195.81	192.76-196.66	196.66-197.27			overburden standpipe
42-I	94	0.79	215.13	214.34	187.97-188.74	187.97-189.44	189.44-203.52	206.11-214.34	187.68-187.97	overburden piezometer
42-II	185	0.87	215.20	214.33	204.3-204.76	204.3-205.64	205.64-213.11	214.03-214.33		overburden piezometer
42-III	185	0.77	215.12	214.35	206.27-209.32	206.27-211	211-214.35			overburden standpipe
43-I	94	0.62	228.50	227.88	200.01-200.71	200.01-201.48	201.48-220.87	226.17-227.88	198.47-200.01	overburden piezometer
43-II	85	0.48	228.76	228.28	208.77-209.44	208.77-209.87	209.87-215.48	225.28-228.28		overburden piezometer
43-III	185	0.63	228.51	227.88	221.05-225.56	221.05-226.17	226.17-226.97			overburden standpipe
44-I	94	0.98	197.64	196.66	175.26-175.96	175.26-177.46	177.46-196.66			deep bedrock piezometer
44-II	94	0.98	197.73	196.74	179.98-180.76	179.98-183.03	183.03-196.74			bedrock piezometer
44-III	185	0.99	197.73	196.74	192.14-195.24	192.14-195.94	195.94-196.74			overburden standpipe
45	105	0.69	196.28	195.59	190.97-193.91	190.97-194.78	194.78-195.59		190.56-190.97	overburden standpipe
46-I	94	0.67	194.71	194.04	174.99-175.51	174.99-175.84	175.84-194.04		174-174.99	bedrock piezometer
46-II	185	0.56	194.86	194.30	186.89-187.48	186.89-187.6	187.6-194.3			overburden piezometer
46-III	185	0.59	194.89	194.30	191.51-193.68	191.51-193.99	193.99-194.3			overburden standpipe
47	105	0.70	195.62	194.92	190.44-193.38	190.44-194.01	194.01-194.92		190.02-190.44	overburden standpipe
48	105	0.76	196.59	195.83	191.17-194.11	191.17-194.92	194.92-195.83			overburden standpipe
49	105	0.74	197.31	196.57	192.04-194.98	192.04-195.75	195.75-196.57			overburden standpipe
50-I	94	0.59	194.58	193.99	182.62-183.17	182.62-183.68	183.68-193.99		181.62-182.62	bedrock piezometer
50-II	185	0.67	194.74	194.07	186.06-186.66	186.06-187.15	187.67-193.87			overburden piezometer
50-III	185	0.56	194.48	193.92	187.7-193.48	187.7-193.52	193.52-193.92		187.39-187.7	overburden standpipe
51-I	91	0.67	190.27	189.60	181.54-182.13	181.54-182.45	182.45-189.6			bedrock piezometer
52-I	94	0.68	189.95	189.27	181.84-182.36	181.84-182.69	182.69-189.27		181.39-181.84	bedrock piezometer

Table E.1
Groundwater Monitor Details
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
52-II	51	1.26	190.31	189.04	187.21-188.00	187.21-188.13	188.13-189.04	188.84-189.04		overburden standpipe
53-I	94	0.79	196.73	195.94	184.29-184.69	184.29-185.08	185.08-195.94		182.4-184.29	bedrock piezometer
53-II	185	0.74	196.78	196.04	189.15-194.93	189.15-195.29	195.29-196.04			overburden standpipe
54-I	94	0.51	195.50	194.99	180.24-181.15	180.24-181.3	181.3-194.99			deep bedrock piezometer
54-II	185	0.45	196.05	195.60	188.96-194.91	188.96-195.03	195.03-195.6			overburden standpipe
59-I	185	0.90	201.44	200.54	192.36-193.11	192.36-193.5	193.5-200.54			overburden piezometer
59-II	185	0.97	201.40	200.43	195.6-199.97	195.6-200.18	200.18-200.43			overburden standpipe
61-I	96	0.81	195.60	194.79	173.02-173.78	173.02-174.37	174.37-194.79			bedrock piezometer
61-II	205	0.81	195.76	194.95	181.18-181.94	181.18-182.25	182.25-194.95			overburden piezometer
61-III	104	0.59	195.66	195.07	190.12-194.69	190.12-194.77	194.77-195.07			overburden standpipe
62-IR	96	0.83	191.95	191.12	183-183.76	183-184.24	184.24-191.12			deep bedrock piezometer
62-II	205	0.79	192.01	191.22	186.88-190.69	186.88-190.82	190.82-191.22			overburden standpipe
63-I	96	0.76	193.29	192.53	170.76-171.52	170.76-171.8	171.8-192.53			deep bedrock piezometer
63-II	205	0.77	193.28	192.51	175.78-176.54	175.78-177.42	177.42-192.51			overburden piezometer
63-III	104	0.48	192.98	192.50	187-191.57	187-192.2	192.2-192.5			overburden standpipe
64-I	96	0.85	190.10	189.25	182.87-183.63	182.87-183.95	183.95-189.25		182.7-182.87	deep bedrock piezometer
64-II	205	0.80	190.16	189.36	185.8-188.85	185.8-188.96	188.96-189.36			overburden piezometer
65-I	205	0.81	198.06	197.25	191.45-196.02	191.45-196.85	196.85-197.25			overburden standpipe
66-I	96	0.69	199.06	198.37	184.54-185.3	184.54-185.54	185.54-198.37		184.12-184.54	deep bedrock piezometer
66-II	205	0.81	199.13	198.32	190.1-190.86	190.1-191.2	191.2-198.32			overburden piezometer
66-III	104	0.76	198.92	198.16	193.39-197.2	193.39-197.66	197.66-198.16		193.28-193.39	overburden standpipe
70-I	96	0.86	195.05	194.19	172.83-173.59	172.83-174.07	174.07-194.19		171.94-172.83	bedrock piezometer
70-II	205	1.72	195.97	194.25	180.43-181.19	180.43-181.75	181.75-194.25			overburden piezometer
70-III	104	0.63	194.91	194.28	189.4-193.98	189.4-194.08	194.08-194.28			overburden standpipe
71-I	96	0.81	197.67	196.86	183.76-184.52	183.76-185.21	185.21-196.86			bedrock piezometer
71-II	205	0.83	197.80	196.97	188.82-189.58	188.82-189.8	189.8-196.97			overburden piezometer
71-III	104	0.87	197.91	197.04	192.77-196.58	192.77-196.74	196.74-197.04			overburden standpipe
72-I	96	0.76	196.56	195.80	167.31-168.07	167.31-168.86	168.86-195.8		166.84-167.31	bedrock piezometer
72-II	96	0.74	196.48	195.74	180.47-181.23	180.47-182.14	182.14-195.74			overburden piezometer
72-III	104	0.75	196.51	195.76	191.19-195.76	191.19-195.46	195.46-195.76		190.88-191.19	overburden standpipe
73-I	96	0.81	195.04	194.23	177.11-177.87	177.11-178.76	178.76-194.23		176.55-177.11	bedrock piezometer
73-II	205	0.78	195.01	194.23	184.04-184.8	184.04-184.96	184.96-194.23			overburden piezometer
73-III	104	0.72	194.99	194.27	188.94-193.51	188.94-193.97	193.97-194.27			overburden standpipe
74-I	96	0.82	195.95	195.13	170.82-171.58	170.82-172.18	172.18-195.13		170.64-170.82	bedrock piezometer
74-II	205	0.78	195.91	195.13	181.38-182.14	181.38-182.5	182.5-195.13		180.35-181.38	overburden piezometer
74-III	104	0.78	195.99	195.21	190.12-194.69	190.12-194.91	194.91-195.21			overburden standpipe

Table E.1
Groundwater Monitor Details
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MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
75-I	96	0.80	191.18	190.38	181.32-182.08	181.32-182.6	182.6-190.38			bedrock piezometer
75-II	104	0.79	191.23	190.44	186.17-189.98	186.17-190.14	190.14-190.44			overburden standpipe
76-I	185	0.76	190.49	189.83	171.08-172.43	171.08-173.03	173.03-189.83			deep bedrock piezometer
76-II	185	0.58	190.41	189.83	177.31-178.07	177.31-178.73	178.73-189.83			bedrock piezometer
76-III	185	0.43	190.26	189.83	183-183.75	183-184.33	184.33-189.83			overburden piezometer
76-IV	185	0.40	190.23	189.83	185.31-188.36	185.31-188.77	188.77-189.83			overburden standpipe
77-I	185	0.45	195.36	194.91	189.97-193.01	189.97-193.72	193.72-194.91			overburden standpipe
78-I	185	0.58	195.84	195.26	191.02-193.31	191.02-194.16	194.16-195.26			overburden standpipe
81-I	96	0.89	199.85	198.96	183.29-184.81	183.29-185.11	185.11-198.96			bedrock piezometer
81-II	185	0.92	199.90	198.98	189.84-191.36	189.84-191.71	191.71-198.98			overburden piezometer
81-III	185	0.96	200.00	199.04	193.68-198.25	193.68-198.62	198.62-199.04			overburden standpipe
82-I	130	0.87	206.80	205.93	192.4-195.5	no sand pack	192.4-202.7	202.7-203.5		n/a
83-I	130	0.53	209.85	209.32	189.8-191.72	189.8-192.1	192.1-204.1	208.52-209.32		overburden piezometer
83-II	130	0.48	209.80	209.32	204.1-206.52	204.1-208.52		208.52-209.32		overburden standpipe
84-I	130	0.69	202.17	201.48	184.4-186.1	184.4-186.3	186.3-201.48			overburden piezometer
84-II	130	0.64	202.12	201.48	193.0-195.0	193.0-195.5	195.5-201.48			overburden standpipe
85-I	130	0.65	198.80	198.15	184.3-186.3	184.3-186.6	186.6-196.6	197.8-198.15	196.6-197.8	overburden piezometer
85-II	130	0.60	198.75	198.15	193.0-195.4	193.0-196.6		197.8-198.15	196.6-197.8	overburden standpipe
86-I	130	0.85	195.73	194.88	176.1-178.1	176.1-178.3	178.3-193.7	193.7-194.88		bedrock piezometer
86-II	130	0.81	195.69	194.88	185.9-187.7	185.9-187.9	187.9-193.9	193.9-194.88		overburden piezometer
86-III	130	0.87	195.75	194.88	190.3-193.3	190.3-193.5	193.5-193.9	193.9-194.88		overburden standpipe
87-I	130	0.86	200.35	199.49	182.3-184.1	182.3-185.2	185.2-198.5	198.5-199.49		bedrock piezometer
87-II	130	0.82	200.31	199.49	190.3-191.9	190.3-192.3	192.3-198.5	198.5-199.49		overburden piezometer
87-III	130	0.90	200.39	199.49	194.9-197.8	194.9-198.0	198.0-198.3	198.3-199.49		overburden standpipe
88-I	130	0.91	207.52	206.61	186.3-187.8	186.3-188.4	188.4-205.6	205.6-206.61		bedrock piezometer
88-II	130	0.91	207.52	206.61	196.6-198.21	196.6-198.6	198.6-205.6	205.6-206.61		overburden piezometer
88-III	130	0.76	207.37	206.61	201.0-204.0	201.0-204.6	204.6-205.6	205.6-206.61		overburden standpipe
89-I	130	0.28	202.77	202.49	180.5-182.1	180.5-182.5	182.5-201.5	201.5-202.49		bedrock piezometer
89-II	130	0.65	203.14	202.49	188.7-190.4	188.7-190.7	190.7-201.5	201.5-202.49		overburden piezometer
89-III	130	0.73	203.22	202.49	195.7-198.9	195.7-199.7	199.7-201.5	201.5-202.49		overburden standpipe
90-I	130	0.93	204.38	203.45	188.0-189.5	188.0-189.9	189.9-203.0	203.0-203.45		bedrock piezometer
90-II	130	0.61	204.06	203.45	194.5-196.0	194.5-196.3	196.3-202.5	202.5-203.45		overburden piezometer
90-III	130	0.73	204.18	203.45	197.9-201.1	197.9-201.7	201.7-202.5	202.5-203.45		overburden standpipe
91-I	130	0.88	206.55	205.67	190.7-192.1	190.7-193.3	193.3-204.7	204.7-205.67		bedrock piezometer
91-II	130	0.89	206.56	205.67	196.5-198.1	196.5-199.6	199.6-204.7	204.7-205.67		overburden piezometer
91-III	130	1.02	206.69	205.67	200.1-203.5	200.1-203.7	203.7-204.7	204.7-205.67		overburden standpipe

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MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
92-I	130	0.86	200.46	199.60	183.6-185.2	183.6-185.6	185.6-198.6	198.6-199.60		bedrock piezometer
92-II	130	0.87	200.47	199.60	190.6-192.3	190.6-192.4	192.4-198.6	198.6-199.60		overburden piezometer
92-III	130	0.88	200.48	199.60	193.8-197.1	193.8-197.6	197.6-198.6	198.6-199.60		overburden standpipe
93-I	130	0.62	197.67	197.05	187.9-189.5	187.9-190.1	190.1-196.3	196.3-197.05		overburden piezometer
93-II	130	0.71	197.76	197.05	193.9-195.7	193.9-196.1	196.1-196.3	196.3-197.05		overburden standpipe
94-I	130	0.78	196.80	196.02	185.19-186.56	184.15-184.75	187.15-195.29		195.29-196.02	overburden piezometer
94-II	130	0.86	196.88	196.02	193.53-194.90	193.36-195.14	195.14-195.29		195.29-196.02	overburden standpipe
95-I	130	0.00	195.51	195.51	184.7-186.9	184.7-187.1	187.1-194.7	194.7-195.51		overburden piezometer
95-II	130	-0.02	195.49	195.51	192.7-194.3	192.7-194.8		194.8-195.51		overburden standpipe
100-I	96	0.73	200.35	199.62	184.32-185.84	184.32-186.36	185.84-199.62			bedrock piezometer
100-II	200	0.68	200.41	199.73	190.83-192.35	190.83-193.02	193.02-199.73			overburden piezometer
100-III	200	0.63	200.33	199.70	195.40-198.45	195.40-198.79	198.79-199.70			overburden standpipe
101-I	96	0.53	219.70	219.17	184.60-186.27	184.60-186.57	186.57-219.17			bedrock piezometer
101-II	200	0.59	219.64	219.04	202.54-204.07	202.54-204.84	204.84-219.04			overburden piezometer
101-III	200	0.60	219.51	218.92	212.82-215.87	212.82-216.42	216.42-218.92			overburden standpipe
104-I	130	0.89	205.53	204.64	183.9-185.1	183.9-185.6	185.6-203-6	203.6-204.64		bedrock piezometer
104-II	130	0.94	205.58	204.64	197.1-198.24	197.1-199.6	199.6-201.0	203.6-204.65	201.0-203.6	overburden piezometer
104-III	130	0.89	205.53	204.64	201.0-203.2	201.0-204.0		204.2-204.64	204.0-204.2	overburden standpipe
106-I	130	0.95	199.80	198.85	182.4-183.7	182.4-184.1	184.1-197.9	197.9-198.85		bedrock piezometer
106-II	130	0.90	199.75	198.85	191.3-192.4	191.3-193.5	193.5-197.9	197.9-198.85	194.0-197.3	overburden piezometer
106-III	130	0.86	199.71	198.85	195.3-198.1	195.3-198.3		198.3-198.85		overburden standpipe
107-I	130	0.70	195.99	195.29	179.8-181.1	179.8-181.7	181.7-190.9	190.9-195.29		bedrock piezometer
107-II	130	0.80	196.09	195.29	186.9-188.9	186.9-189.5	189.5-194.3	194.3-195.29		overburden piezometer
107-III	130	0.79	196.08	195.29	192.3-193.8	192.3-195.1		195.1-195.29		overburden standpipe
108-I		0.99	206.32	205.33	190.71					overburden piezometer
108-II		0.80	206.13	205.33	194.20					overburden piezometer
108-III		0.58	205.91	205.33	200.40					overburden standpipe
109-I		0.89	199.19	198.30	181.47					overburden piezometer
109-II [5]	130	1.00	200.10	199.10	188.58-190.11	188.58-190.11	190.11-198.64	198.64-199.10		overburden piezometer
109-III		0.78	199.04	198.26	193.24					overburden standpipe
110-I		0.81	202.55	201.73	184.87					overburden piezometer
110-II		0.89	202.73	201.84	192.10					overburden piezometer
110-III		0.65	202.55	201.90	196.95					overburden standpipe
ISP94-1										inclined standpipe
ISP94-2										inclined standpipe
ISP94-3										inclined standpipe

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Groundwater Monitor Details
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

MONITOR	Borehole Diameter (mm)	Monitor Stick Up (m)	T.O.P. ELEVATION (mASL)	Ground Elevation (mASL)	Screen Bottom / Interval (mASL)	Filter Pack Interval (mASL)	Lower Seal Interval (mASL)	Surface Seal Interval (mASL)	Backfill Interval (mASL)	Monitor Type
ISP94-4										inclined standpipe
111-I	185	0.52	200.28	199.76	186.29-184.77	186.88-184.74		199.76-186.88		overburden piezometer
111-II	185	0.59	200.29	199.71	188.19-186.67	188.79-186.64		199.71-188.79		overburden piezometer
111-III	185	0.67	200.41	199.74	196.15-193.10	198.74-193.07		199.74-198.74		overburden standpipe
112-I	185	0.81	208.59	207.78	190.85-189.33	191.45-189.30		207.78-191.45		overburden piezometer
112-II	185	0.83	208.59	207.75	196.47-194.95	197.07-194.92		207.75-197.07		overburden piezometer
112-III	185	0.88	208.60	207.72	203.95-200.90	206.72-200.88		207.72-206.72		overburden standpipe
113-I	185	1.00	195.34	194.34	174.13-172.61	174.73-172.58		194.34-174.73		bedrock piezometer
113-II	185	1.00	195.31	194.31	186.29-184.77	186.89-184.74		194.31-186.89		overburden piezometer
113-III	185	0.85	195.25	194.41	190.57-189.05	193.41-189.03		194.41-193.41		overburden standpipe
114-I		0.99	209.74	208.75	189.55-191.05	189.55-191.65				overburden piezometer
114-II		1.04	209.86	208.82	196.32-197.82	196.32-198.42				overburden piezometer
114-III		1.03	209.94	208.91	201.91-204.91	201.91-205.51				overburden standpipe
115-I		0.91	206.68	205.77	188.67-190.17	188.67-190.77				overburden piezometer
115-II		0.96	206.72	205.76	194.26-195.76	194.26-196.76				overburden piezometer
115-III		1.00	206.85	205.85	199.35-200.85	199.35-201.85				overburden standpipe
MW20-30		0.78	208.60	207.82	200.11-203.11					overburden standpipe
MW20-28A		0.90	212.13	211.23	193.18-196.28					overburden standpipe
MW20-01		0.80	209.26	208.46	200.82-203.82					overburden standpipe
MW20-19R		0.93	206.40	205.47	186.51-189.61					overburden standpipe
MW20-22		0.90	202.54	201.64	193.91-196.91					overburden standpipe
SP17-96		0.98	197.00	196.02						standpipe
SP20-96		1.138	202.29	201.15						toe drain standpipe
T-1	185	0.81	192.24	191.43	187.92-190.52	187.92-190.83	190.83-191.43			trench monitor
T-2	185	0.71	191.55	190.84	187.34-190.08	187.34-190.14	190.14-190.84			trench monitor
T-4	185	0.61	191.19	190.58	186.45-190.11	186.45-190.18	190.18-190.58		186.45-186.45	trench monitor
T3-I	185	0.94	191.59	190.65	185.19-185.95	185.19	186.41-190.65		185.19-185.19	trench monitor
T3-II	185	0.80	191.49	190.69	187.18-189.93	187.18-189.99	189.99-190.69			trench monitor
T5-I	185	0.98	191.25	190.27	185.36-186.12	185.36-186.27	186.27-190.27		185.36-185.36	trench monitor
T5-II	185	0.93	191.25	190.32	186.12-189.17	186.12-189.62	189.62-190.32			trench monitor

NOTES: 1) T.O.P. - Top Of Pipe
2) mASL - Metres Above Sea Level
3) Information presented in table is based on data provided in the 2007 Annual Monitoring Report prepared by Conestoga-Rovers & Associates, May 2008
4) Monitor information is not available for borehole locations 108, 109, and 110.
5) Monitoring well 109-II redrilled in September 2022 with a prepacked monitoring well screen.

Table E.2
Vertical Standpipe Measurements
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PHASE 1		Feb-24	Mar-24	Jun-24	Aug-24	Oct-24	
Location	Length of Pipe (m)	Level (m)	Level (m)	Level (m)	Level (m)	Level (m)	COMMENTS
SP1-90	2.91	2.85 / dry	2.91 / dry	2.84 / dry	2.86 / dry	2.86 / dry	Dry - low to moderate methane odour, snow coverage around SP (Feb), length of pipe remeasured, hit bottom sooner than previous measurement (Mar)
SP2-90	3.65	3.52 / dry	3.65 / dry	3.50 / dry	3.52 / dry	3.53 / dry	Dry - light to moderate methane odour, melting snow coverage around SP (Feb), length of pipe remeasured, hit bottom sooner than previous measurement (Mar)
SP3-90	2.99	2.95 / dry	2.99 / dry	2.95 / dry	2.96 / dry	2.95 / dry	Dry - low to moderate odour (Feb, Mar, Jun), moderate to strong odour (Aug), no odour (Oct), snow coverage around SP (Feb), length of pipe remeasured, same depth as previous (Mar), iron precipitate on probe (Jun, Aug)
SP4-90	3.75	3.74 / dry	3.75 / dry	3.74 / dry	3.75 / dry	3.75 / dry	Dry - low odour (Feb, Mar), no odour (Jun, Aug, Oct), snow coverage around SP (Feb), length of pipe remeasured, hit bottom sooner than previous measurement (Mar).
SP6-90	4.62	4.36 / dry	4.36 / dry	4.39 / dry	4.37 / dry	4.41 / dry	Dry - low to slight odour (Feb, Mar), no odour (Jun, Aug, Oct), no snow (Feb).
SP7-90	3.99	3.96 / dry	3.99 / dry	3.99 / dry	3.99 / dry	3.91 / dry	Dry - low to slight odour (Feb, Mar), no odour (Jun, Aug, Oct), no snow (Feb), length of pipe remeasured, hit bottom sooner than previous measurement, black/dark grey sludge on tip of tape (Mar, Jun, Aug).
SP8-90	5.25	4.66	4.99 / dry	4.93	4.98 / Nearly dry	4.68	Nearly Dry - slight to moderate odour (Feb, Mar), no odour (Jun, Aug, Oct), no snow (Feb), black sludge on probe (Jun, Aug, Oct).
SP10-94	5.70	5.49 / dry	5.58 / dry	5.61 / dry	5.60 / dry	5.46 / dry	Dry - moderate to strong methane odour, no snow (Feb), small amount of standing water in ditch at road (Mar), little black sludge on probe (Aug).
SP11-94	7.15	7.03 / dry	7.02 / dry	7.02 / dry	7.03 / dry	7.02 / dry	Dry - moderate to strong methane odour, no snow (Feb), small amount of standing water in ditch at road (Mar)
SP14-94	4.83	3.44	3.60	3.67	3.56	3.52	Low to no odour, moderate to strong odour near pipe due to holding tank proximity (Oct), no snow (Feb), brown sludge on probe (Jun, Aug), vegetation very thick around LCH HTs near SP (Oct).
SP15-91	3.92	3.92 / dry	3.92 / dry	3.92 / dry	3.91 / dry	3.92 / dry	Dry - light to moderate methane odour (Mar, Jun, Aug), no methane odour (Oct), no snow, no water in ditch (Feb), length of pipe remeasured, hit bottom sooner than previous measurement (Mar), black sludge on probe (Jun), little black sludge on probe (Aug).
SP16-91	4.11	3.93 / dry	3.93 / dry	3.94 / dry	3.95 / dry	3.98 / dry	Dry - moderate to strong odour (Feb, Mar, Aug, Oct), slight methane odour (Jun), no snow, no water in ditch to direct east (Feb).
SP18-96	3.68	3.67 / dry	3.68 / dry	3.68 / dry	3.68 / dry	3.68 / dry	Dry - low to strong odour (Feb, Mar, Aug, Oct), moderate methane odour (Jun), some snow coverage (Feb), length of pipe remeasured, hit bottom sooner than previous measurement (Mar).
SP19-96	4.54	4.43 / dry	4.45 / dry	4.51 / dry	4.49 / dry	4.51 / dry	Dry - moderate to strong odour (Feb, Jun, Aug, Oct), low to no odour (Mar, Aug), some snow coverage (Feb).
SP20-96	5.98	5.84 / dry	5.83 / dry	5.82 / dry	5.82 / dry	5.84 / dry	Dry - moderate to strong odour (Feb, Jun, Aug), low to no odour (Mar, Oct), some snow coverage (Feb), thick buckthorn shrub growth adjacent to standpipe (Oct).

Notes:

1. If standpipe has less than 0.3 m of standing water in it, it is considered dry.

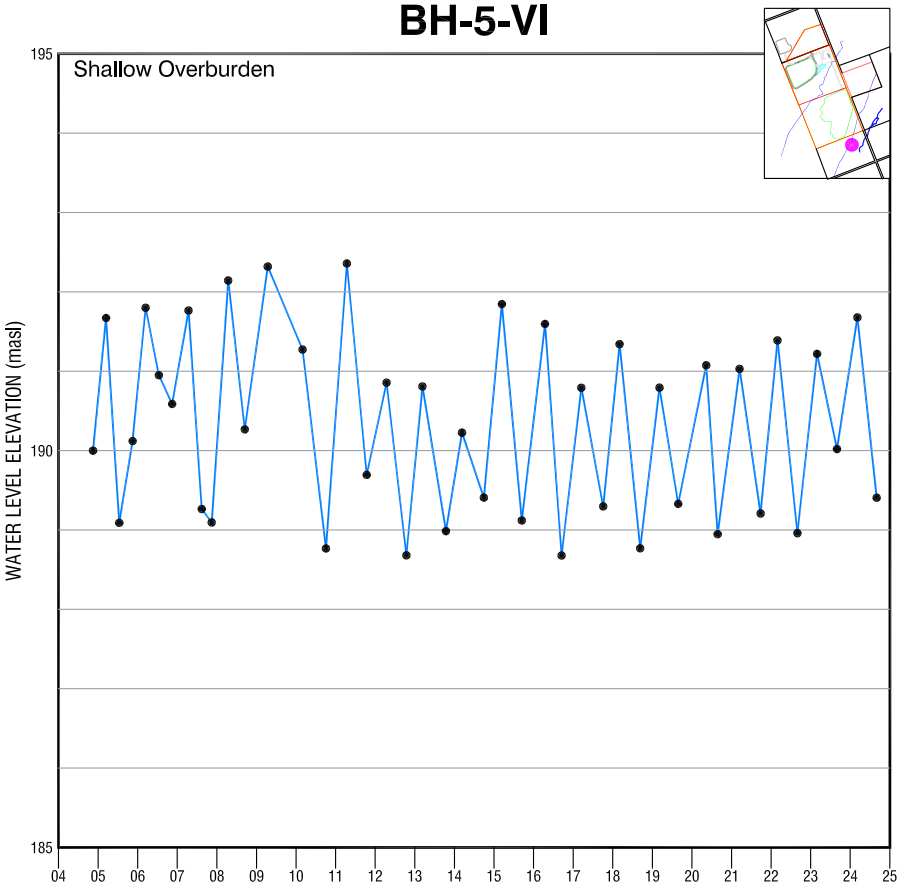
2. No vertical standpipes having protective casings

Table E.3
Inclined Standpipe Measurements
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

Location	Measured Length of Pipe (m)	Feb-24 Level (m)	Apr-24 Level (m)	Jun-24 Level (m)	Aug-24 Level (m)	Oct-24 Level (m)	COMMENTS
ISP7-95	9.37	10.69	8.58	8.54	8.55	8.58	Strong to moderate odour (Feb, Apr), low odour (Jun, Aug, Oct), no snow or water near incline (Feb), no standing water in surrounding area - sloped waste mound/land (Apr), decayed grasses surrounding incline (Feb), new vegetation beginning to pop up at location (Apr), tall grass surrounding (Jun, Aug, Oct), brown/orange silt on tape when removed (Jun, Aug), ant nest inside casing persists (Aug, Oct), mixture of decaying and green vegetation (Oct).
ISP8	11.80	Gone	Gone	Gone	Gone	Gone	Incline decommissioned due to waste mound resloping - unknown replacement timeline.
ISP9	13.53	Gone	Gone	Gone	Gone	Gone	Incline decommissioned due to waste mound resloping - unknown replacement timeline.
ISP11	CNM	37.88 / dry	38 / dry	37.085 / dry	37.527 / dry	37.52 / dry	Dry - moderate to very strong odour, partial blockages along pipe but all passed with ease, thick black sludge on tape when removed, no water near incline or in surrounding area, no snow nearby (Feb), decayed grasses surrounding incline (Feb), vegetation starting to grow through matted grass (Apr), tall grass surrounding and covering pipe (Jun, Aug), thick vegetation surrounding and covering pipe - green and decayed (Oct).
ISP12	34.45	29.59	34.45 / dry	34.375 / dry	34.451 / dry	34.45 / dry	Dry - moderate to strong odour, thick black sludge on tape when removed, no snow nearby (Feb), decayed grasses and rocks/gravel surrounding (Feb), little to 5+ cm standing water in ditch beside incline (Apr), new vegetative growth around location (Apr), tall grass surrounding and covering pipe (Jun, Aug), thick vegetation surrounding and covering pipe - green and decayed (Oct).
ISP13	35.88	35.884 / dry	35.84 / dry	35.884 / dry	24.205 / dry	36.00	Dry - moderate to strong odour, thick black sludge on tape when removed, shallow pooling of water in ditch beside incline (Feb, Apr), no snow nearby, decayed grasses and rocks/gravel surrounding (Feb), new vegetative growth around location (Apr), tall grass surrounding and covering pipe (Jun, Aug), thick vegetation surrounding and covering pipe - green and decayed (Oct), possible level not accurate due to sludge - tape cleaned and remeasured multiple times with same reading (Aug).
ISP14	21.56	20.49	20.39 / dry	20.27 / dry	21.17	20.81	Nearly dry - Light to strong odour. Slight block or break at 12.26 m - caught tape but got past the break (Apr). Some black sludge on end of tape. Saturated ground due to rainfall event, no standing water (Apr). New vegetation coming through matted grasses (Apr). High odour from dead snakes when tape was removed (Jun, Aug). No standing water in area. Tall grass/vegetation surrounding - green and decayed (Oct). Multiple points of moisture throughout tubing, solid indication at 20.805 m (Oct).
ISP15 (NFA)	21.44	15.61	14.96	14.28	12.00	16.62	Low odour. Litter in ditch beside incline. Small volume of standing water in ditch (Jun, Aug), 5+ cm of standing water in ditch south of pipe (Apr), no standing water in ditch (Oct), Significant garbage in surrounding area..Orange leachate on tape (Apr). Brown silty/sludge on tape (Jun, Aug). New vegetation growing in location (Apr). Very tall grasses/vegetation (Jun, Aug). Tall decaying grasses and seasonal weeds throughout ditch area to direct south and Cell 2 waste slope to the direct north (Oct). Incline SP remains troublesome—disconnected pipe below ground, requiring repair/replacement (Oct). Casing lid broken off and not secure (Oct). Level ~1 m lower than normal (Oct). Numerous attempts to pass initial blockage of pipe (Apr). Blockages/damaged couplings but was able to get past (Jun, Aug). Needs to be replaced or repaired to provide accurate readings (Apr, Oct). 04-23-24 – An additional attempt was made. Was able to pass initial broken section of pipe with assistance of large sample rod. However, around 8 m mark there was another blockage that was impassable. It is to note that first section of separated pipe seems to be sinking into the ground. Further measurements may see this section of the pipe not accessible. 04-25-24 – ADS was able to get past blockage by removing the broken section of pipe and using a sample rod to guide line through pipe below ground surface - marked line in casing prior to removing top section of pipe - measure level at this line so should be representative.
ISP16 (NFA)	New 19.23	17.275 / dry	17.25 / dry	19.23 / dry	19.23 / dry	17.29 / dry	Dry - strong odour, little standing water in ditch beside incline (Feb), no snow nearby (Feb), trickling water in ditch south of pipe (Apr), high sediment deposit and lots of garbage in ditch and surrounding area from washout (Apr), new grass growth coming up in ditch (Apr), no standing water in nearby ditch (Jun, Aug, Oct), some litter around pipe (Jun), garbage being dumped on Cell 3 above ISP16 to the north at time of measurement (Aug), mixture of new green and decaying vegetation (Oct), partial blockage at 17.290 m was able to be passed (Oct), leachate level triggered WL tape at this level—attempted 3x and WL meter beeped each time (Oct)
ISP17 (NFA)	27.65	27.645 / dry	27.65	27.65	27.62	27.62	Dry - light to moderate odour, active cell, no standing water or snow nearby, litter beside incline just inside cell fencing with some garbage in surronding area, trickling flow of water in ditch south of pipe, some washout beginning to occur around base of bollard (Apr), significant blockage at 19.630 m, attempted multiple times and returned for an additional attempt (Apr). 04-23-24: An additional attempt was made with multiple blockages to 10m, where further passage was not permissible. 04-25-24: ADS was able to get past blockage, dry but with wet mud on end of line when removed. Initial blockage around 3m, passed successfully; blockage at 7.585m could not be passed, re-attempted next day and got past (Jun), Got past both blockages (Aug), wet silt on tape when removed, No water in ditch (Oct), multiple partial blockages passed, tape was especially hard to progress around the 25m mark.
ISPL-1-91	12.76	12.76	12.76	12.76	12.74	12.7 / dry	Dry - moderate to strong odour (Feb Apr), low to no odour (Jun, Aug, Oct), little to no standing water in ditch, decayed grasses surrounding, trickling flow of 5+ cm of water in ditch east of pipe (Apr), new vegetation and grasses sprouting, very tall grass surrounding.
ISPL-2-91	12.62	12.62	12.39	12.40	12.62	12.55 / dry	Dry - moderate to strong odour (Feb, Apr), low to no odour (Jun, Aug, Oct), little to no standing water in ditch, decayed grasses surrounding, trickling flow of 5+ cm of water in ditch east of pipe (Apr), new vegetation and grasses sprouting, very tall grass surrounding.
ISPL2-1-91	12.79	12.79	12.79	12.79	12.79	12.77 / dry	Dry - strong odour (Feb), moderate odour (Apr), low to no odour (Jun, Aug, Oct), little to no standing water in ditch, decayed grasses surrounding, trickling flow of 5+ cm of water in ditch east of pipe (Apr), new vegetation and grasses sprouting, very tall grass surrounding.
ISPL2-2-91	12.65	12.65	12.65	12.65	12.65	12.65 / dry	Dry - strong odour (Feb), moderate odour (Apr, Oct), low to no odour (Jun, Aug), little to no standing water in ditch, decayed grasses surrounding, trickling flow of 5+ cm of water in ditch east of pipe (Apr), new vegetation and grasses sprouting, very tall grass surrounding.

NOTES: 1) If standpipe has less than 0.3 m of standing water in it, it is considered dry.
2) * - Indicates length is installation length, instead of measured length as current length cannot be measured.

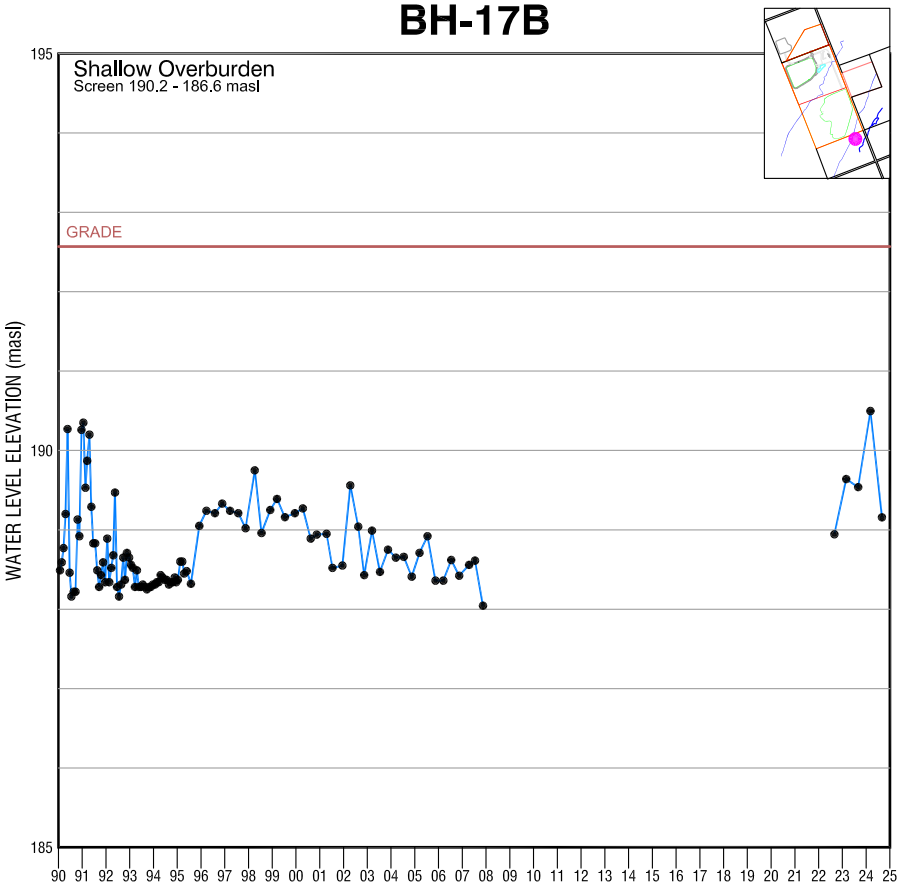
BH-5-VI



MP Elevation 194.05 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-04	190.00	07-Mar-24	191.68
15-Mar-05	191.67	01-Sep-24	189.41
15-Jul-05	189.09		
15-Nov-05	190.12		
15-Mar-06	191.80		
15-Jul-06	190.95		
15-Nov-06	190.59		
15-Apr-07	191.76		
15-Aug-07	189.26		
15-Nov-07	189.10		
15-Apr-08	192.14		
15-Sep-08	190.27		
15-Apr-09	192.32		
02-Mar-10	191.27		
04-Oct-10	188.77		
15-Apr-11	192.36		
15-Oct-11	189.69		
15-Apr-12	190.86		
15-Oct-12	188.68		
12-Mar-13	190.81		
15-Oct-13	188.99		
12-Mar-14	190.23		
30-Sep-14	189.41		
15-Mar-15	191.85		
15-Sep-15	189.12		
16-Apr-16	191.60		
16-Sep-16	188.68		
17-Mar-17	190.79		
05-Oct-17	189.30		
05-Mar-18	191.34		
11-Sep-18	188.77		
08-Mar-19	190.79		
28-Aug-19	189.33		
12-May-20	191.07		
26-Aug-20	188.95		
16-Mar-21	191.03		
26-Sep-21	189.21		
01-Mar-22	191.39		
01-Sep-22	188.96		
01-Mar-23	191.22		
01-Sep-23	190.02		

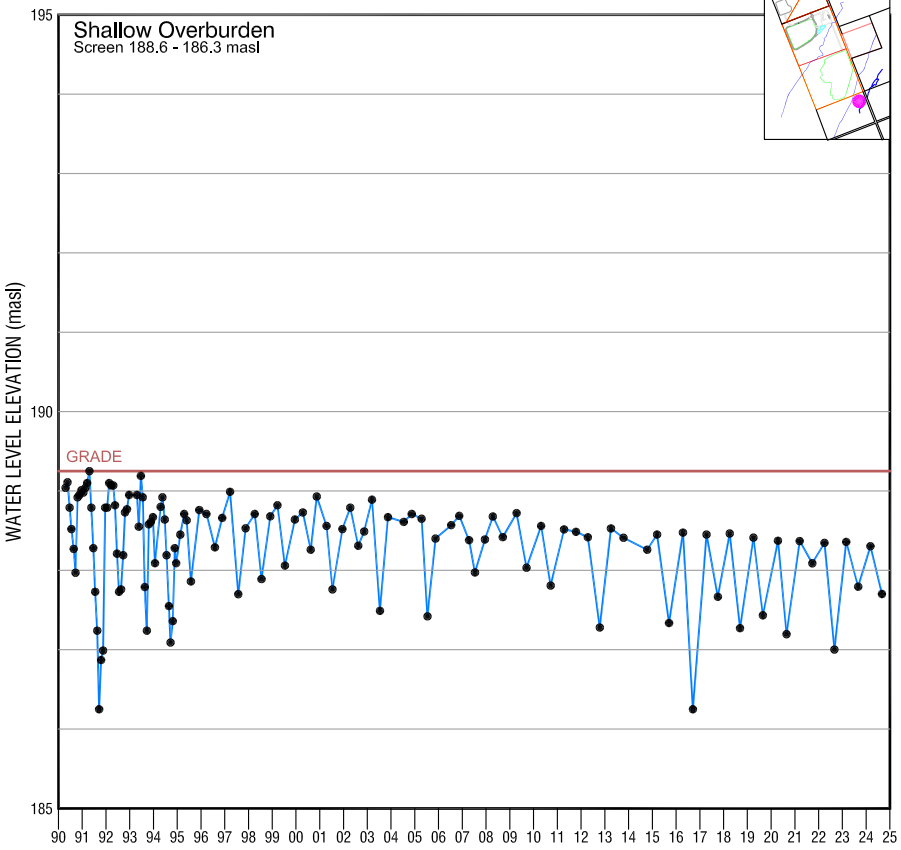
BH-17B

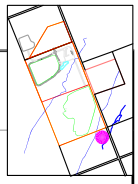


MP Elevation 193.33 masl
Grade 192.6 masl

DATE	ELEVATION	DATE	ELEVATION
23-Mar-92	188.52	25-Mar-96	189.24
22-Apr-92	188.68	03-Aug-96	189.21
19-May-92	189.47	22-Nov-96	189.33
19-Jun-92	188.28	23-Mar-97	189.24
20-Jul-92	188.16	28-Jul-97	189.21
20-Aug-92	188.31	17-Nov-97	189.02
22-Sep-92	188.65	07-Apr-98	189.75
20-Oct-92	188.37	20-Jul-98	188.96
19-Nov-92	188.71	01-Dec-98	189.25
22-Dec-92	188.65	15-Mar-99	189.39
20-Jan-93	188.56	15-Jul-99	189.16
18-Feb-93	188.52	15-Dec-99	189.21
22-Mar-93	188.28	15-Apr-00	189.27
21-Apr-93	188.49	15-Aug-00	188.89
20-May-93	188.28	15-Nov-00	188.94
21-Jun-93	188.28	15-Apr-01	188.95
20-Jul-93	188.31	15-Jul-01	188.52
20-Aug-93	188.28	15-Dec-01	188.55
21-Sep-93	188.25	15-Apr-02	189.56
21-Oct-93	188.28	15-Aug-02	189.04
22-Nov-93	188.28	15-Nov-02	188.43
23-Dec-93	188.31	15-Mar-03	188.99
24-Jan-94	188.31	15-Jul-03	188.47
21-Feb-94	188.34	15-Nov-03	188.75
21-Mar-94	188.34	15-Mar-04	188.65
21-Apr-94	188.43	15-Jul-04	188.66
19-May-94	188.40	15-Nov-04	188.41
23-Jun-94	188.37	15-Mar-05	188.71
21-Jul-94	188.37	15-Jul-05	188.92
26-Aug-94	188.31	15-Nov-05	188.36
20-Sep-94	188.34	15-Mar-06	188.36
25-Oct-94	188.34	15-Jul-06	188.62
24-Nov-94	188.40	15-Nov-06	188.42
16-Dec-94	188.34	15-Apr-07	188.56
12-Jan-95	188.37	15-Jul-07	188.61
17-Feb-95	188.60	15-Nov-07	188.04
20-Mar-95	188.60	01-Sep-22	188.94
18-Apr-95	188.45	01-Mar-23	189.64
26-May-95	188.48	01-Sep-23	189.54
31-Jul-95	188.32	07-Mar-24	190.50
06-Dec-95	189.05	01-Sep-24	189.16

BH-18B

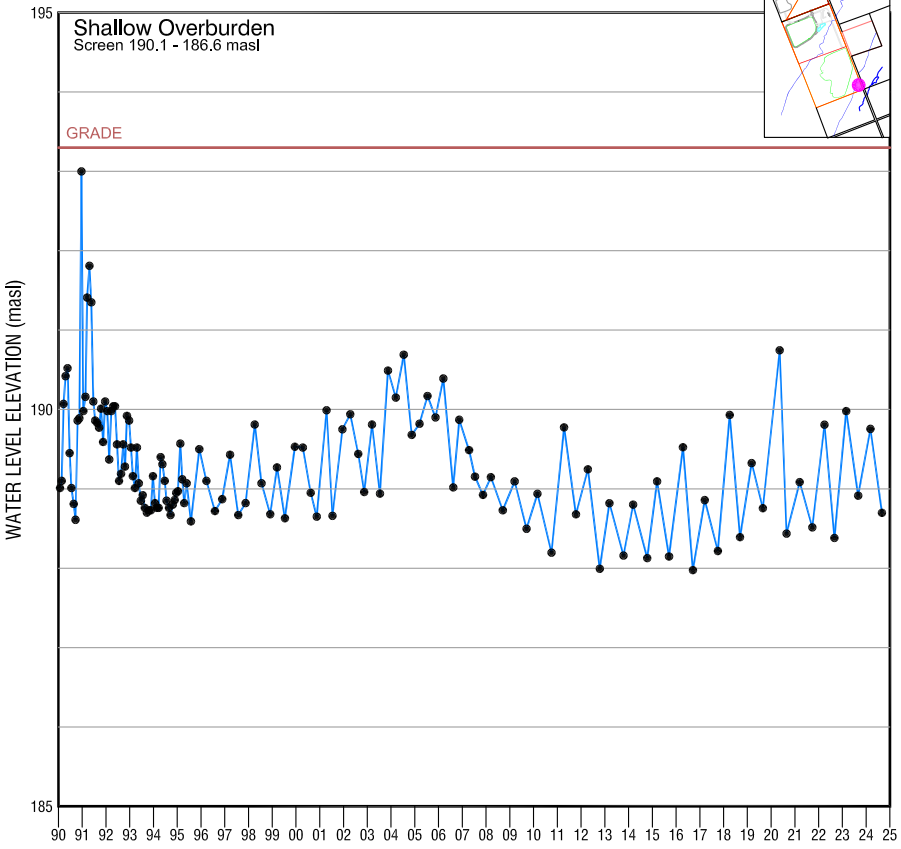


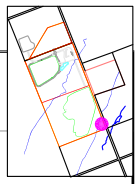


MP Elevation 189.71 masl
Grade 189.3 masl

DATE	ELEVATION	DATE	ELEVATION
24-Jan-94	188.09	15-Apr-05	188.65
21-Apr-94	188.80	15-Jul-05	187.42
19-May-94	188.92	15-Nov-05	188.40
23-Jun-94	188.64	15-Jul-06	188.57
21-Jul-94	188.19	15-Nov-06	188.69
26-Aug-94	187.55	15-Apr-07	188.38
20-Sep-94	187.09	15-Jul-07	187.97
25-Oct-94	187.36	15-Dec-07	188.39
24-Nov-94	188.28	15-Apr-08	188.68
16-Dec-94	188.09	15-Sep-08	188.42
17-Feb-95	188.45	15-Apr-09	188.72
18-Apr-95	188.71	15-Sep-09	188.03
26-May-95	188.63	27-Apr-10	188.56
31-Jul-95	187.86	21-Sep-10	187.81
06-Dec-95	188.76	15-Apr-11	188.52
25-Mar-96	188.71	15-Oct-11	188.49
03-Aug-96	188.29	15-Apr-12	188.42
22-Nov-96	188.66	15-Oct-12	187.28
23-Mar-97	188.99	05-Apr-13	188.53
28-Jul-97	187.70	15-Oct-13	188.41
17-Nov-97	188.53	15-Oct-14	188.26
07-Apr-98	188.71	15-Mar-15	188.45
20-Jul-98	187.89	15-Sep-15	187.34
01-Dec-98	188.68	16-Apr-16	188.48
22-Mar-99	188.82	16-Sep-16	DRY
15-Jul-99	188.06	13-Apr-17	188.45
15-Dec-99	188.64	05-Oct-17	187.67
15-Apr-00	188.73	05-Apr-18	188.46
15-Aug-00	188.26	11-Sep-18	187.27
15-Nov-00	188.93	05-Apr-19	188.41
15-Apr-01	188.56	28-Aug-19	187.43
15-Jul-01	187.76	16-Apr-20	188.37
15-Dec-01	188.52	26-Aug-20	187.20
15-Apr-02	188.79	16-Mar-21	188.37
15-Aug-02	188.31	26-Sep-21	188.09
15-Nov-02	188.49	01-Apr-22	188.35
15-Mar-03	188.89	01-Sep-22	187.00
15-Jul-03	187.49	01-Mar-23	188.36
15-Nov-03	188.67	01-Sep-23	187.79
15-Jul-04	188.61	07-Mar-24	188.30
15-Nov-04	188.71	01-Sep-24	187.70

BH-19B

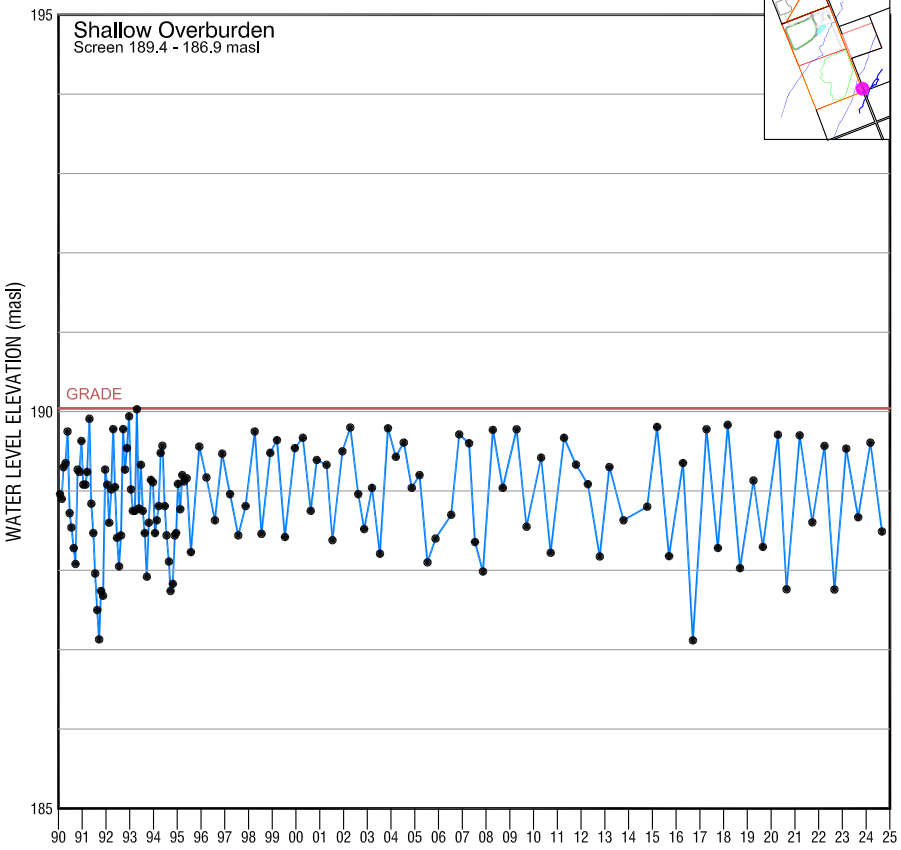


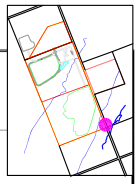


MP Elevation 193.84 masl
Grade 193.3 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	188.76	15-Nov-05	189.90
20-Sep-94	188.67	15-Mar-06	190.39
25-Oct-94	188.80	15-Aug-06	189.02
24-Nov-94	188.86	15-Nov-06	189.87
16-Dec-94	188.95	15-Apr-07	189.49
12-Jan-95	188.97	15-Jul-07	189.15
17-Feb-95	189.57	15-Nov-07	188.92
20-Mar-95	189.12	15-Mar-08	189.15
18-Apr-95	188.82	15-Sep-08	188.73
26-May-95	189.07	16-Mar-09	189.09
31-Jul-95	188.59	15-Sep-09	188.50
06-Dec-95	189.50	02-Mar-10	188.94
25-Mar-96	189.10	04-Oct-10	188.20
03-Aug-96	188.72	15-Apr-11	189.77
22-Nov-96	188.87	15-Oct-11	188.68
23-Mar-97	189.43	15-Apr-12	189.25
28-Jul-97	188.67	15-Oct-12	187.99
17-Nov-97	188.82	12-Mar-13	188.82
07-Apr-98	189.81	15-Oct-13	188.16
20-Jul-98	189.07	12-Mar-14	188.80
01-Dec-98	188.68	15-Oct-14	188.13
15-Mar-99	189.27	15-Mar-15	189.09
15-Jul-99	188.63	15-Sep-15	188.15
15-Dec-99	189.53	16-Apr-16	189.52
15-Apr-00	189.52	16-Sep-16	187.98
15-Aug-00	188.95	17-Mar-17	188.86
15-Nov-00	188.65	05-Oct-17	188.22
15-Apr-01	189.99	05-Apr-18	189.93
15-Jul-01	188.66	11-Sep-18	188.39
15-Dec-01	189.75	08-Mar-19	189.32
15-Apr-02	189.94	28-Aug-19	188.76
15-Aug-02	189.44	12-May-20	190.75
15-Nov-02	188.96	26-Aug-20	188.44
15-Mar-03	189.81	16-Mar-21	189.09
15-Jul-03	188.94	26-Sep-21	188.51
15-Nov-03	190.49	01-Apr-22	189.81
15-Mar-04	190.15	01-Sep-22	188.38
15-Jul-04	190.69	01-Mar-23	189.98
15-Nov-04	189.68	01-Sep-23	188.91
15-Mar-05	189.82	07-Mar-24	189.76
15-Jul-05	190.17	01-Sep-24	188.70

BH-20B

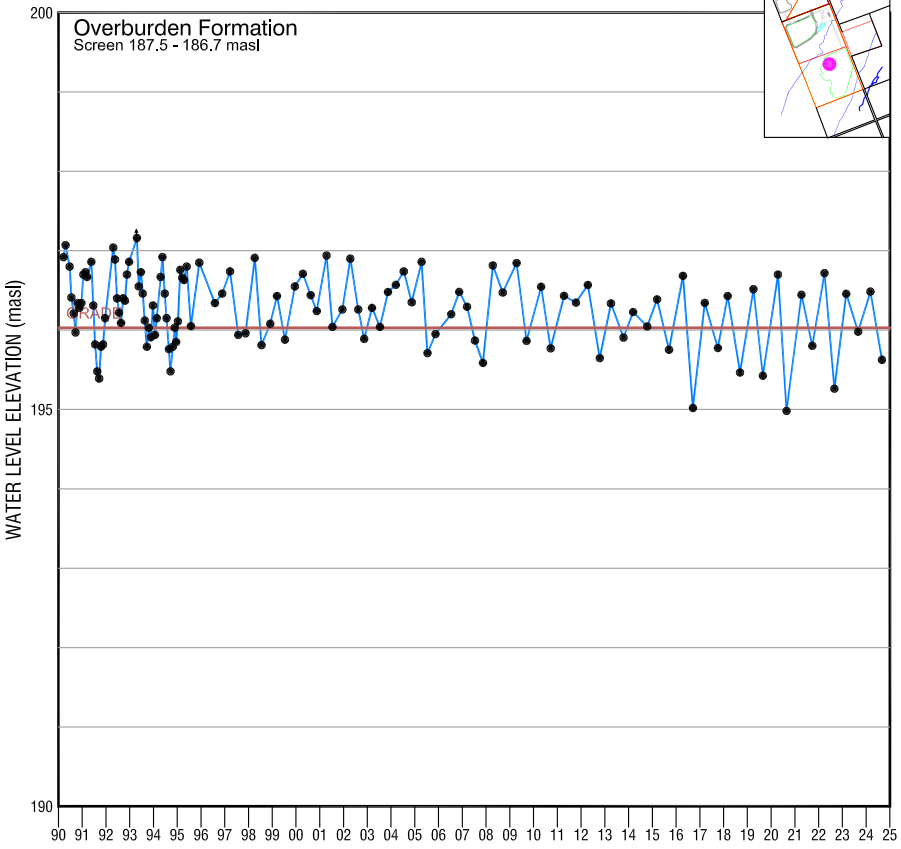


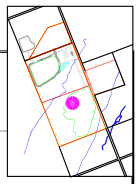


MP Elevation 190.79 masl
Grade 190.0 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jun-94	188.81	15-Mar-05	189.20
21-Jul-94	188.44	15-Jul-05	188.10
26-Aug-94	188.11	15-Nov-05	188.40
20-Sep-94	187.74	15-Jul-06	188.70
25-Oct-94	187.83	15-Nov-06	189.71
24-Nov-94	188.44	15-Apr-07	189.60
16-Dec-94	188.47	15-Jul-07	188.36
12-Jan-95	189.09	15-Nov-07	187.99
17-Feb-95	188.77	15-Apr-08	189.77
20-Mar-95	189.20	15-Sep-08	189.04
18-Apr-95	189.12	15-Apr-09	189.78
26-May-95	189.16	15-Sep-09	188.55
31-Jul-95	188.23	27-Apr-10	189.42
06-Dec-95	189.56	21-Sep-10	188.22
25-Mar-96	189.17	15-Apr-11	189.67
03-Aug-96	188.63	15-Oct-11	189.33
22-Nov-96	189.47	15-Apr-12	189.09
23-Mar-97	188.96	15-Oct-12	188.17
28-Jul-97	188.44	12-Mar-13	189.30
17-Nov-97	188.81	15-Oct-13	188.63
07-Apr-98	189.75	15-Oct-14	188.80
20-Jul-98	188.46	15-Mar-15	189.81
01-Dec-98	189.48	15-Sep-15	188.18
15-Mar-99	189.64	16-Apr-16	189.35
15-Jul-99	188.42	16-Sep-16	187.12
15-Dec-99	189.54	13-Apr-17	189.78
15-Apr-00	189.67	05-Oct-17	188.28
15-Aug-00	188.75	05-Mar-18	189.83
15-Nov-00	189.39	11-Sep-18	188.03
15-Apr-01	189.33	05-Apr-19	189.13
15-Jul-01	188.38	28-Aug-19	188.30
15-Dec-01	189.50	16-Apr-20	189.71
15-Apr-02	189.80	26-Aug-20	187.76
15-Aug-02	188.96	16-Mar-21	189.70
15-Nov-02	188.52	26-Sep-21	188.60
15-Mar-03	189.04	01-Apr-22	189.57
15-Jul-03	188.21	01-Sep-22	187.76
15-Nov-03	189.79	01-Mar-23	189.53
15-Mar-04	189.43	01-Sep-23	188.67
15-Jul-04	189.61	07-Mar-24	189.61
15-Nov-04	189.04	01-Sep-24	188.49

BH-33-II

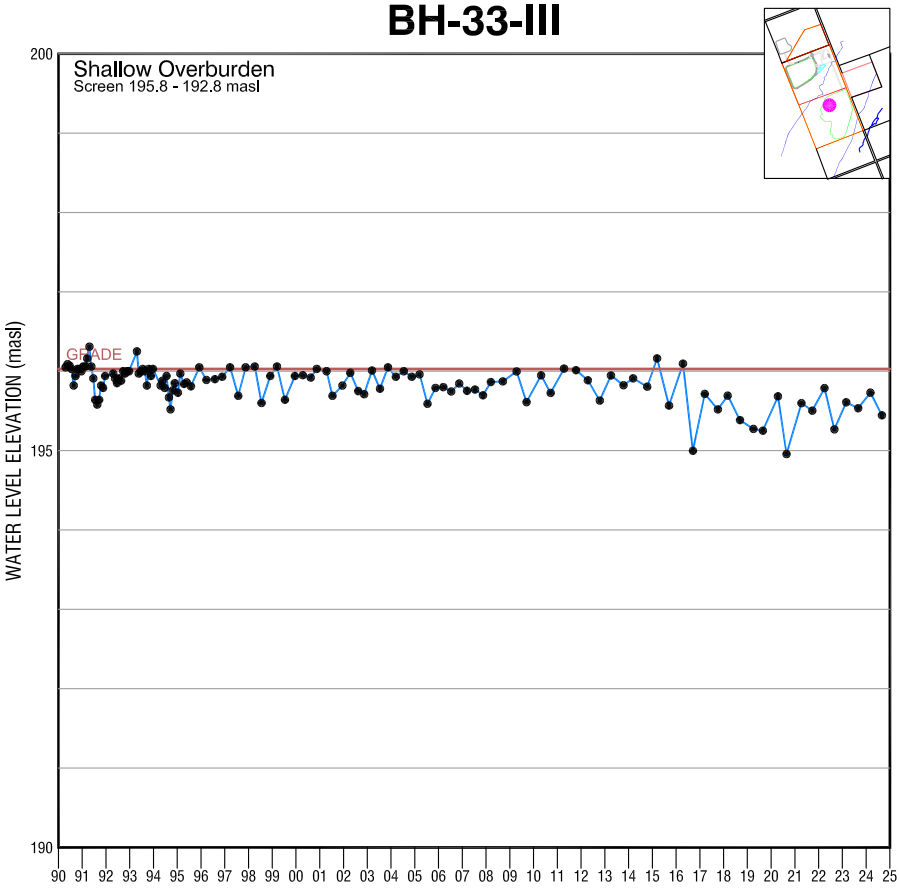




MP Elevation 197.16 masl
Grade 196.0 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jun-94	196.46	15-Jul-05	195.71
21-Jul-94	196.15	15-Nov-05	195.95
26-Aug-94	195.76	15-Jul-06	196.20
20-Sep-94	195.48	15-Nov-06	196.48
25-Oct-94	195.79	15-Mar-07	196.29
24-Nov-94	196.03	15-Jul-07	195.87
16-Dec-94	195.85	15-Nov-07	195.59
12-Jan-95	196.11	15-Apr-08	196.82
17-Feb-95	196.76	15-Sep-08	196.47
20-Mar-95	196.66	15-Apr-09	196.85
15-Apr-95	196.63	15-Sep-09	195.86
26-May-95	196.80	27-Apr-10	196.55
31-Jul-95	196.05	21-Sep-10	195.77
06-Dec-95	196.85	15-Apr-11	196.43
03-Aug-96	196.34	15-Oct-11	196.35
22-Nov-96	196.46	15-Apr-12	196.57
23-Mar-97	196.74	15-Oct-12	195.65
28-Jul-97	195.94	05-Apr-13	196.34
17-Nov-97	195.96	15-Oct-13	195.91
07-Apr-98	196.91	12-Mar-14	196.23
20-Jul-98	195.81	15-Oct-14	196.05
01-Dec-98	196.08	15-Mar-15	196.39
15-Mar-99	196.43	15-Sep-15	195.75
15-Jul-99	195.88	16-Apr-16	196.68
15-Dec-99	196.55	16-Sep-16	195.02
15-Apr-00	196.71	17-Mar-17	196.34
15-Aug-00	196.44	05-Oct-17	195.77
15-Nov-00	196.24	05-Mar-18	196.43
15-Apr-01	196.94	11-Sep-18	195.47
15-Jul-01	196.04	05-Apr-19	196.51
15-Dec-01	196.26	28-Aug-19	195.43
15-Apr-02	196.90	16-Apr-20	196.70
15-Aug-02	196.26	26-Aug-20	194.98
15-Nov-02	195.89	12-Apr-21	196.45
15-Mar-03	196.28	26-Sep-21	195.80
15-Jul-03	196.04	01-Apr-22	196.72
15-Nov-03	196.48	01-Sep-22	195.26
15-Mar-04	196.57	01-Mar-23	196.46
15-Jul-04	196.74	01-Sep-23	195.98
15-Nov-04	196.35	07-Mar-24	196.49
15-Apr-05	196.86	01-Sep-24	195.63

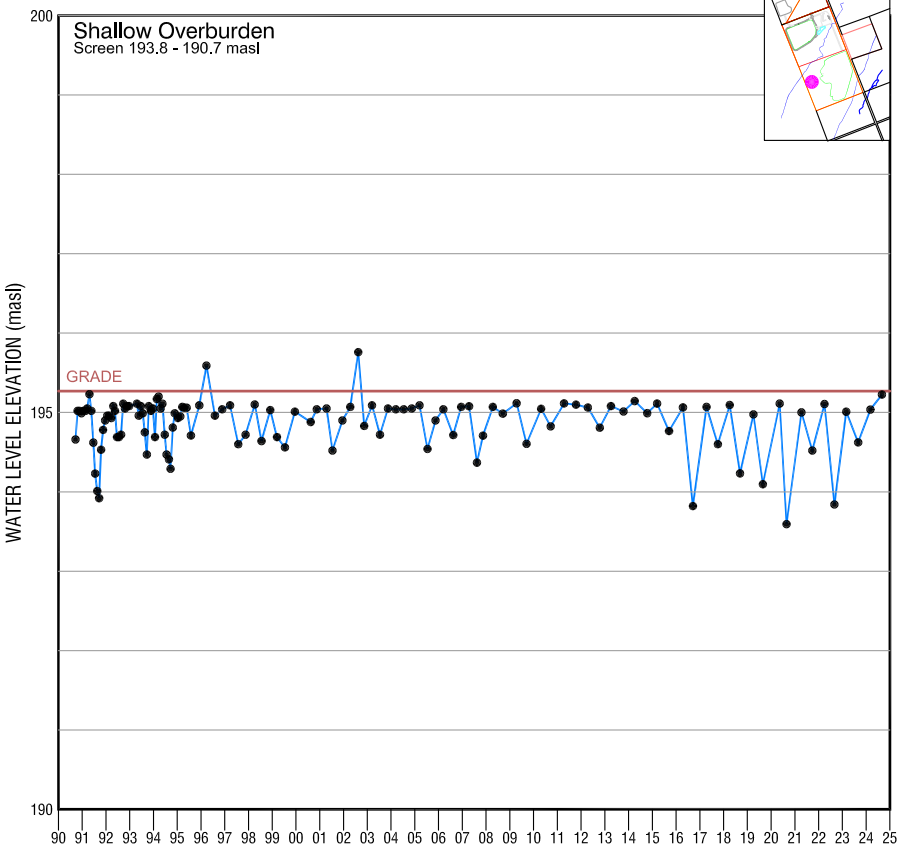
BH-33-III

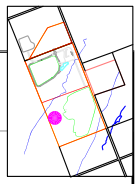


MP Elevation 197.10 masl
Grade 196.0 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jun-94	195.79	15-Nov-05	195.79
21-Jul-94	195.94	15-Mar-06	195.80
26-Aug-94	195.67	15-Jul-06	195.74
20-Sep-94	195.52	15-Nov-06	195.85
25-Oct-94	195.76	15-Mar-07	195.75
24-Nov-94	195.85	15-Jul-07	195.77
12-Jan-95	195.73	15-Nov-07	195.70
17-Feb-95	195.97	15-Mar-08	195.86
15-Apr-95	195.84	15-Sep-08	195.87
26-May-95	195.86	15-Apr-09	196.00
31-Jul-95	195.81	15-Sep-09	195.61
06-Dec-95	196.05	27-Apr-10	195.95
25-Mar-96	195.89	21-Sep-10	195.73
03-Aug-96	195.90	15-Apr-11	196.03
22-Nov-96	195.93	15-Oct-11	196.01
23-Mar-97	196.05	15-Apr-12	195.89
28-Jul-97	195.69	15-Oct-12	195.63
17-Nov-97	196.05	05-Apr-13	195.95
07-Apr-98	196.06	15-Oct-13	195.82
20-Jul-98	195.60	12-Mar-14	195.91
01-Dec-98	195.94	15-Oct-14	195.80
15-Mar-99	196.06	15-Mar-15	196.16
15-Jul-99	195.64	15-Sep-15	195.57
15-Dec-99	195.94	16-Apr-16	196.10
15-Apr-00	195.95	16-Sep-16	195.00
15-Aug-00	195.92	17-Mar-17	195.71
15-Nov-00	196.03	05-Oct-17	195.52
15-Apr-01	196.00	05-Mar-18	195.69
15-Jul-01	195.69	11-Sep-18	195.38
15-Dec-01	195.82	05-Apr-19	195.27
15-Apr-02	195.98	28-Aug-19	195.25
15-Aug-02	195.75	16-Apr-20	195.68
15-Nov-02	195.71	26-Aug-20	194.96
15-Mar-03	196.01	12-Apr-21	195.60
15-Jul-03	195.78	26-Sep-21	195.50
15-Nov-03	196.05	01-Apr-22	195.79
15-Mar-04	195.93	01-Sep-22	195.27
15-Jul-04	196.00	01-Mar-23	195.61
15-Nov-04	195.93	01-Sep-23	195.53
15-Mar-05	195.96	07-Mar-24	195.73
15-Jul-05	195.59	01-Sep-24	195.45

BH-40-II

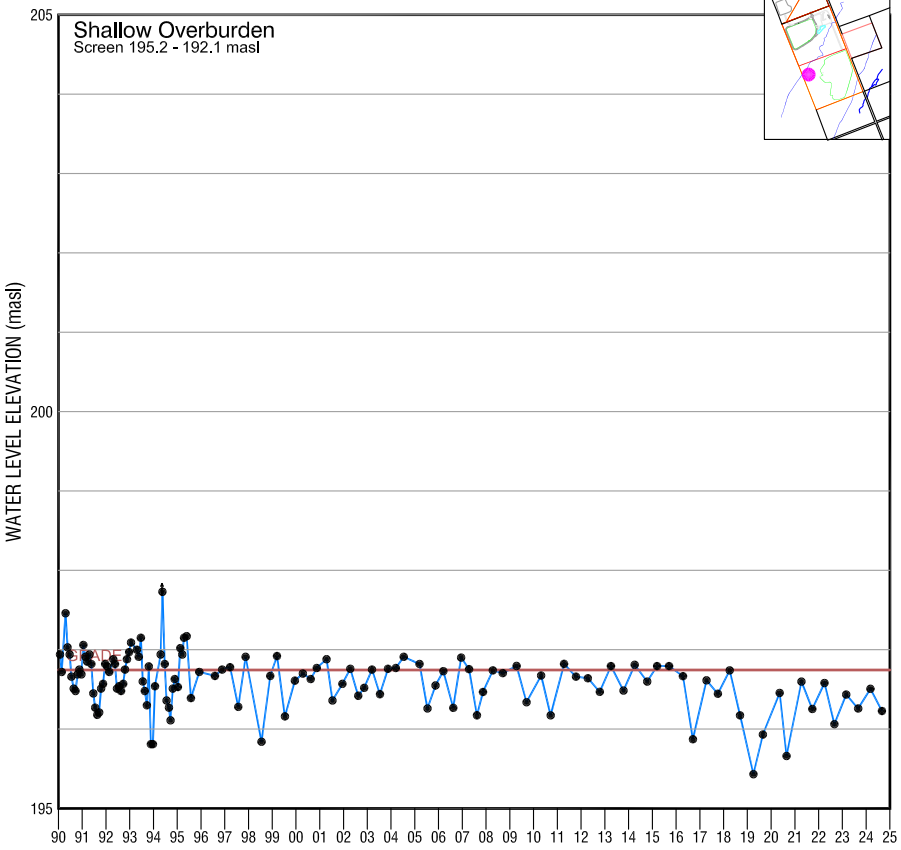


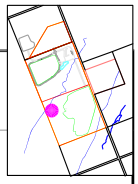


MP Elevation 196.24 masl
Grade 195.3 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jun-94	194.72	15-Nov-05	194.90
21-Jul-94	194.47	15-Mar-06	195.04
26-Aug-94	194.41	15-Aug-06	194.71
20-Sep-94	194.29	15-Dec-06	195.07
25-Oct-94	194.81	15-Apr-07	195.08
24-Nov-94	194.99	15-Aug-07	194.37
12-Jan-95	194.93	15-Nov-07	194.71
17-Feb-95	194.95	15-Apr-08	195.07
20-Mar-95	195.07	15-Sep-08	194.99
15-Apr-95	195.06	15-Apr-09	195.12
26-May-95	195.06	15-Sep-09	194.60
31-Jul-95	194.71	27-Apr-10	195.05
06-Dec-95	195.09	21-Sep-10	194.82
25-Mar-96	195.59	15-Apr-11	195.11
03-Aug-96	194.96	15-Oct-11	195.10
22-Nov-96	195.04	15-Apr-12	195.06
23-Mar-97	195.09	15-Oct-12	194.81
28-Jul-97	194.60	05-Apr-13	195.08
17-Nov-97	194.72	15-Oct-13	195.01
07-Apr-98	195.10	05-Apr-14	195.14
20-Jul-98	194.64	15-Oct-14	194.99
01-Dec-98	195.03	15-Mar-15	195.11
15-Mar-99	194.69	15-Sep-15	194.77
15-Jul-99	194.56	16-Apr-16	195.06
15-Dec-99	195.01	16-Sep-16	193.82
15-Aug-00	194.88	13-Apr-17	195.07
15-Nov-00	195.04	05-Oct-17	194.60
15-Apr-01	195.05	05-Apr-18	195.09
15-Jul-01	194.52	11-Sep-18	194.23
15-Dec-01	194.90	05-Apr-19	194.98
15-Apr-02	195.07	28-Aug-19	194.10
15-Aug-02	195.76	12-May-20	195.11
15-Nov-02	194.83	26-Aug-20	193.59
15-Mar-03	195.09	12-Apr-21	195.00
15-Jul-03	194.72	26-Sep-21	194.52
15-Nov-03	195.05	01-Apr-22	195.11
15-Mar-04	195.04	01-Sep-22	193.84
15-Jul-04	195.04	01-Mar-23	195.01
15-Nov-04	195.05	01-Sep-23	194.62
15-Mar-05	195.09	07-Mar-24	195.04
15-Jul-05	194.54	01-Sep-24	195.23

BH-44-III

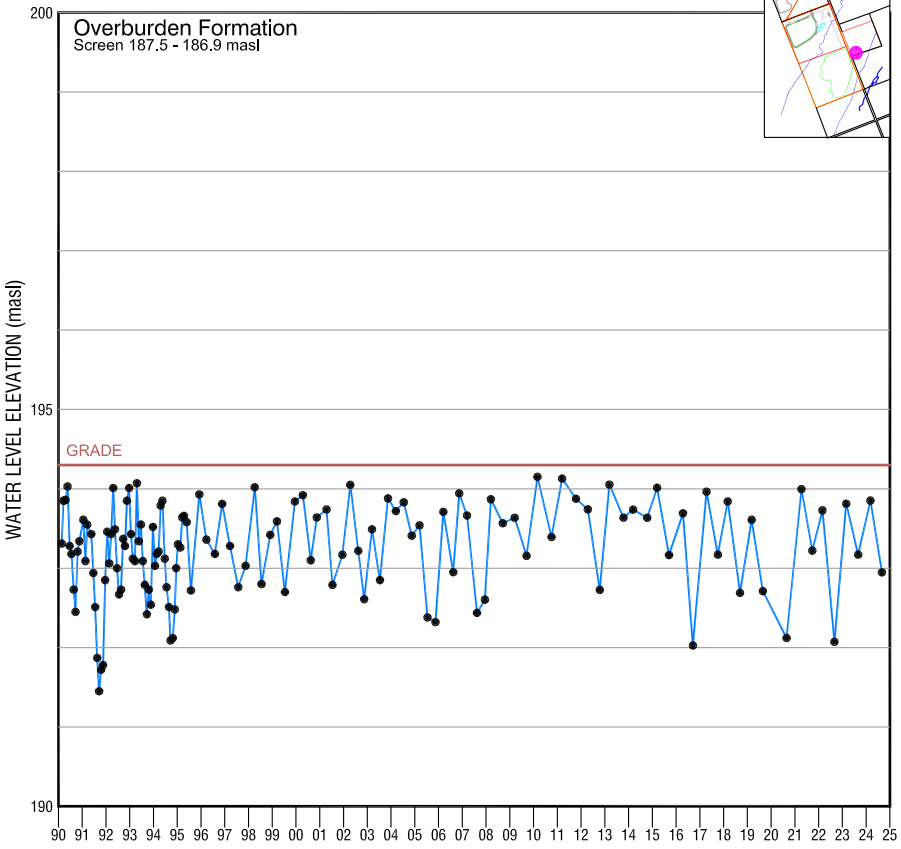


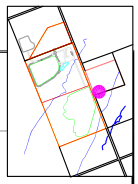


MP Elevation 197.73 masl
Grade 196.7 masl

DATE	ELEVATION	DATE	ELEVATION
21-Apr-94	196.94	15-Nov-05	196.55
19-May-94	FLW	15-Mar-06	196.73
23-Jun-94	196.82	15-Aug-06	196.27
21-Jul-94	196.36	15-Dec-06	196.90
26-Aug-94	196.27	15-Apr-07	196.76
20-Sep-94	196.11	15-Aug-07	196.17
25-Oct-94	196.51	15-Nov-07	196.47
24-Nov-94	196.63	15-Apr-08	196.74
12-Jan-95	196.53	15-Sep-08	196.71
17-Feb-95	197.02	15-Apr-09	196.79
20-Mar-95	196.94	15-Sep-09	196.34
15-Apr-95	197.15	27-Apr-10	196.68
26-May-95	197.17	21-Sep-10	196.17
31-Jul-95	196.39	15-Apr-11	196.82
06-Dec-95	196.72	15-Oct-11	196.66
03-Aug-96	196.67	15-Apr-12	196.64
22-Nov-96	196.75	15-Oct-12	196.47
23-Mar-97	196.78	05-Apr-13	196.79
28-Jul-97	196.28	15-Oct-13	196.49
17-Nov-97	196.91	05-Apr-14	196.81
20-Jul-98	195.84	15-Oct-14	196.60
01-Dec-98	196.67	15-Mar-15	196.79
15-Mar-99	196.92	15-Sep-15	196.79
15-Jul-99	196.16	16-Apr-16	196.67
15-Dec-99	196.61	16-Sep-16	195.87
15-Apr-00	196.70	13-Apr-17	196.61
15-Aug-00	196.63	05-Oct-17	196.45
15-Nov-00	196.77	05-Apr-18	196.74
15-Apr-01	196.88	11-Sep-18	196.17
15-Jul-01	196.36	05-Apr-19	195.43
15-Dec-01	196.57	28-Aug-19	195.93
15-Apr-02	196.76	12-May-20	196.46
15-Aug-02	196.42	26-Aug-20	195.66
15-Nov-02	196.52	12-Apr-21	196.60
15-Mar-03	196.75	26-Sep-21	196.25
15-Jul-03	196.44	01-Apr-22	196.58
15-Nov-03	196.76	01-Sep-22	196.06
15-Mar-04	196.77	01-Mar-23	196.43
15-Jul-04	196.91	01-Sep-23	196.26
15-Mar-05	196.82	07-Mar-24	196.51
15-Jul-05	196.26	01-Sep-24	196.23

BH-46-II

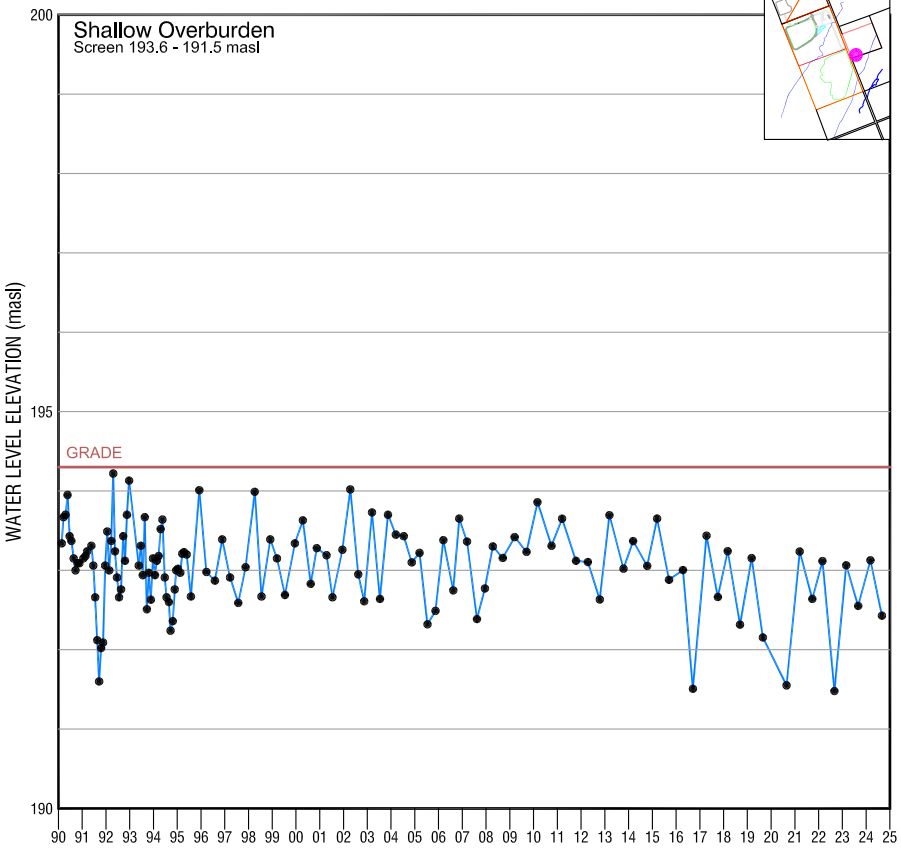


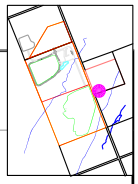


MP Elevation 194.86 masl
Grade 194.3 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	192.76	15-Jul-05	192.38
26-Aug-94	192.51	15-Nov-05	192.32
20-Sep-94	192.09	15-Mar-06	193.71
25-Oct-94	192.12	15-Aug-06	192.95
24-Nov-94	192.48	15-Nov-06	193.94
16-Dec-94	193.00	15-Mar-07	193.66
12-Jan-95	193.30	15-Aug-07	192.44
17-Feb-95	193.26	15-Dec-07	192.60
20-Mar-95	193.64	15-Mar-08	193.87
15-Apr-95	193.66	15-Sep-08	193.57
26-May-95	193.58	16-Mar-09	193.64
31-Jul-95	192.72	15-Sep-09	193.16
06-Dec-95	193.93	02-Mar-10	194.15
25-Mar-96	193.36	04-Oct-10	193.39
03-Aug-96	193.18	15-Mar-11	194.13
22-Nov-96	193.81	15-Oct-11	193.88
23-Mar-97	193.28	15-Apr-12	193.74
28-Jul-97	192.76	15-Oct-12	192.73
17-Nov-97	193.03	12-Mar-13	194.05
07-Apr-98	194.02	15-Oct-13	193.64
20-Jul-98	192.80	12-Mar-14	193.74
01-Dec-98	193.42	15-Oct-14	193.63
15-Mar-99	193.59	15-Mar-15	194.01
15-Jul-99	192.70	15-Sep-15	193.17
15-Dec-99	193.84	16-Apr-16	193.69
15-Apr-00	193.92	16-Sep-16	192.03
15-Aug-00	193.10	13-Apr-17	193.96
15-Nov-00	193.64	05-Oct-17	193.17
15-Apr-01	193.74	05-Mar-18	193.84
15-Jul-01	192.79	11-Sep-18	192.69
15-Dec-01	193.17	08-Mar-19	193.61
15-Apr-02	194.05	28-Aug-19	192.71
15-Aug-02	193.22	26-Aug-20	192.12
15-Nov-02	192.61	12-Apr-21	194.00
15-Mar-03	193.49	26-Sep-21	193.22
15-Jul-03	192.85	01-Mar-22	193.73
15-Nov-03	193.88	01-Sep-22	192.07
15-Mar-04	193.72	01-Mar-23	193.81
15-Jul-04	193.83	01-Sep-23	193.17
15-Nov-04	193.41	07-Mar-24	193.85
15-Mar-05	193.54	01-Sep-24	192.95

BH-46-III





MP Elevation 194.89 masl
Grade 194.3 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	192.66	15-Jul-05	192.32
26-Aug-94	192.60	15-Nov-05	192.49
20-Sep-94	192.24	15-Mar-06	193.38
25-Oct-94	192.36	15-Aug-06	192.75
24-Nov-94	192.76	15-Nov-06	193.65
16-Dec-94	193.00	15-Mar-07	193.36
12-Jan-95	193.02	15-Aug-07	192.39
17-Feb-95	192.97	15-Dec-07	192.77
20-Mar-95	193.21	15-Apr-08	193.30
15-Apr-95	193.23	15-Sep-08	193.16
26-May-95	193.20	16-Mar-09	193.42
31-Jul-95	192.67	15-Sep-09	193.23
06-Dec-95	194.01	02-Mar-10	193.86
25-Mar-96	192.98	04-Oct-10	193.31
03-Aug-96	192.87	15-Mar-11	193.65
22-Nov-96	193.39	15-Oct-11	193.12
23-Mar-97	192.91	15-Apr-12	193.10
28-Jul-97	192.59	15-Oct-12	192.63
17-Nov-97	193.04	12-Mar-13	193.70
07-Apr-98	193.99	15-Oct-13	193.02
20-Jul-98	192.67	12-Mar-14	193.37
01-Dec-98	193.39	15-Oct-14	193.06
15-Mar-99	193.15	15-Mar-15	193.65
15-Jul-99	192.69	15-Sep-15	192.88
15-Dec-99	193.34	16-Apr-16	193.00
15-Apr-00	193.63	16-Sep-16	191.51
15-Aug-00	192.83	13-Apr-17	193.44
15-Nov-00	193.28	05-Oct-17	192.66
15-Apr-01	193.19	05-Mar-18	193.24
15-Jul-01	192.66	11-Sep-18	192.32
15-Dec-01	193.26	08-Mar-19	193.15
15-Apr-02	194.02	28-Aug-19	192.15
15-Aug-02	192.95	26-Aug-20	191.55
15-Nov-02	192.61	16-Mar-21	193.24
15-Mar-03	193.73	26-Sep-21	192.64
15-Jul-03	192.64	01-Mar-22	193.12
15-Nov-03	193.70	01-Sep-22	191.48
15-Mar-04	193.45	01-Mar-23	193.06
15-Jul-04	193.43	01-Sep-23	192.55
15-Nov-04	193.10	07-Mar-24	193.13
15-Mar-05	193.22	01-Sep-24	192.43

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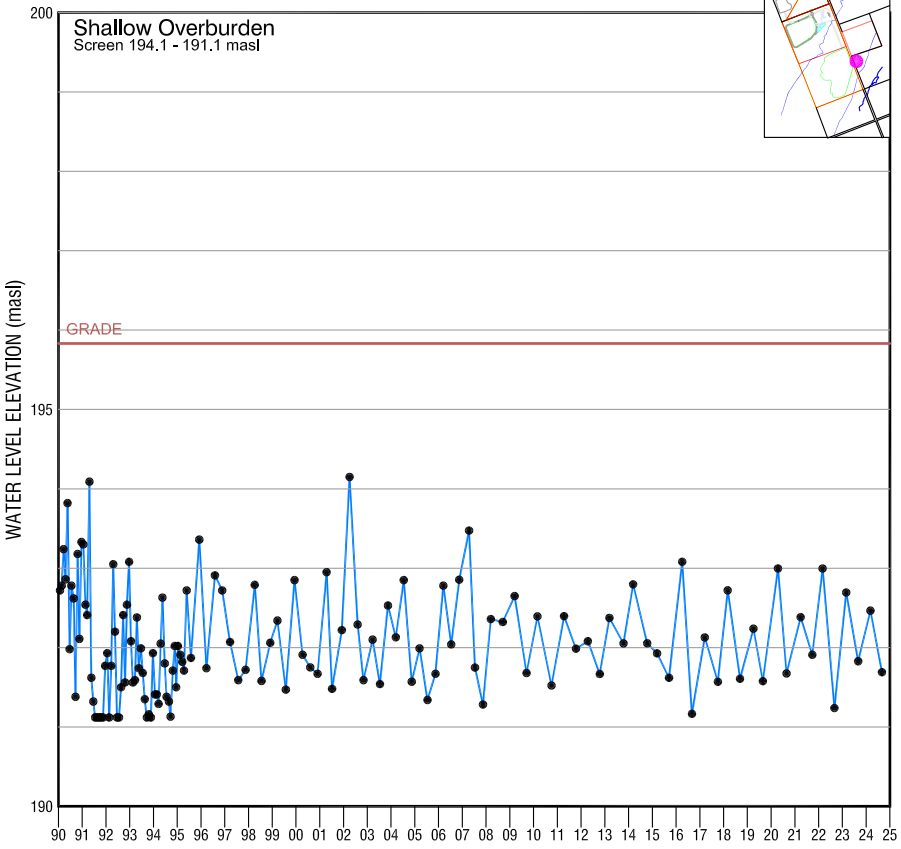

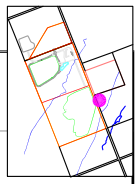

MP Elevation 196.59 masl
Grade 195.8 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	191.32	15-Nov-05	191.67
20-Sep-94	191.13	15-Mar-06	192.78
25-Oct-94	191.71	15-Jul-06	192.04
24-Nov-94	192.02	15-Nov-06	192.85
16-Dec-94	191.50	15-Apr-07	193.47
12-Jan-95	192.02	15-Jul-07	191.75
17-Feb-95	191.91	15-Nov-07	191.28
20-Mar-95	191.82	15-Mar-08	192.36
15-Apr-95	191.71	15-Sep-08	192.32
26-May-95	192.72	16-Mar-09	192.65
31-Jul-95	191.87	15-Sep-09	191.68
06-Dec-95	193.36	02-Mar-10	192.39
25-Mar-96	191.74	04-Oct-10	191.52
03-Aug-96	192.91	15-Apr-11	192.40
22-Nov-96	192.72	15-Oct-11	191.99
23-Mar-97	192.07	15-Apr-12	192.08
28-Jul-97	191.59	15-Oct-12	191.67
17-Nov-97	191.72	12-Mar-13	192.37
07-Apr-98	192.79	15-Oct-13	192.05
20-Jul-98	191.58	12-Mar-14	192.80
01-Dec-98	192.06	15-Oct-14	192.05
22-Mar-99	192.34	15-Mar-15	191.93
29-Jul-99	191.47	15-Sep-15	191.62
09-Dec-99	192.85	04-Apr-16	193.08
11-Apr-00	191.91	01-Sep-16	191.16
08-Aug-00	191.75	17-Mar-17	192.13
28-Nov-00	191.67	05-Oct-17	191.57
16-Apr-01	192.95	05-Mar-18	192.72
09-Jul-01	191.48	11-Sep-18	191.61
06-Dec-01	192.22	05-Apr-19	192.24
04-Apr-02	194.15	28-Aug-19	191.58
06-Aug-02	192.29	16-Apr-20	193.00
04-Nov-02	191.59	26-Aug-20	191.67
24-Mar-03	192.10	31-Mar-21	192.38
15-Jul-03	191.54	26-Sep-21	191.91
15-Nov-03	192.53	03-Mar-22	193.00
15-Mar-04	192.13	01-Sep-22	191.24
15-Jul-04	192.85	01-Mar-23	192.69
15-Nov-04	191.57	01-Sep-23	191.83
15-Mar-05	191.99	07-Mar-24	192.46
15-Jul-05	191.34	01-Sep-24	191.69

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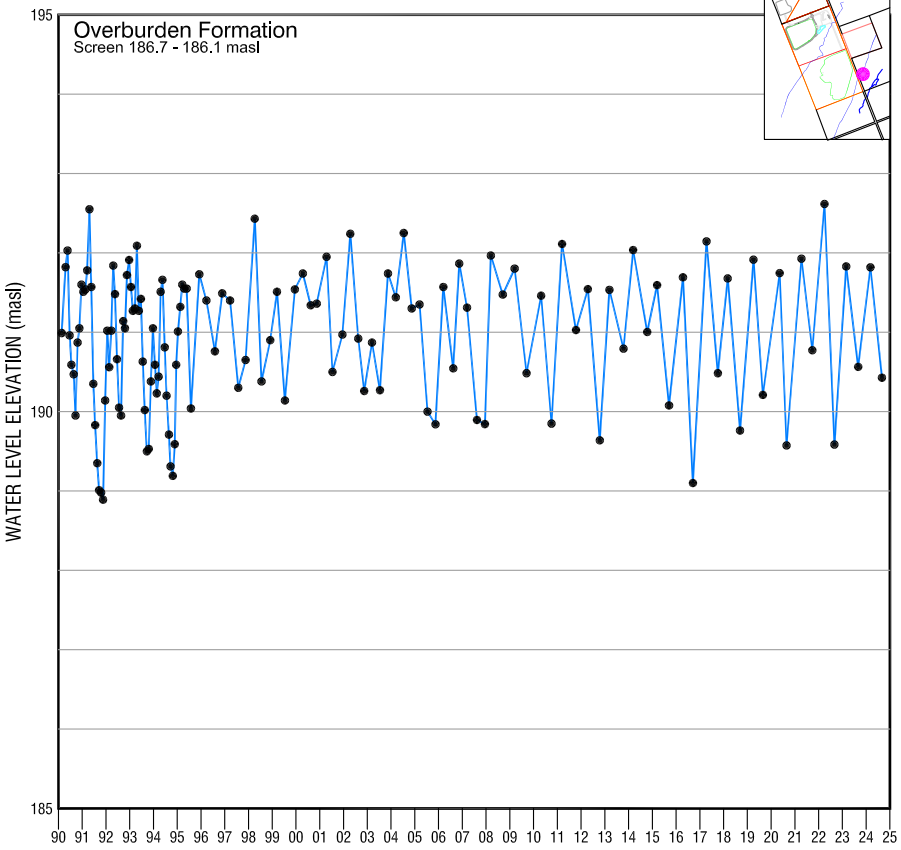
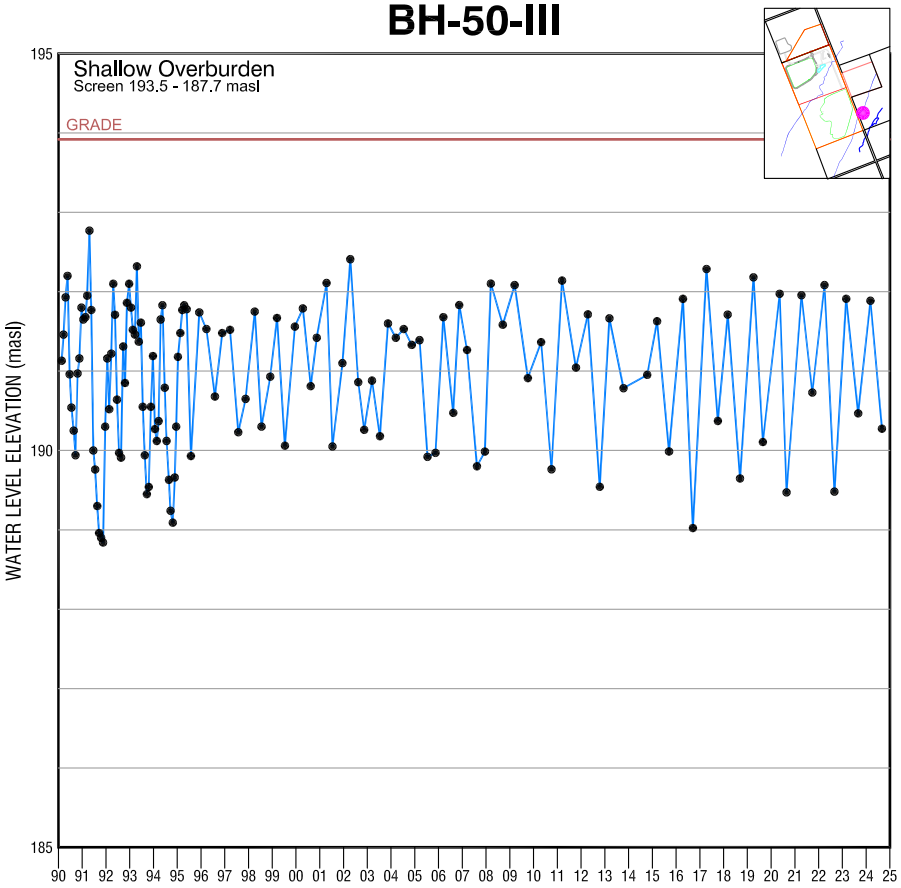


MP Elevation 194.74 masl
Grade 194.1 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	189.71	15-Nov-05	189.84
20-Sep-94	189.31	15-Mar-06	191.57
25-Oct-94	189.19	15-Aug-06	190.54
24-Nov-94	189.59	15-Nov-06	191.87
16-Dec-94	190.59	15-Mar-07	191.31
12-Jan-95	191.01	15-Aug-07	189.90
17-Feb-95	191.32	15-Dec-07	189.84
20-Mar-95	191.60	15-Mar-08	191.97
18-Apr-95	191.55	15-Sep-08	191.47
26-May-95	191.55	16-Mar-09	191.80
31-Jul-95	190.04	15-Sep-09	190.48
06-Dec-95	191.73	27-Apr-10	191.46
25-Mar-96	191.40	04-Oct-10	189.85
03-Aug-96	190.76	15-Mar-11	192.11
22-Nov-96	191.49	15-Oct-11	191.03
23-Mar-97	191.40	15-Apr-12	191.54
28-Jul-97	190.30	15-Oct-12	189.64
17-Nov-97	190.65	12-Mar-13	191.53
07-Apr-98	192.43	15-Oct-13	190.79
20-Jul-98	190.38	12-Mar-14	192.04
01-Dec-98	190.90	15-Oct-14	191.00
15-Mar-99	191.51	15-Mar-15	191.59
15-Jul-99	190.14	15-Sep-15	190.08
15-Dec-99	191.54	16-Apr-16	191.69
15-Apr-00	191.74	16-Sep-16	189.10
15-Aug-00	191.34	13-Apr-17	192.15
15-Nov-00	191.36	05-Oct-17	190.48
15-Apr-01	191.95	05-Mar-18	191.68
15-Jul-01	190.50	11-Sep-18	189.76
15-Dec-01	190.97	05-Apr-19	191.91
15-Apr-02	192.24	28-Aug-19	190.21
15-Aug-02	190.92	12-May-20	191.74
15-Nov-02	190.26	26-Aug-20	189.57
15-Mar-03	190.87	12-Apr-21	191.93
15-Jul-03	190.27	26-Sep-21	190.77
15-Nov-03	191.74	01-Apr-22	192.62
15-Mar-04	191.44	01-Sep-22	189.59
15-Jul-04	192.25	01-Mar-23	191.83
15-Nov-04	191.30	01-Sep-23	190.56
15-Mar-05	191.35	07-Mar-24	191.82
15-Jul-05	190.00	01-Sep-24	190.43

BH-50-III



MP Elevation 194.48 masl
Grade 193.9 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	190.12	15-Jul-05	189.92
26-Aug-94	189.63	15-Nov-05	189.97
20-Sep-94	189.24	15-Mar-06	191.68
25-Oct-94	189.09	15-Aug-06	190.47
24-Nov-94	189.66	15-Nov-06	191.83
16-Dec-94	190.30	15-Mar-07	191.27
12-Jan-95	191.18	15-Aug-07	189.80
17-Feb-95	191.48	15-Dec-07	189.99
20-Mar-95	191.77	15-Mar-08	192.10
18-Apr-95	191.83	15-Sep-08	191.58
26-May-95	191.78	16-Mar-09	192.08
31-Jul-95	189.93	06-Oct-09	190.91
06-Dec-95	191.74	27-Apr-10	191.37
25-Mar-96	191.53	04-Oct-10	189.76
03-Aug-96	190.68	15-Mar-11	192.14
22-Nov-96	191.48	15-Oct-11	191.04
23-Mar-97	191.52	15-Apr-12	191.71
28-Jul-97	190.23	15-Oct-12	189.54
17-Nov-97	190.65	12-Mar-13	191.66
07-Apr-98	191.75	15-Oct-13	190.79
20-Jul-98	190.30	15-Oct-14	190.95
01-Dec-98	190.93	15-Mar-15	191.63
15-Mar-99	191.67	15-Sep-15	189.99
15-Jul-99	190.06	16-Apr-16	191.91
15-Dec-99	191.56	16-Sep-16	189.02
15-Apr-00	191.79	13-Apr-17	192.29
15-Aug-00	190.81	05-Oct-17	190.37
15-Nov-00	191.42	05-Mar-18	191.71
15-Apr-01	192.11	11-Sep-18	189.65
15-Jul-01	190.05	05-Apr-19	192.18
15-Dec-01	191.10	28-Aug-19	190.11
15-Apr-02	192.41	12-May-20	191.97
15-Aug-02	190.86	26-Aug-20	189.47
15-Nov-02	190.26	12-Apr-21	191.96
15-Mar-03	190.88	26-Sep-21	190.73
15-Jul-03	190.18	01-Apr-22	192.08
15-Nov-03	191.60	01-Sep-22	189.48
15-Mar-04	191.42	01-Mar-23	191.91
15-Jul-04	191.53	01-Sep-23	190.47
15-Nov-04	191.33	07-Mar-24	191.89
15-Mar-05	191.39	01-Sep-24	190.27

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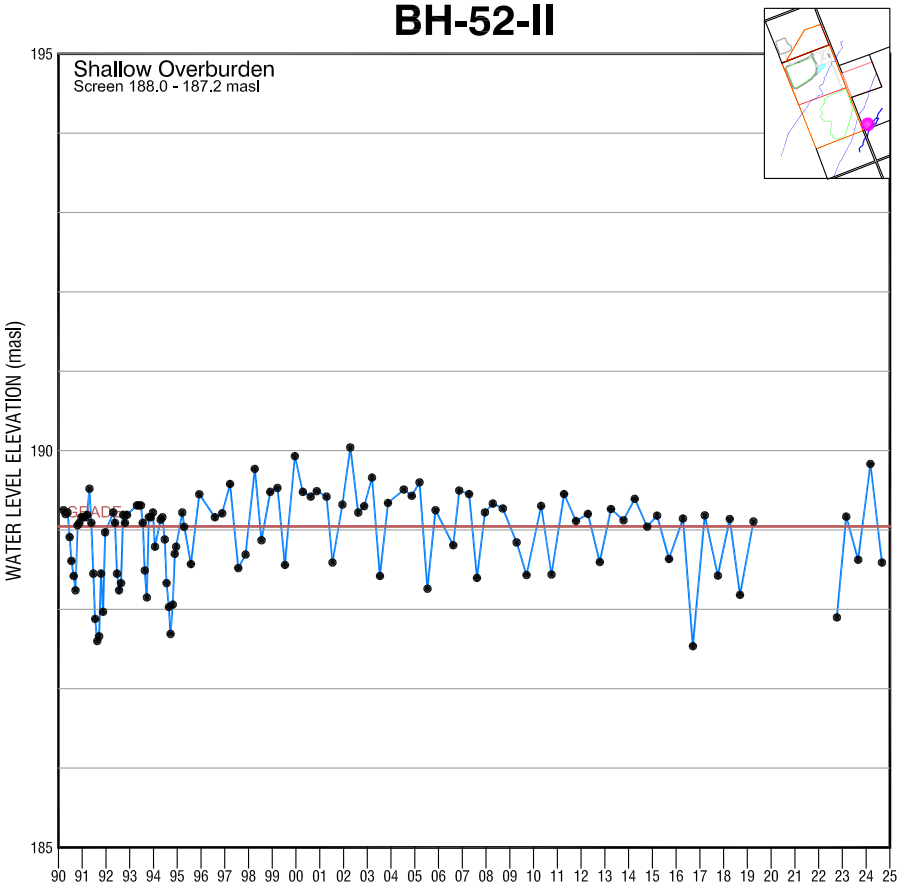

MP Elevation 190.31 masl
Grade 189.0 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jun-93	189.31	15-Mar-03	189.66
20-Jul-93	189.09	15-Jul-03	188.42
20-Aug-93	188.49	15-Nov-03	189.34
21-Sep-93	188.15	15-Jul-04	189.51
21-Oct-93	189.16	15-Nov-04	189.43
22-Nov-93	189.16	15-Mar-05	189.60
23-Dec-93	189.22	15-Jul-05	188.26
24-Jan-94	188.79	15-Nov-05	189.25
21-Apr-94	189.13	15-Aug-06	188.81
19-May-94	189.16	15-Nov-06	189.50
23-Jun-94	188.88	15-Apr-07	189.45
21-Jul-94	188.33	15-Aug-07	188.40
26-Aug-94	188.03	15-Dec-07	189.22
20-Sep-94	187.69	15-Apr-08	189.33
25-Oct-94	188.06	15-Sep-08	189.27
24-Nov-94	188.70	15-Apr-09	188.84
16-Dec-94	188.79	15-Sep-09	188.43
20-Mar-95	189.22	27-Apr-10	189.30
18-Apr-95	189.04	04-Oct-10	188.44
31-Jul-95	188.57	15-Apr-11	189.45
06-Dec-95	189.45	15-Oct-11	189.11
03-Aug-96	189.16	15-Apr-12	189.20
22-Nov-96	189.21	15-Oct-12	188.60
23-Mar-97	189.58	05-Apr-13	189.26
28-Jul-97	188.52	15-Oct-13	189.12
17-Nov-97	188.69	05-Apr-14	189.39
07-Apr-98	189.77	15-Oct-14	189.04
20-Jul-98	188.87	15-Mar-15	189.18
01-Dec-98	189.48	15-Sep-15	188.63
22-Mar-99	189.53	16-Apr-16	189.14
15-Jul-99	188.56	16-Sep-16	187.54
15-Dec-99	189.93	17-Mar-17	189.18
15-Apr-00	189.48	05-Oct-17	188.43
15-Aug-00	189.42	05-Apr-18	189.14
15-Nov-00	189.49	11-Sep-18	188.18
15-Apr-01	189.42	05-Apr-19	189.11
15-Jul-01	188.59	09-Oct-22	187.90
15-Dec-01	189.32	01-Mar-23	189.17
15-Apr-02	190.04	01-Sep-23	188.63
15-Aug-02	189.22	07-Mar-24	189.83
15-Nov-02	189.30	01-Sep-24	188.59

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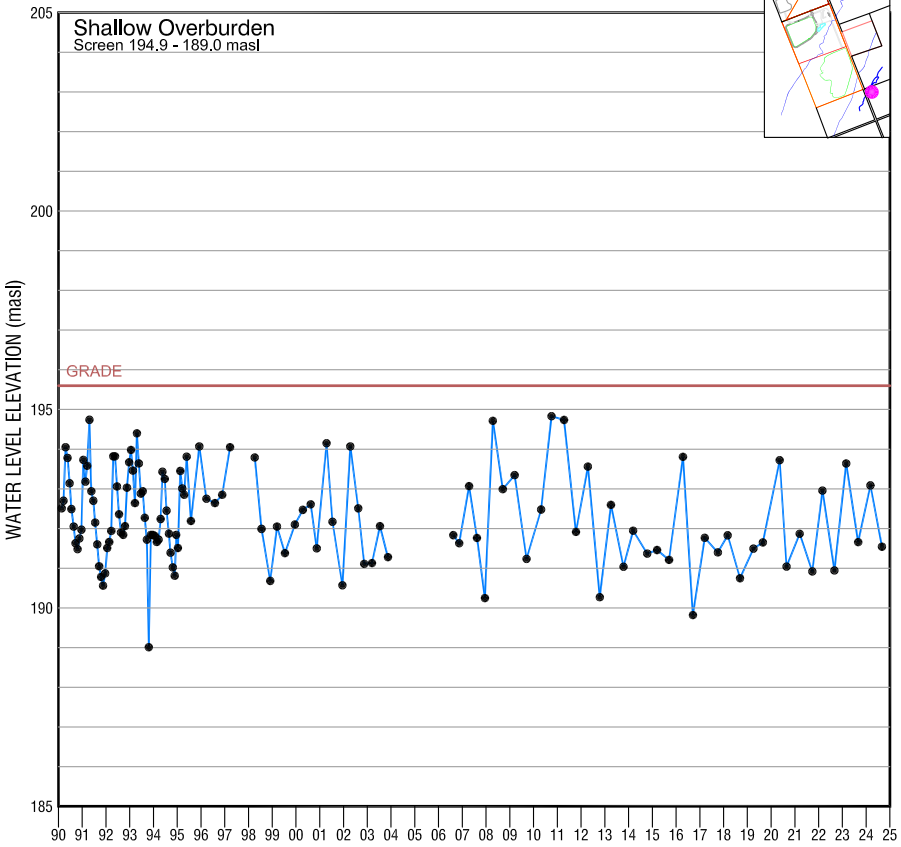

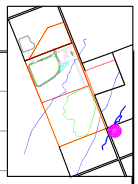

MP Elevation 196.05 masl
Grade 195.6 masl

DATE	ELEVATION	DATE	ELEVATION
22-Nov-93	191.84	15-Jul-03	192.06
23-Dec-93	191.84	15-Nov-03	191.28
24-Jan-94	191.81	15-Aug-06	191.83
21-Feb-94	191.66	15-Nov-06	191.63
21-Mar-94	191.72	15-Apr-07	193.07
21-Apr-94	192.24	15-Aug-07	191.76
19-May-94	193.43	15-Dec-07	190.25
23-Jun-94	193.25	15-Apr-08	194.71
21-Jul-94	192.45	15-Sep-08	192.99
26-Aug-94	191.87	16-Mar-09	193.35
20-Sep-94	191.39	15-Sep-09	191.24
25-Oct-94	191.02	27-Apr-10	192.48
24-Nov-94	190.81	04-Oct-10	194.83
16-Dec-94	191.84	15-Apr-11	194.74
12-Jan-95	191.51	15-Oct-11	191.91
17-Feb-95	193.45	15-Apr-12	193.56
20-Mar-95	193.01	15-Oct-12	190.27
18-Apr-95	192.85	05-Apr-13	192.60
26-May-95	193.81	15-Oct-13	191.04
31-Jul-95	192.19	12-Mar-14	191.95
06-Dec-95	194.07	15-Oct-14	191.37
25-Mar-96	192.75	15-Mar-15	191.46
03-Aug-96	192.64	15-Sep-15	191.21
22-Nov-96	192.85	16-Apr-16	193.81
23-Mar-97	194.05	16-Sep-16	189.82
07-Apr-98	193.79	17-Mar-17	191.76
20-Jul-98	191.99	05-Oct-17	191.40
01-Dec-98	190.68	05-Mar-18	191.83
15-Mar-99	192.05	11-Sep-18	190.75
15-Jul-99	191.38	05-Apr-19	191.49
15-Dec-99	192.10	28-Aug-19	191.65
15-Apr-00	192.47	12-May-20	193.72
15-Aug-00	192.61	26-Aug-20	191.04
15-Nov-00	191.50	16-Mar-21	191.87
15-Apr-01	194.15	26-Sep-21	190.92
15-Jul-01	192.17	01-Mar-22	192.96
15-Dec-01	190.57	01-Sep-22	190.94
15-Apr-02	194.07	01-Mar-23	193.64
15-Aug-02	192.51	01-Sep-23	191.66
15-Nov-02	191.11	07-Mar-24	193.09
15-Mar-03	191.13	01-Sep-24	191.54

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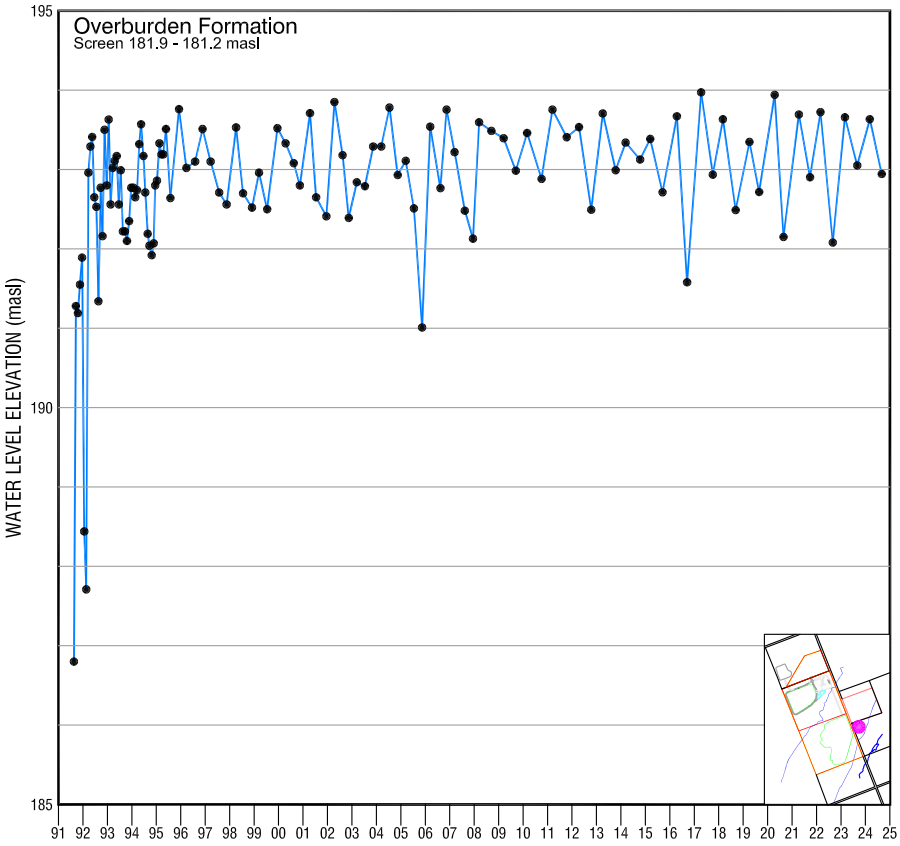
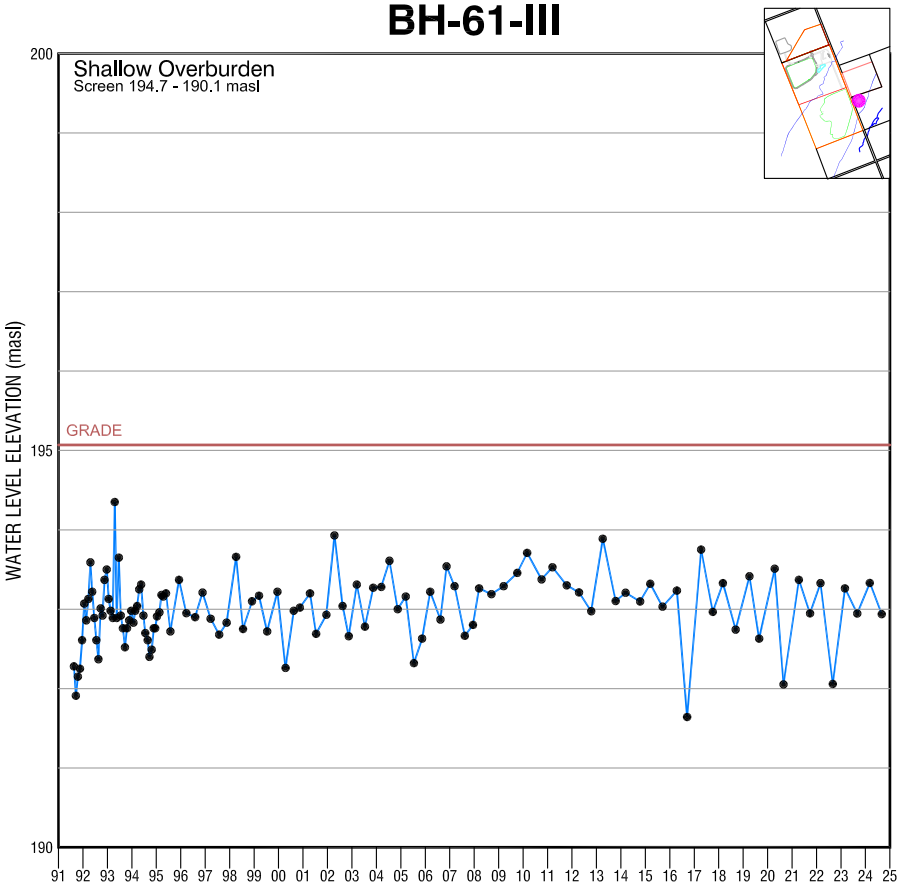


MP Elevation 195.76 masl
Grade 194.9 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	192.19	15-Nov-05	191.01
20-Sep-94	192.04	15-Mar-06	193.54
25-Oct-94	191.92	15-Aug-06	192.76
24-Nov-94	192.07	15-Nov-06	193.75
16-Dec-94	192.80	15-Mar-07	193.22
12-Jan-95	192.86	15-Aug-07	192.48
17-Feb-95	193.33	15-Dec-07	192.13
20-Mar-95	193.19	15-Mar-08	193.60
15-Apr-95	193.19	15-Sep-08	193.49
26-May-95	193.51	16-Mar-09	193.39
31-Jul-95	192.64	15-Sep-09	192.99
06-Dec-95	193.76	02-Mar-10	193.46
25-Mar-96	193.02	04-Oct-10	192.88
03-Aug-96	193.10	15-Mar-11	193.75
22-Nov-96	193.51	15-Oct-11	193.41
23-Mar-97	193.10	15-Apr-12	193.53
28-Jul-97	192.71	15-Oct-12	192.49
17-Nov-97	192.56	05-Apr-13	193.71
07-Apr-98	193.53	15-Oct-13	192.99
20-Jul-98	192.70	12-Mar-14	193.34
01-Dec-98	192.52	15-Oct-14	193.13
15-Mar-99	192.96	15-Mar-15	193.38
15-Jul-99	192.50	15-Sep-15	192.71
15-Dec-99	193.52	16-Apr-16	193.67
15-Apr-00	193.33	16-Sep-16	191.58
15-Aug-00	193.08	13-Apr-17	193.97
15-Nov-00	192.80	05-Oct-17	192.93
15-Apr-01	193.71	05-Mar-18	193.63
15-Jul-01	192.65	11-Sep-18	192.49
15-Dec-01	192.41	05-Apr-19	193.35
15-Apr-02	193.85	28-Aug-19	192.72
15-Aug-02	193.18	16-Apr-20	193.94
15-Nov-02	192.39	26-Aug-20	192.15
15-Mar-03	192.84	12-Apr-21	193.69
15-Jul-03	192.79	26-Sep-21	192.90
15-Nov-03	193.29	01-Mar-22	193.72
15-Mar-04	193.29	01-Sep-22	192.08
15-Jul-04	193.78	01-Mar-23	193.66
15-Nov-04	192.93	01-Sep-23	193.05
15-Mar-05	193.11	07-Mar-24	193.63
15-Jul-05	192.51	01-Sep-24	192.94

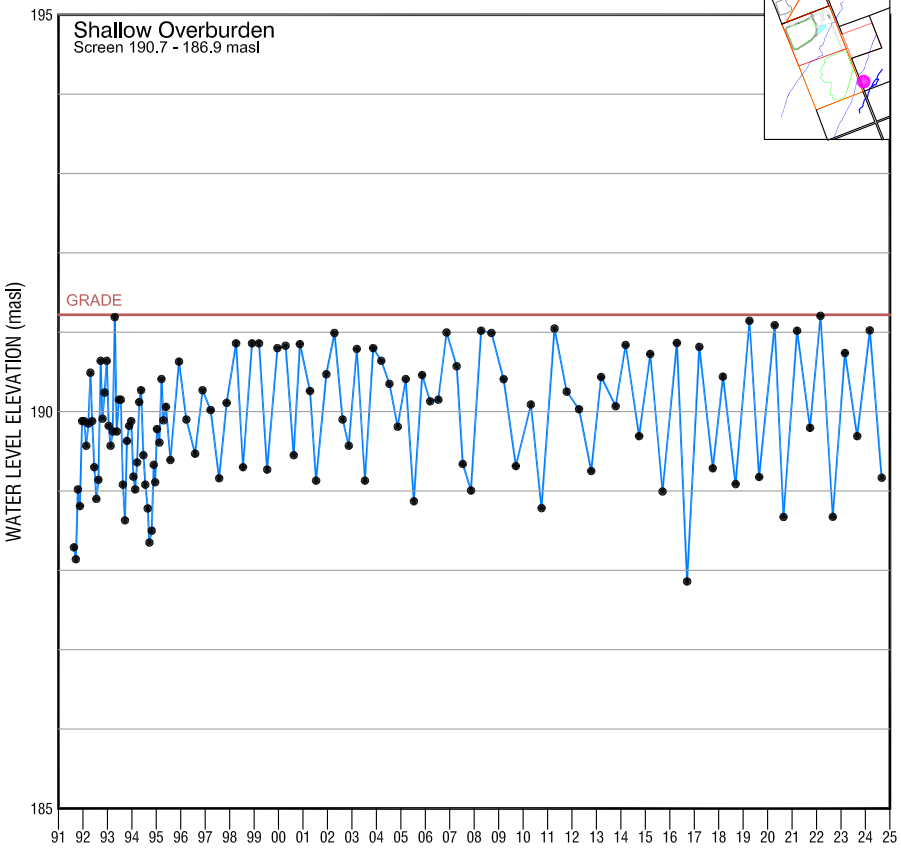
BH-61-III



MP Elevation 195.66 masl
Grade 195.1 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	192.61	15-Nov-05	192.63
20-Sep-94	192.40	15-Mar-06	193.22
25-Oct-94	192.49	15-Aug-06	192.87
24-Nov-94	192.76	15-Nov-06	193.54
16-Dec-94	192.76	15-Mar-07	193.29
12-Jan-95	192.91	15-Aug-07	192.66
17-Feb-95	192.96	15-Dec-07	192.80
20-Mar-95	193.18	15-Mar-08	193.26
15-Apr-95	193.16	15-Sep-08	193.19
26-May-95	193.20	16-Mar-09	193.29
31-Jul-95	192.72	06-Oct-09	193.46
06-Dec-95	193.37	02-Mar-10	193.71
25-Mar-96	192.95	04-Oct-10	193.38
03-Aug-96	192.90	15-Mar-11	193.53
22-Nov-96	193.21	15-Oct-11	193.30
23-Mar-97	192.88	15-Apr-12	193.21
28-Jul-97	192.68	15-Oct-12	192.98
17-Nov-97	192.83	05-Apr-13	193.89
07-Apr-98	193.66	15-Oct-13	193.10
20-Jul-98	192.75	12-Mar-14	193.21
01-Dec-98	193.10	15-Oct-14	193.10
15-Mar-99	193.17	15-Mar-15	193.32
15-Jul-99	192.72	15-Sep-15	193.03
15-Dec-99	193.22	16-Apr-16	193.23
15-Apr-00	192.26	16-Sep-16	191.64
15-Aug-00	192.98	13-Apr-17	193.75
15-Nov-00	193.02	05-Oct-17	192.97
15-Apr-01	193.20	05-Mar-18	193.33
15-Jul-01	192.69	11-Sep-18	192.74
15-Dec-01	192.93	05-Apr-19	193.41
15-Apr-02	193.93	28-Aug-19	192.63
15-Aug-02	193.04	16-Apr-20	193.51
15-Nov-02	192.66	26-Aug-20	192.05
15-Mar-03	193.31	12-Apr-21	193.37
15-Jul-03	192.78	26-Sep-21	192.95
15-Nov-03	193.27	01-Mar-22	193.33
15-Mar-04	193.28	01-Sep-22	192.06
15-Jul-04	193.61	01-Mar-23	193.26
15-Nov-04	193.00	01-Sep-23	192.95
15-Mar-05	193.16	07-Mar-24	193.33
15-Jul-05	192.32	01-Sep-24	192.94

BH-62-II



MP Elevation 192.01 masl
Grade 191.2 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	188.78	15-Nov-05	190.46
20-Sep-94	188.35	15-Mar-06	190.13
25-Oct-94	188.50	15-Jul-06	190.15
24-Nov-94	189.33	15-Nov-06	191.00
16-Dec-94	189.11	15-Apr-07	190.57
12-Jan-95	189.78	15-Jul-07	189.34
17-Feb-95	189.61	15-Nov-07	189.01
20-Mar-95	190.41	15-Apr-08	191.02
18-Apr-95	189.89	15-Sep-08	190.99
26-May-95	190.06	16-Mar-09	190.41
31-Jul-95	189.39	15-Sep-09	189.31
06-Dec-95	190.63	27-Apr-10	190.09
25-Mar-96	189.90	04-Oct-10	188.78
03-Aug-96	189.47	15-Apr-11	191.05
22-Nov-96	190.27	15-Oct-11	190.25
23-Mar-97	190.02	15-Apr-12	190.03
28-Jul-97	189.16	15-Oct-12	189.25
17-Nov-97	190.11	12-Mar-13	190.44
07-Apr-98	190.86	15-Oct-13	190.07
20-Jul-98	189.30	12-Mar-14	190.84
01-Dec-98	190.86	30-Sep-14	189.69
15-Mar-99	190.86	15-Mar-15	190.73
15-Jul-99	189.27	15-Sep-15	188.99
15-Dec-99	190.80	16-Apr-16	190.87
15-Apr-00	190.83	16-Sep-16	187.86
15-Aug-00	189.45	17-Mar-17	190.82
15-Nov-00	190.85	05-Oct-17	189.29
15-Apr-01	190.26	05-Mar-18	190.44
15-Jul-01	189.13	11-Sep-18	189.09
15-Dec-01	190.47	05-Apr-19	191.14
15-Apr-02	190.99	28-Aug-19	189.18
15-Aug-02	189.90	16-Apr-20	191.09
15-Nov-02	189.57	26-Aug-20	188.67
15-Mar-03	190.79	16-Mar-21	191.02
15-Jul-03	189.13	26-Sep-21	189.80
15-Nov-03	190.80	01-Mar-22	191.21
15-Mar-04	190.64	01-Sep-22	188.67
15-Jul-04	190.35	01-Mar-23	190.74
15-Nov-04	189.81	01-Sep-23	189.69
15-Mar-05	190.41	07-Mar-24	191.02
15-Jul-05	188.87	01-Sep-24	189.17

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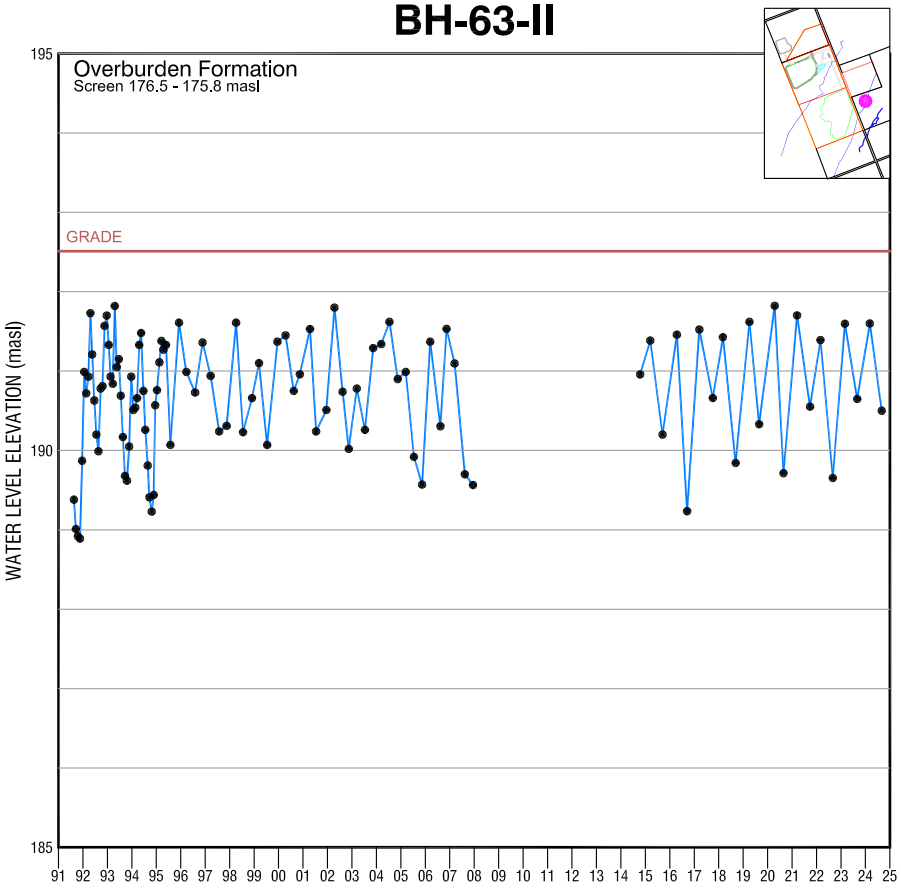

MP Elevation 193.28 masl
Grade 192.5 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-93	190.69	15-Jul-01	190.24
20-Aug-93	190.17	15-Dec-01	190.51
20-Sep-93	189.68	15-Apr-02	191.80
20-Oct-93	189.62	15-Aug-02	190.74
22-Nov-93	190.05	15-Nov-02	190.02
23-Dec-93	190.93	15-Mar-03	190.78
24-Jan-94	190.51	15-Jul-03	190.26
21-Feb-94	190.54	15-Nov-03	191.29
21-Mar-94	190.66	15-Mar-04	191.34
21-Apr-94	191.33	15-Jul-04	191.62
19-May-94	191.48	15-Nov-04	190.90
23-Jun-94	190.75	15-Mar-05	190.99
21-Jul-94	190.26	15-Jul-05	189.92
26-Aug-94	189.81	15-Nov-05	189.57
20-Sep-94	189.41	15-Mar-06	191.37
25-Oct-94	189.23	15-Aug-06	190.30
24-Nov-94	189.44	15-Nov-06	191.53
16-Dec-94	190.57	15-Mar-07	191.10
12-Jan-95	190.76	15-Aug-07	189.70
17-Feb-95	191.11	15-Dec-07	189.57
20-Mar-95	191.38	15-Oct-14	190.96
18-Apr-95	191.27	15-Mar-15	191.38
26-May-95	191.33	15-Sep-15	190.20
31-Jul-95	190.07	16-Apr-16	191.46
06-Dec-95	191.61	16-Sep-16	189.24
25-Mar-96	190.99	17-Mar-17	191.52
03-Aug-96	190.73	05-Oct-17	190.66
22-Nov-96	191.36	05-Mar-18	191.43
23-Mar-97	190.94	11-Sep-18	189.84
28-Jul-97	190.24	05-Apr-19	191.62
17-Nov-97	190.31	28-Aug-19	190.33
07-Apr-98	191.61	16-Apr-20	191.82
20-Jul-98	190.23	26-Aug-20	189.71
01-Dec-98	190.66	16-Mar-21	191.70
15-Mar-99	191.10	26-Sep-21	190.55
15-Jul-99	190.07	01-Mar-22	191.39
15-Dec-99	191.37	01-Sep-22	189.65
15-Apr-00	191.45	01-Mar-23	191.60
15-Aug-00	190.75	01-Sep-23	190.65
15-Nov-00	190.96	07-Mar-24	191.60
15-Apr-01	191.53	01-Sep-24	190.50

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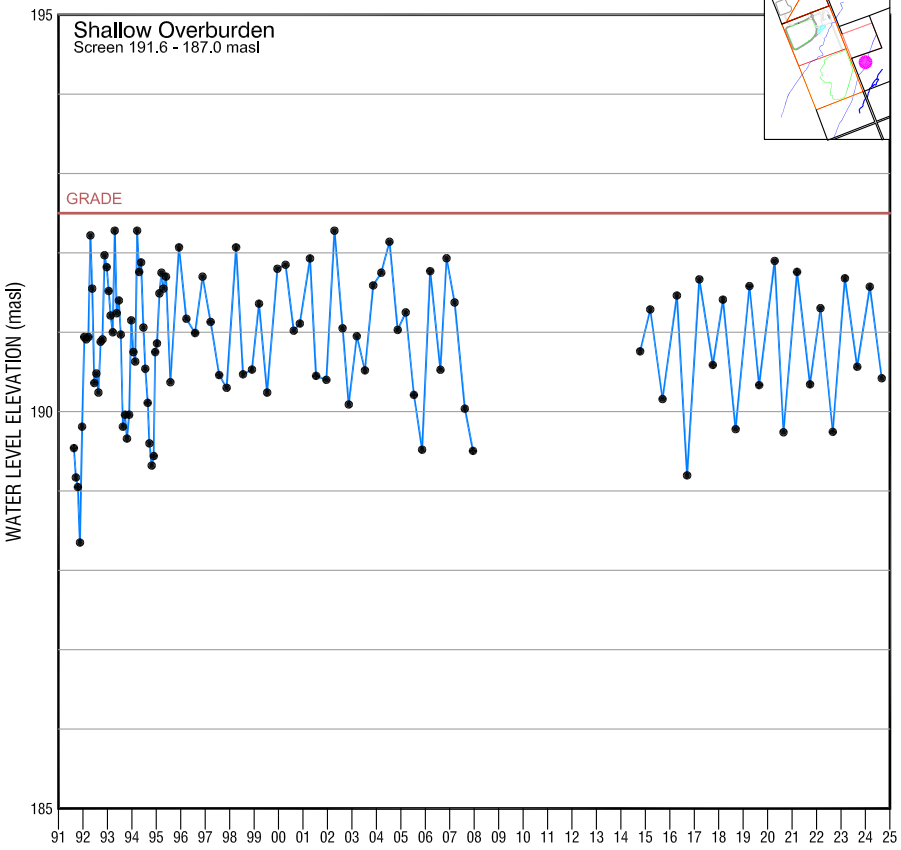

MP Elevation 192.98 masl
Grade 192.5 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-93	190.97	15-Jul-01	190.45
20-Aug-93	189.81	15-Dec-01	190.40
20-Sep-93	189.96	15-Apr-02	192.28
20-Oct-93	189.66	15-Aug-02	191.05
22-Nov-93	189.96	15-Nov-02	190.09
23-Dec-93	191.15	15-Mar-03	190.95
24-Jan-94	190.75	15-Jul-03	190.52
21-Feb-94	190.63	15-Nov-03	191.59
21-Mar-94	192.28	15-Mar-04	191.75
21-Apr-94	191.76	15-Jul-04	192.14
19-May-94	191.88	15-Nov-04	191.03
23-Jun-94	191.06	15-Mar-05	191.25
21-Jul-94	190.54	15-Jul-05	190.21
26-Aug-94	190.11	15-Nov-05	189.52
20-Sep-94	189.60	15-Mar-06	191.77
25-Oct-94	189.32	15-Aug-06	190.53
24-Nov-94	189.44	15-Nov-06	191.93
16-Dec-94	190.75	15-Mar-07	191.38
12-Jan-95	190.86	15-Aug-07	190.04
17-Feb-95	191.49	15-Dec-07	189.51
20-Mar-95	191.75	15-Oct-14	190.76
18-Apr-95	191.55	15-Mar-15	191.29
26-May-95	191.70	15-Sep-15	190.16
31-Jul-95	190.37	16-Apr-16	191.46
06-Dec-95	192.07	16-Sep-16	189.20
25-Mar-96	191.17	17-Mar-17	191.67
03-Aug-96	190.99	05-Oct-17	190.59
22-Nov-96	191.70	05-Mar-18	191.41
23-Mar-97	191.13	11-Sep-18	189.78
28-Jul-97	190.46	05-Apr-19	191.58
17-Nov-97	190.30	28-Aug-19	190.33
07-Apr-98	192.07	16-Apr-20	191.90
20-Jul-98	190.47	26-Aug-20	189.74
01-Dec-98	190.53	16-Mar-21	191.76
15-Mar-99	191.36	26-Sep-21	190.34
15-Jul-99	190.24	01-Mar-22	191.30
15-Dec-99	191.80	01-Sep-22	189.74
15-Apr-00	191.85	01-Mar-23	191.68
15-Aug-00	191.02	01-Sep-23	190.57
15-Nov-00	191.11	07-Mar-24	191.57
15-Apr-01	191.93	01-Sep-24	190.42

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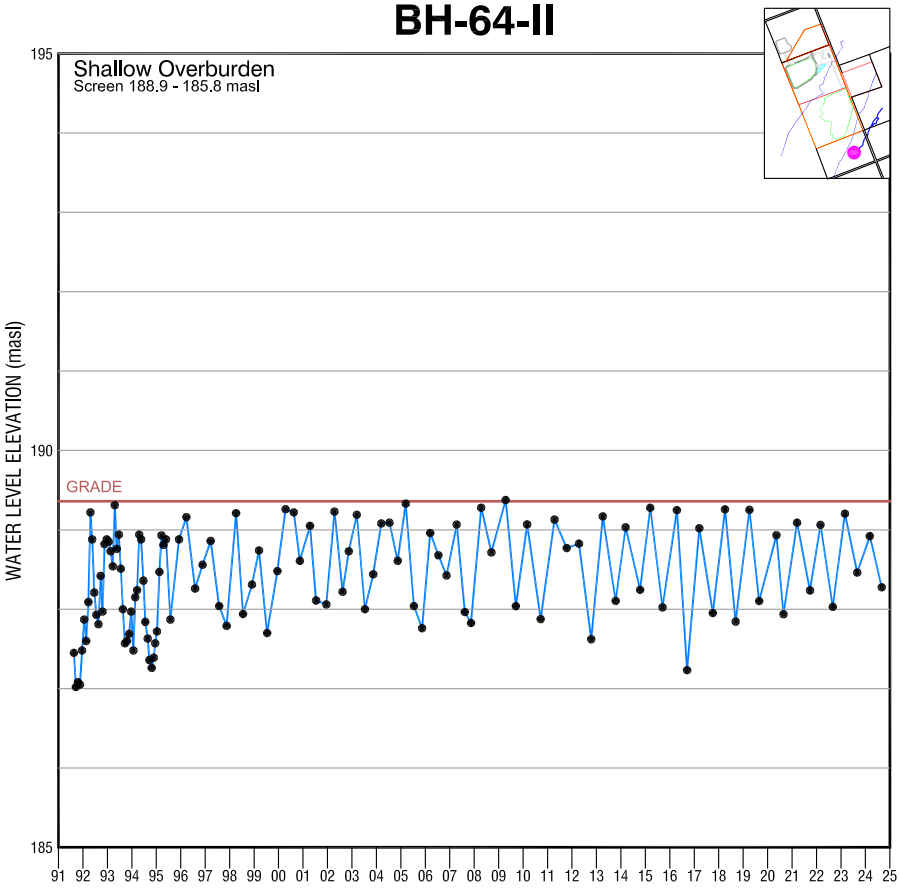

MP Elevation 190.16 masl
Grade 189.4 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	187.63	15-Nov-05	187.76
20-Sep-94	187.36	15-Mar-06	188.96
25-Oct-94	187.26	15-Jul-06	188.68
24-Nov-94	187.39	15-Nov-06	188.43
16-Dec-94	187.57	15-Apr-07	189.07
12-Jan-95	187.72	15-Aug-07	187.96
17-Feb-95	188.47	15-Nov-07	187.83
20-Mar-95	188.93	15-Apr-08	189.28
18-Apr-95	188.81	15-Sep-08	188.71
26-May-95	188.88	15-Apr-09	189.38
31-Jul-95	187.87	15-Sep-09	188.04
06-Dec-95	188.88	02-Mar-10	189.07
25-Mar-96	189.16	21-Sep-10	187.88
03-Aug-96	188.26	15-Apr-11	189.13
22-Nov-96	188.56	15-Oct-11	188.77
23-Mar-97	188.86	15-Apr-12	188.83
28-Jul-97	188.04	15-Oct-12	187.62
17-Nov-97	187.79	05-Apr-13	189.17
07-Apr-98	189.21	15-Oct-13	188.10
20-Jul-98	187.94	12-Mar-14	189.03
01-Dec-98	188.31	15-Oct-14	188.24
15-Mar-99	188.74	15-Mar-15	189.28
15-Jul-99	187.70	15-Sep-15	188.02
15-Dec-99	188.48	16-Apr-16	189.25
15-Apr-00	189.26	16-Sep-16	187.23
15-Aug-00	189.22	17-Mar-17	189.02
15-Nov-00	188.61	05-Oct-17	187.95
15-Apr-01	189.05	05-Apr-18	189.26
15-Jul-01	188.11	11-Sep-18	187.84
15-Dec-01	188.06	05-Apr-19	189.25
15-Apr-02	189.23	28-Aug-19	188.10
15-Aug-02	188.22	12-May-20	188.93
15-Nov-02	188.73	26-Aug-20	187.94
15-Mar-03	189.19	16-Mar-21	189.09
15-Jul-03	188.00	26-Sep-21	188.24
15-Nov-03	188.44	01-Mar-22	189.06
15-Mar-04	189.08	01-Sep-22	188.03
15-Jul-04	189.09	01-Mar-23	189.20
15-Nov-04	188.61	01-Sep-23	188.46
15-Mar-05	189.33	07-Mar-24	188.92
15-Jul-05	188.04	01-Sep-24	188.28

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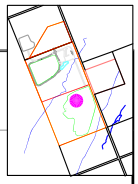
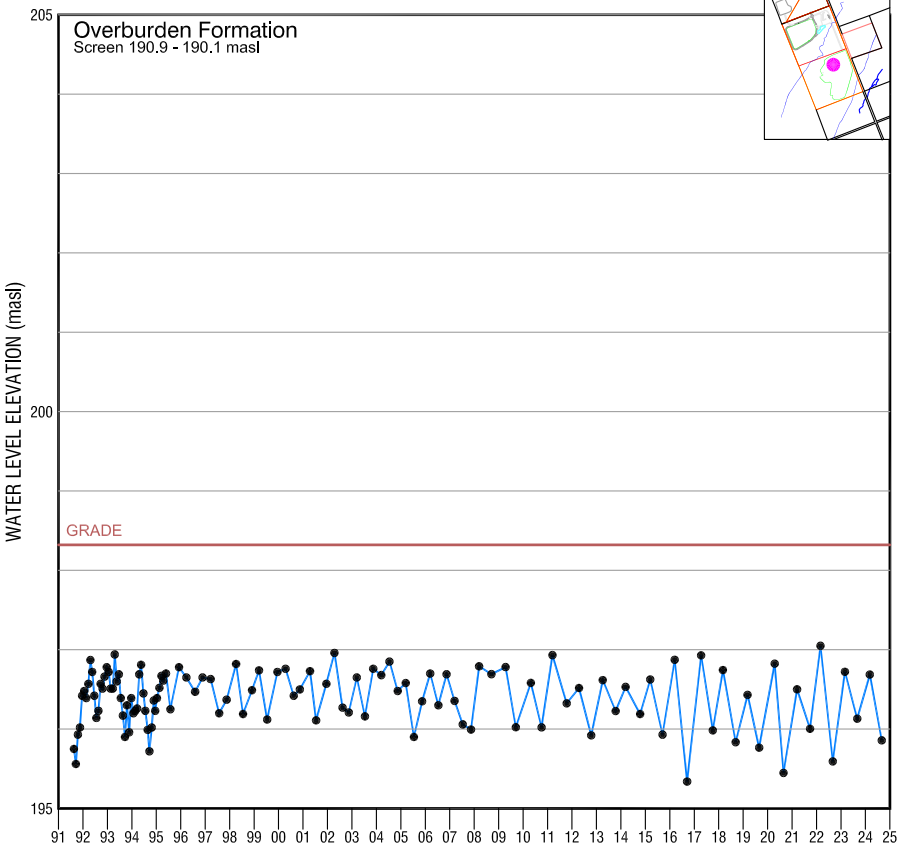
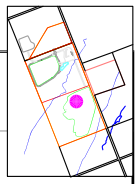


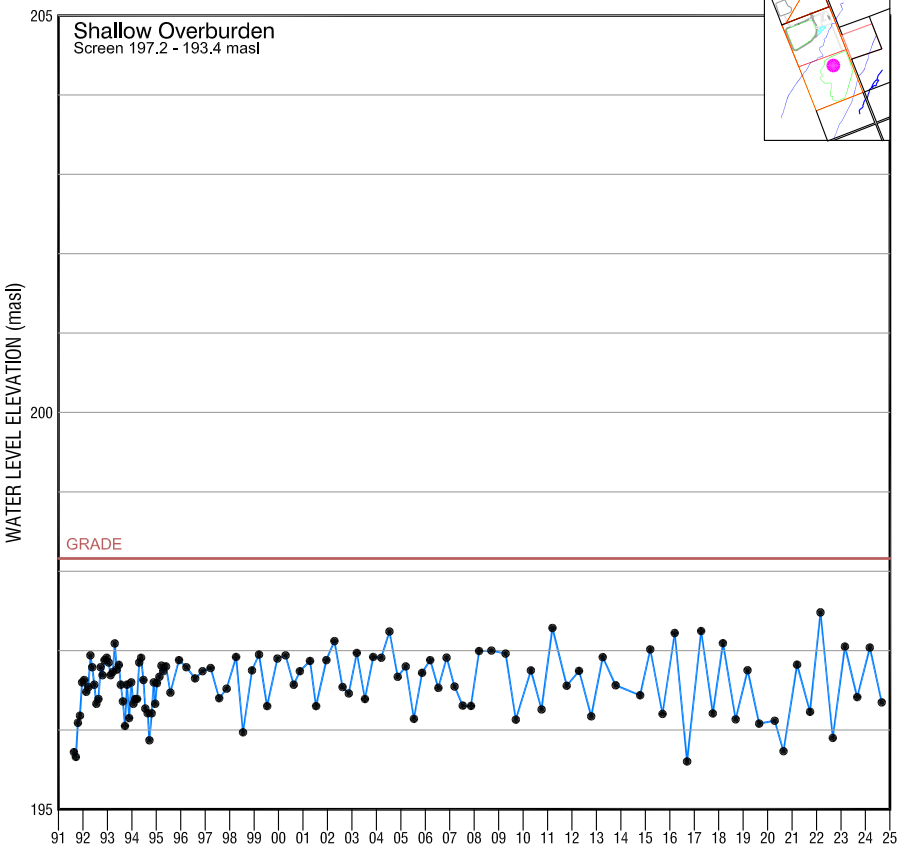


MP Elevation 199.13 masl
Grade 198.3 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	195.99	15-Nov-05	196.35
20-Sep-94	195.72	15-Mar-06	196.70
25-Oct-94	196.02	15-Jul-06	196.30
24-Nov-94	196.36	15-Nov-06	196.69
16-Dec-94	196.23	15-Mar-07	196.35
12-Jan-95	196.39	15-Jul-07	196.06
17-Feb-95	196.52	15-Nov-07	195.99
20-Mar-95	196.67	15-Mar-08	196.79
15-Apr-95	196.61	15-Sep-08	196.69
26-May-95	196.70	15-Apr-09	196.78
31-Jul-95	196.25	15-Sep-09	196.02
06-Dec-95	196.78	27-Apr-10	196.58
25-Mar-96	196.65	04-Oct-10	196.02
03-Aug-96	196.47	15-Mar-11	196.93
22-Nov-96	196.65	15-Oct-11	196.32
23-Mar-97	196.63	15-Apr-12	196.52
28-Jul-97	196.20	15-Oct-12	195.92
17-Nov-97	196.37	05-Apr-13	196.62
07-Apr-98	196.82	15-Oct-13	196.23
20-Jul-98	196.19	12-Mar-14	196.53
01-Dec-98	196.49	15-Oct-14	196.19
15-Mar-99	196.74	15-Mar-15	196.63
15-Jul-99	196.12	15-Sep-15	195.93
15-Dec-99	196.72	15-Mar-16	196.87
15-Apr-00	196.76	16-Sep-16	195.34
15-Aug-00	196.42	13-Apr-17	196.93
15-Nov-00	196.50	05-Oct-17	195.98
15-Apr-01	196.73	05-Mar-18	196.74
15-Jul-01	196.11	11-Sep-18	195.84
15-Dec-01	196.57	08-Mar-19	196.43
15-Apr-02	196.96	28-Aug-19	195.77
15-Aug-02	196.27	16-Apr-20	196.82
15-Nov-02	196.21	26-Aug-20	195.45
15-Mar-03	196.65	16-Mar-21	196.50
15-Jul-03	196.16	26-Sep-21	196.00
15-Nov-03	196.76	01-Mar-22	197.05
15-Mar-04	196.68	01-Sep-22	195.59
15-Jul-04	196.85	01-Mar-23	196.72
15-Nov-04	196.48	01-Sep-23	196.13
15-Mar-05	196.58	07-Mar-24	196.69
15-Jul-05	195.90	01-Sep-24	195.86

BH-66-III





MP Elevation 198.92 masl
Grade 198.2 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	196.27	15-Jul-05	196.14
26-Aug-94	196.21	15-Nov-05	196.72
20-Sep-94	195.87	15-Mar-06	196.88
25-Oct-94	196.21	15-Jul-06	196.53
24-Nov-94	196.60	15-Nov-06	196.91
16-Dec-94	196.33	15-Mar-07	196.55
12-Jan-95	196.59	15-Jul-07	196.31
17-Feb-95	196.67	15-Nov-07	196.30
20-Mar-95	196.81	15-Mar-08	196.99
15-Apr-95	196.74	15-Sep-08	197.00
26-May-95	196.80	15-Apr-09	196.96
31-Jul-95	196.47	15-Sep-09	196.13
06-Dec-95	196.88	27-Apr-10	196.75
25-Mar-96	196.79	04-Oct-10	196.26
03-Aug-96	196.65	15-Mar-11	197.29
22-Nov-96	196.74	15-Oct-11	196.56
23-Mar-97	196.78	15-Apr-12	196.74
28-Jul-97	196.40	15-Oct-12	196.17
17-Nov-97	196.52	05-Apr-13	196.92
07-Apr-98	196.92	15-Oct-13	196.56
20-Jul-98	195.97	15-Oct-14	196.44
01-Dec-98	196.75	15-Mar-15	197.01
15-Mar-99	196.95	15-Sep-15	196.20
15-Jul-99	196.30	15-Mar-16	197.22
15-Dec-99	196.90	16-Sep-16	195.60
15-Apr-00	196.94	13-Apr-17	197.25
15-Aug-00	196.57	05-Oct-17	196.21
15-Nov-00	196.74	05-Mar-18	197.09
15-Apr-01	196.87	11-Sep-18	196.13
15-Jul-01	196.30	08-Mar-19	196.75
15-Dec-01	196.88	28-Aug-19	196.08
15-Apr-02	197.12	16-Apr-20	196.12
15-Aug-02	196.54	26-Aug-20	195.73
15-Nov-02	196.46	16-Mar-21	196.82
15-Mar-03	196.97	26-Sep-21	196.23
15-Jul-03	196.39	01-Mar-22	197.48
15-Nov-03	196.92	01-Sep-22	195.90
15-Mar-04	196.91	01-Mar-23	197.05
15-Jul-04	197.24	01-Sep-23	196.41
15-Nov-04	196.67	07-Mar-24	197.04
15-Mar-05	196.80	01-Sep-24	196.35

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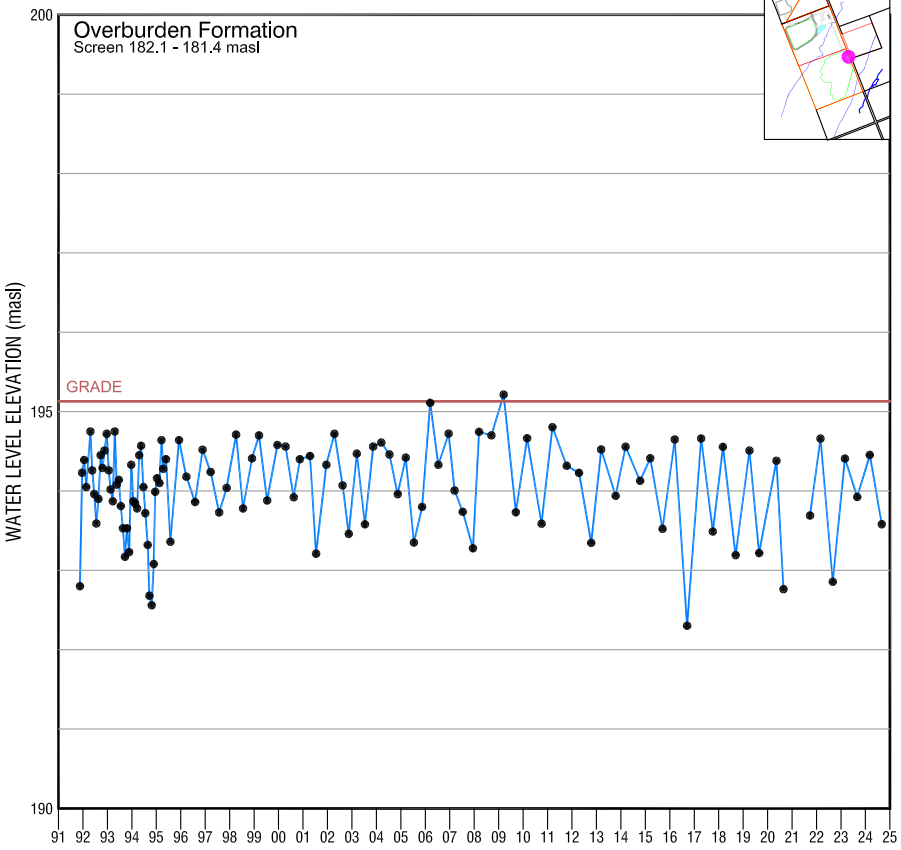
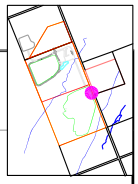
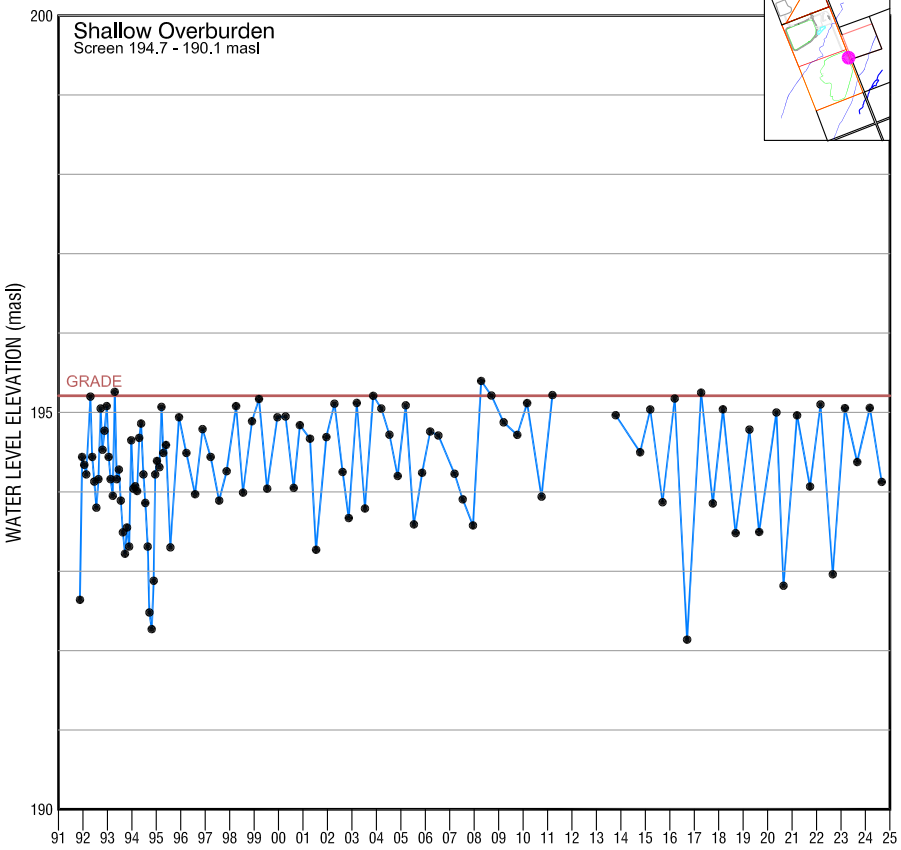


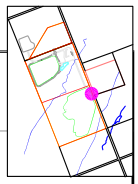


MP Elevation 195.91 masl
Grade 195.1 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	193.72	15-Jul-05	193.35
26-Aug-94	193.32	15-Nov-05	193.80
20-Sep-94	192.68	15-Mar-06	195.11
25-Oct-94	192.56	15-Jul-06	194.33
24-Nov-94	193.08	15-Dec-06	194.72
16-Dec-94	193.99	15-Mar-07	194.01
12-Jan-95	194.16	15-Jul-07	193.74
17-Feb-95	194.10	15-Dec-07	193.28
20-Mar-95	194.64	15-Mar-08	194.74
15-Apr-95	194.28	15-Sep-08	194.70
26-May-95	194.40	16-Mar-09	195.21
31-Jul-95	193.36	15-Sep-09	193.73
06-Dec-95	194.64	02-Mar-10	194.66
25-Mar-96	194.18	04-Oct-10	193.59
03-Aug-96	193.86	15-Mar-11	194.80
22-Nov-96	194.52	15-Oct-11	194.32
23-Mar-97	194.24	15-Apr-12	194.23
28-Jul-97	193.73	15-Oct-12	193.35
17-Nov-97	194.04	12-Mar-13	194.52
07-Apr-98	194.71	15-Oct-13	193.94
20-Jul-98	193.78	12-Mar-14	194.56
01-Dec-98	194.41	15-Oct-14	194.13
15-Mar-99	194.70	15-Mar-15	194.41
15-Jul-99	193.88	15-Sep-15	193.52
15-Dec-99	194.58	15-Mar-16	194.65
15-Apr-00	194.56	16-Sep-16	192.30
15-Aug-00	193.92	13-Apr-17	194.66
15-Nov-00	194.40	05-Oct-17	193.49
15-Apr-01	194.44	05-Mar-18	194.56
15-Jul-01	193.21	11-Sep-18	193.19
15-Dec-01	194.33	05-Apr-19	194.51
15-Apr-02	194.72	28-Aug-19	193.22
15-Aug-02	194.07	12-May-20	194.38
15-Nov-02	193.46	26-Aug-20	192.76
15-Mar-03	194.47	26-Sep-21	193.69
15-Jul-03	193.58	01-Mar-22	194.66
15-Nov-03	194.56	01-Sep-22	192.86
15-Mar-04	194.61	01-Mar-23	194.41
15-Jul-04	194.46	01-Sep-23	193.93
15-Nov-04	193.96	07-Mar-24	194.45
15-Mar-05	194.42	01-Sep-24	193.58

BH-74-III

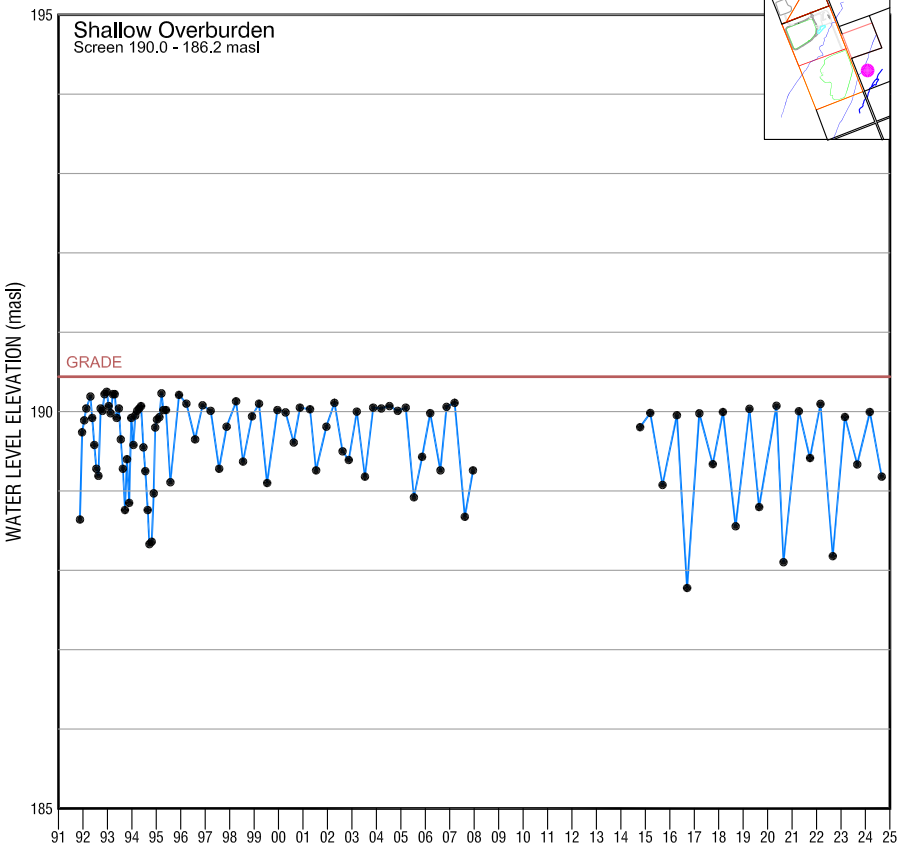




MP Elevation 195.99 masl
Grade 195.2 masl

DATE	ELEVATION	DATE	ELEVATION
21-Feb-94	194.07	15-Nov-03	195.21
21-Mar-94	194.01	15-Mar-04	195.05
21-Apr-94	194.68	15-Jul-04	194.72
19-May-94	194.86	15-Nov-04	194.20
23-Jun-94	194.22	15-Mar-05	195.09
21-Jul-94	193.86	15-Jul-05	193.59
26-Aug-94	193.31	15-Nov-05	194.24
20-Sep-94	192.48	15-Mar-06	194.76
25-Oct-94	192.27	15-Jul-06	194.71
24-Nov-94	192.88	15-Mar-07	194.23
16-Dec-94	194.22	15-Jul-07	193.91
12-Jan-95	194.39	15-Dec-07	193.58
17-Feb-95	194.31	15-Apr-08	195.40
20-Mar-95	195.07	15-Sep-08	195.21
15-Apr-95	194.49	16-Mar-09	194.88
26-May-95	194.59	06-Oct-09	194.72
31-Jul-95	193.30	02-Mar-10	195.12
06-Dec-95	194.94	04-Oct-10	193.94
25-Mar-96	194.49	15-Mar-11	195.22
03-Aug-96	193.97	15-Oct-13	194.97
22-Nov-96	194.79	15-Oct-14	194.50
23-Mar-97	194.44	15-Mar-15	195.04
28-Jul-97	193.89	15-Sep-15	193.87
17-Nov-97	194.26	15-Mar-16	195.18
07-Apr-98	195.08	16-Sep-16	192.14
20-Jul-98	193.99	13-Apr-17	195.25
01-Dec-98	194.89	05-Oct-17	193.85
15-Mar-99	195.17	05-Mar-18	195.04
15-Jul-99	194.04	11-Sep-18	193.48
15-Dec-99	194.94	05-Apr-19	194.79
15-Apr-00	194.95	28-Aug-19	193.49
15-Aug-00	194.05	12-May-20	195.00
15-Nov-00	194.84	26-Aug-20	192.82
15-Apr-01	194.67	16-Mar-21	194.96
15-Jul-01	193.27	26-Sep-21	194.07
15-Dec-01	194.69	01-Mar-22	195.10
15-Apr-02	195.11	01-Sep-22	192.96
15-Aug-02	194.25	01-Mar-23	195.05
15-Nov-02	193.67	01-Sep-23	194.38
15-Mar-03	195.12	07-Mar-24	195.06
15-Jul-03	193.79	01-Sep-24	194.13

BH-75-II



MP Elevation 191.23 masl
Grade 190.4 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-93	189.65	15-Jul-01	189.26
20-Aug-93	189.28	15-Dec-01	189.81
20-Sep-93	188.76	15-Apr-02	190.11
20-Oct-93	189.40	15-Aug-02	189.50
22-Nov-93	188.85	15-Nov-02	189.39
23-Dec-93	189.92	15-Mar-03	190.00
24-Jan-94	189.58	15-Jul-03	189.18
21-Feb-94	189.95	15-Nov-03	190.05
21-Mar-94	190.01	15-Mar-04	190.04
21-Apr-94	190.04	15-Jul-04	190.07
19-May-94	190.07	15-Nov-04	190.01
23-Jun-94	189.55	15-Mar-05	190.05
21-Jul-94	189.25	15-Jul-05	188.92
26-Aug-94	188.76	15-Nov-05	189.43
20-Sep-94	188.33	15-Mar-06	189.98
25-Oct-94	188.36	15-Aug-06	189.26
24-Nov-94	188.97	15-Nov-06	190.06
16-Dec-94	189.80	15-Mar-07	190.11
12-Jan-95	189.90	15-Aug-07	188.68
17-Feb-95	189.93	15-Dec-07	189.26
20-Mar-95	190.23	15-Oct-14	189.80
18-Apr-95	190.02	15-Mar-15	189.98
26-May-95	190.02	15-Sep-15	189.08
31-Jul-95	189.11	16-Apr-16	189.95
06-Dec-95	190.21	16-Sep-16	187.78
25-Mar-96	190.10	17-Mar-17	189.98
03-Aug-96	189.65	05-Oct-17	189.34
22-Nov-96	190.08	05-Mar-18	189.99
23-Mar-97	190.01	11-Sep-18	188.55
28-Jul-97	189.28	05-Apr-19	190.04
17-Nov-97	189.81	28-Aug-19	188.80
07-Apr-98	190.13	12-May-20	190.07
20-Jul-98	189.37	26-Aug-20	188.10
01-Dec-98	189.94	12-Apr-21	190.01
15-Mar-99	190.10	26-Sep-21	189.41
15-Jul-99	189.10	01-Mar-22	190.10
15-Dec-99	190.02	01-Sep-22	188.18
15-Apr-00	189.99	01-Mar-23	189.93
15-Aug-00	189.61	01-Sep-23	189.33
15-Nov-00	190.05	07-Mar-24	189.99
15-Apr-01	190.03	01-Sep-24	189.18

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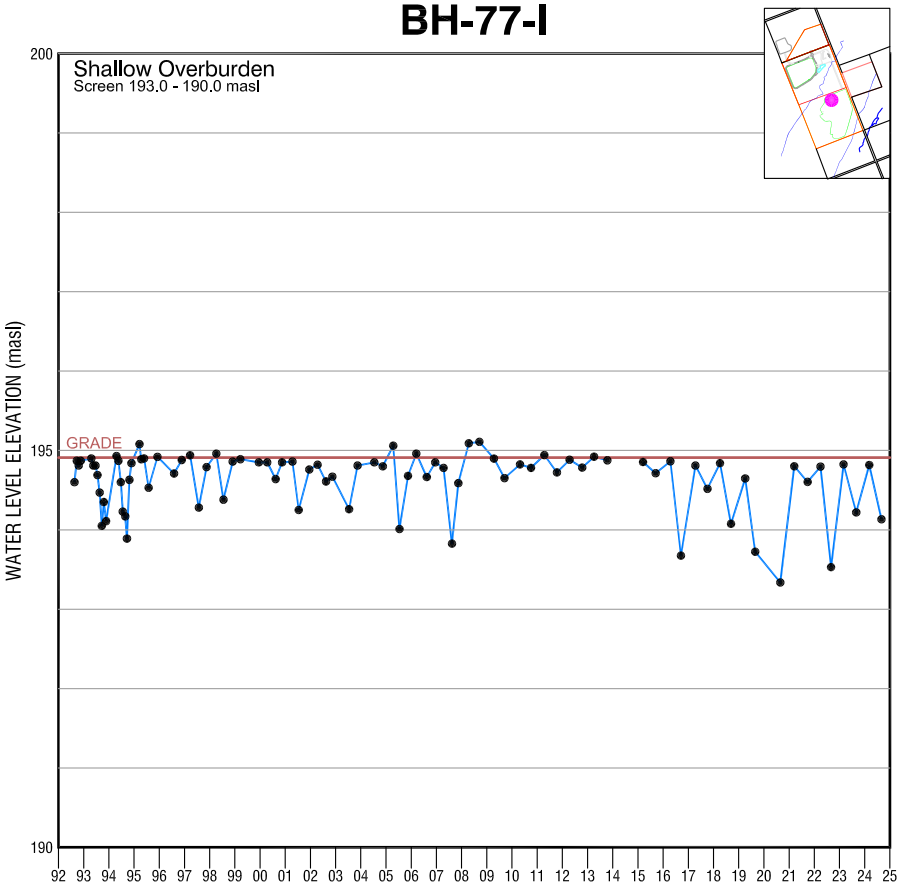
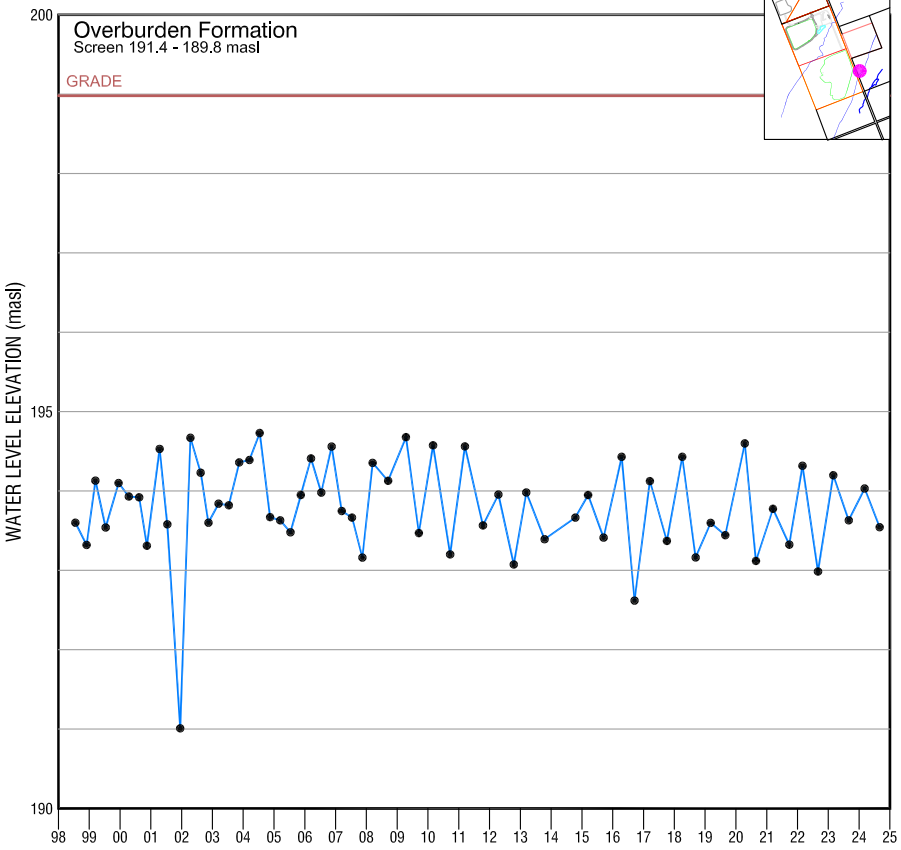
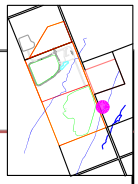


MP Elevation 195.36 masl
Grade 194.9 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jun-93	194.81	15-Nov-04	194.80
20-Jul-93	194.69	15-Apr-05	195.06
20-Aug-93	194.47	15-Jul-05	194.01
20-Sep-93	194.05	15-Nov-05	194.68
20-Oct-93	194.35	15-Mar-06	194.96
22-Nov-93	194.11	15-Aug-06	194.66
21-Apr-94	194.93	15-Dec-06	194.85
19-May-94	194.87	15-Apr-07	194.78
23-Jun-94	194.60	15-Aug-07	193.83
21-Jul-94	194.23	15-Nov-07	194.59
26-Aug-94	194.17	15-Apr-08	195.09
20-Sep-94	193.89	15-Sep-08	195.11
25-Oct-94	194.63	15-Apr-09	194.90
24-Nov-94	194.84	15-Sep-09	194.65
20-Mar-95	195.08	27-Apr-10	194.82
15-Apr-95	194.89	04-Oct-10	194.78
26-May-95	194.90	15-Apr-11	194.94
31-Jul-95	194.53	15-Oct-11	194.72
06-Dec-95	194.92	15-Apr-12	194.88
03-Aug-96	194.71	15-Oct-12	194.78
22-Nov-96	194.88	05-Apr-13	194.92
23-Mar-97	194.94	15-Oct-13	194.88
28-Jul-97	194.28	15-Mar-15	194.85
17-Nov-97	194.79	15-Sep-15	194.71
07-Apr-98	194.96	16-Apr-16	194.86
20-Jul-98	194.38	16-Sep-16	193.68
01-Dec-98	194.86	13-Apr-17	194.81
22-Mar-99	194.89	05-Oct-17	194.52
15-Dec-99	194.85	05-Apr-18	194.84
15-Apr-00	194.85	11-Sep-18	194.08
15-Aug-00	194.64	05-Apr-19	194.65
15-Nov-00	194.85	28-Aug-19	193.72
15-Apr-01	194.86	26-Aug-20	193.34
15-Jul-01	194.25	16-Mar-21	194.80
15-Dec-01	194.76	26-Sep-21	194.60
15-Apr-02	194.82	01-Apr-22	194.80
15-Aug-02	194.61	01-Sep-22	193.53
15-Nov-02	194.67	01-Mar-23	194.82
15-Jul-03	194.26	01-Sep-23	194.22
15-Nov-03	194.81	07-Mar-24	194.82
15-Jul-04	194.85	01-Sep-24	194.13

BH-81-II

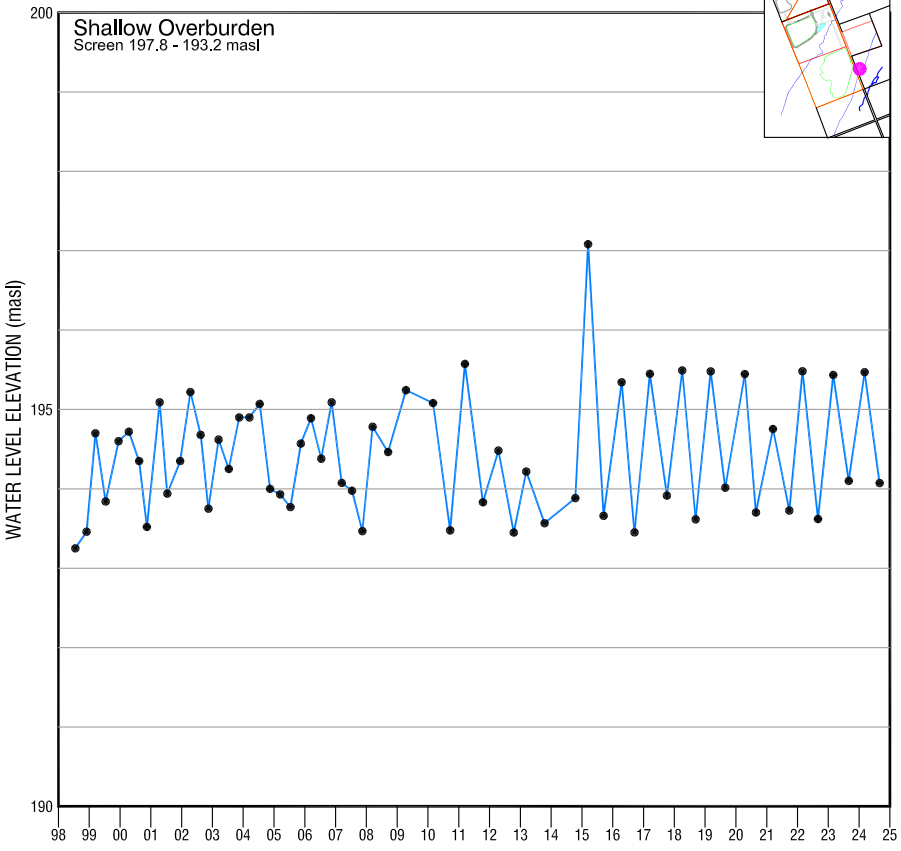


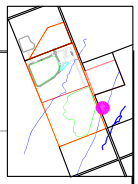


MP Elevation 199.90 masl
Grade 199.0 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-98	193.60	15-Oct-14	193.66
01-Dec-98	193.32	15-Mar-15	193.95
15-Mar-99	194.13	15-Sep-15	193.41
15-Jul-99	193.54	16-Apr-16	194.43
15-Dec-99	194.10	16-Sep-16	192.62
15-Apr-00	193.93	17-Mar-17	194.12
15-Aug-00	193.92	05-Oct-17	193.37
15-Nov-00	193.31	05-Apr-18	194.43
15-Apr-01	194.53	11-Sep-18	193.16
15-Jul-01	193.58	08-Mar-19	193.60
15-Dec-01	191.01	28-Aug-19	193.44
15-Apr-02	194.67	16-Apr-20	194.60
15-Aug-02	194.23	26-Aug-20	193.12
15-Nov-02	193.60	16-Mar-21	193.77
15-Mar-03	193.84	26-Sep-21	193.32
15-Jul-03	193.82	01-Mar-22	194.32
15-Nov-03	194.36	01-Sep-22	192.99
15-Mar-04	194.39	01-Mar-23	194.20
15-Jul-04	194.73	01-Sep-23	193.63
15-Nov-04	193.67	07-Mar-24	194.03
15-Mar-05	193.63	01-Sep-24	193.54
15-Jul-05	193.48		
15-Nov-05	193.95		
15-Mar-06	194.41		
15-Jul-06	193.98		
15-Nov-06	194.56		
15-Mar-07	193.75		
15-Jul-07	193.66		
15-Nov-07	193.16		
15-Mar-08	194.35		
15-Sep-08	194.13		
15-Apr-09	194.68		
15-Sep-09	193.47		
02-Mar-10	194.57		
21-Sep-10	193.20		
15-Mar-11	194.56		
15-Oct-11	193.57		
15-Apr-12	193.96		
15-Oct-12	193.07		
12-Mar-13	193.98		
15-Oct-13	193.39		

BH-81-III

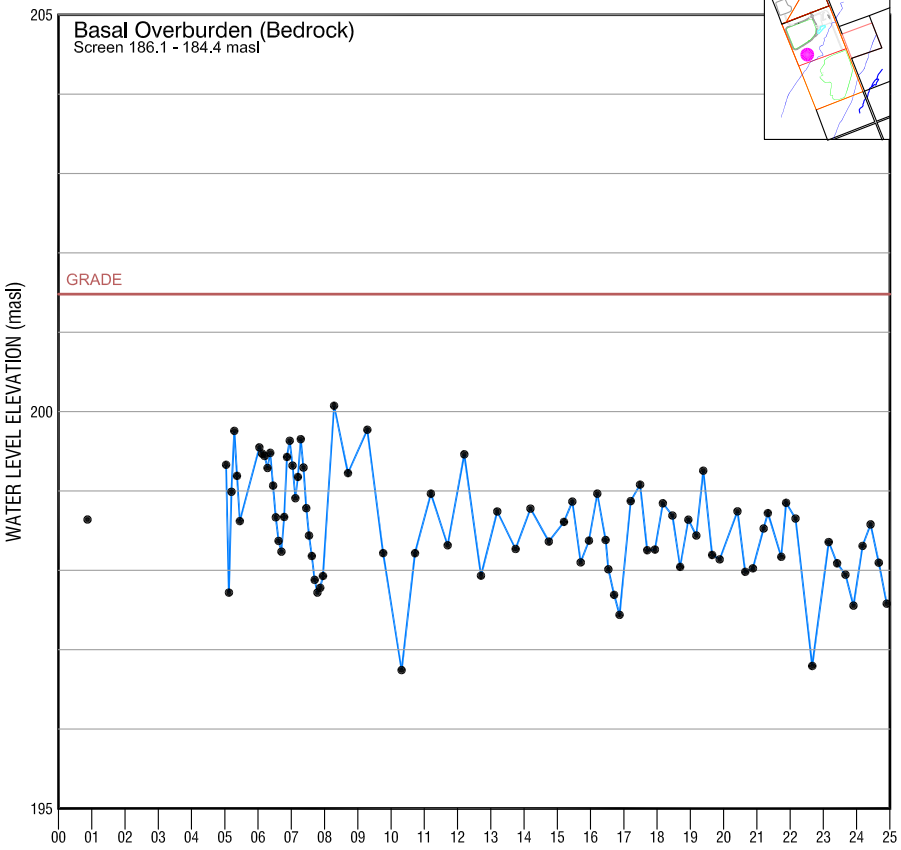


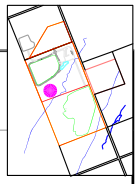


MP Elevation 200.00 masl
Grade 199.0 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-98	193.25	15-Mar-15	197.08
01-Dec-98	193.46	15-Sep-15	193.66
15-Mar-99	194.70	16-Apr-16	195.34
15-Jul-99	193.84	16-Sep-16	193.45
15-Dec-99	194.60	17-Mar-17	195.45
15-Apr-00	194.72	05-Oct-17	193.91
15-Aug-00	194.35	05-Apr-18	195.49
15-Nov-00	193.52	11-Sep-18	193.62
15-Apr-01	195.09	08-Mar-19	195.48
15-Jul-01	193.94	28-Aug-19	194.01
15-Dec-01	194.35	16-Apr-20	195.45
15-Apr-02	195.22	26-Aug-20	193.70
15-Aug-02	194.68	16-Mar-21	194.75
15-Nov-02	193.75	26-Sep-21	193.73
15-Mar-03	194.62	01-Mar-22	195.48
15-Jul-03	194.25	01-Sep-22	193.62
15-Nov-03	194.90	01-Mar-23	195.43
15-Mar-04	194.90	01-Sep-23	194.10
15-Jul-04	195.07	07-Mar-24	195.47
15-Nov-04	194.00	01-Sep-24	194.07
15-Mar-05	193.93		
15-Jul-05	193.77		
15-Nov-05	194.57		
15-Mar-06	194.89		
15-Jul-06	194.38		
15-Nov-06	195.09		
15-Mar-07	194.07		
15-Jul-07	193.98		
15-Nov-07	193.47		
15-Mar-08	194.78		
15-Sep-08	194.46		
15-Apr-09	195.24		
02-Mar-10	195.08		
21-Sep-10	193.48		
15-Mar-11	195.57		
15-Oct-11	193.83		
15-Apr-12	194.48		
15-Oct-12	193.45		
12-Mar-13	194.22		
15-Oct-13	193.57		
15-Oct-14	193.88		

BH-84-I

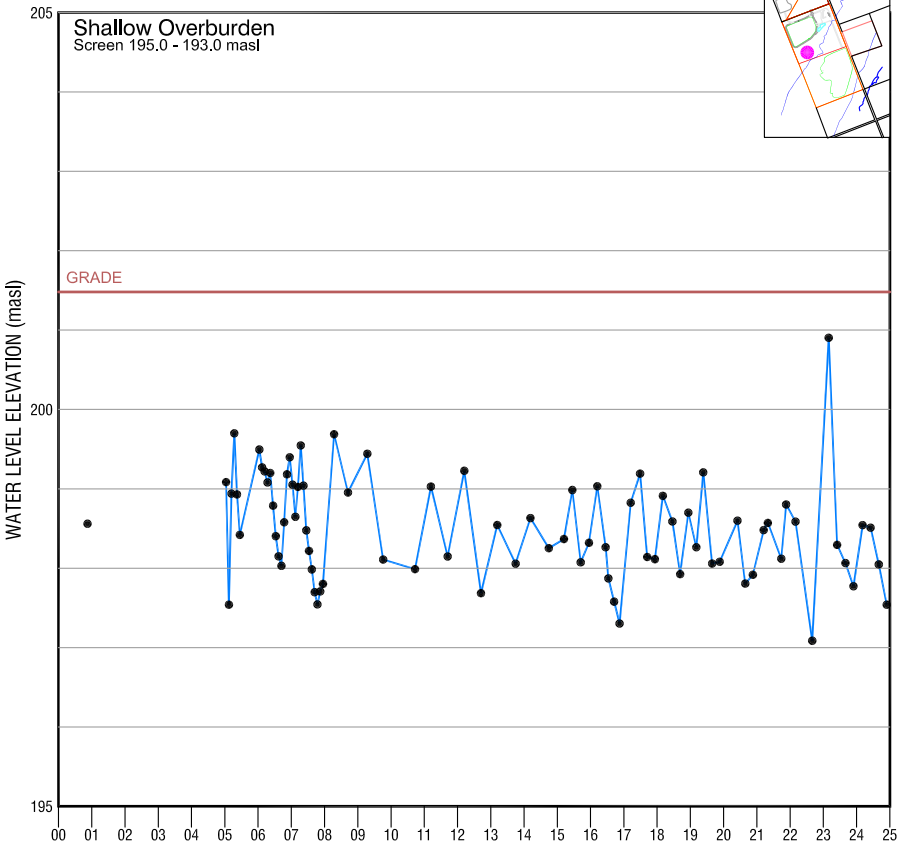


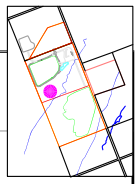


MP Elevation 202.17 masl
Grade 201.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jan-05	199.33	30-Sep-13	198.27
15-Feb-05	197.72	12-Mar-14	198.78
15-Mar-05	198.99	30-Sep-14	198.36
15-Apr-05	199.76	15-Mar-15	198.61
15-May-05	199.19	15-Jun-15	198.87
15-Jun-05	198.62	15-Sep-15	198.10
15-Jan-06	199.55	15-Dec-15	198.37
15-Feb-06	199.47	15-Mar-16	198.97
15-Mar-06	199.44	15-Jun-16	198.38
15-Apr-06	199.29	15-Jul-16	198.01
15-May-06	199.48	16-Sep-16	197.69
15-Jun-06	199.07	15-Nov-16	197.44
15-Jul-06	198.67	17-Mar-17	198.87
15-Aug-06	198.37	28-Jun-17	199.08
15-Sep-06	198.24	14-Sep-17	198.25
15-Oct-06	198.67	08-Dec-17	198.26
15-Nov-06	199.43	05-Mar-18	198.85
15-Dec-06	199.63	18-Jun-18	198.69
15-Jan-07	199.32	11-Sep-18	198.04
15-Feb-07	198.91	10-Dec-18	198.64
15-Mar-07	199.18	08-Mar-19	198.44
15-Apr-07	199.65	23-May-19	199.26
15-May-07	199.29	28-Aug-19	198.19
15-Jun-07	198.78	20-Nov-19	198.14
15-Jul-07	198.44	02-Jun-20	198.74
15-Aug-07	198.18	26-Aug-20	197.98
15-Sep-07	197.88	18-Nov-20	198.02
15-Oct-07	197.72	16-Mar-21	198.53
15-Nov-07	197.78	02-May-21	198.72
15-Dec-07	197.93	26-Sep-21	198.17
15-Apr-08	200.07	18-Nov-21	198.85
15-Sep-08	199.23	01-Mar-22	198.65
15-Apr-09	199.77	01-Sep-22	196.79
06-Oct-09	198.22	01-Mar-23	198.36
27-Apr-10	196.74	01-Jun-23	198.09
21-Sep-10	198.22	01-Sep-23	197.95
15-Mar-11	198.97	28-Nov-23	197.55
15-Sep-11	198.32	07-Mar-24	198.31
15-Mar-12	199.46	03-Jun-24	198.58
15-Sep-12	197.93	01-Sep-24	198.10
12-Mar-13	198.74	27-Nov-24	197.58

BH-84-II

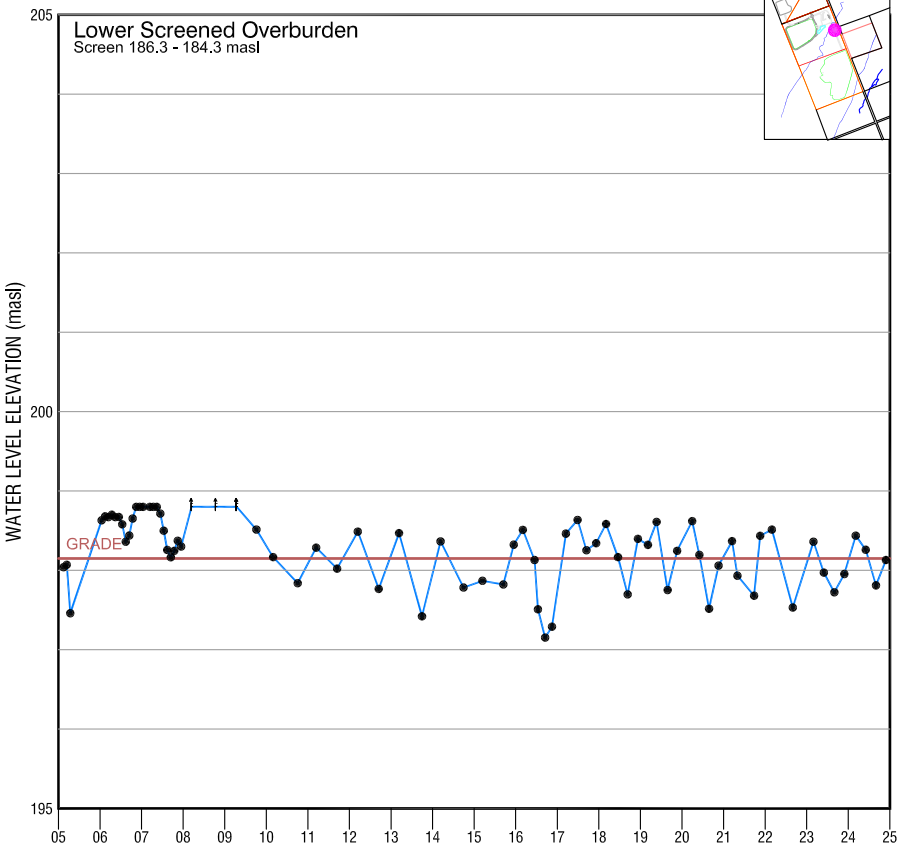


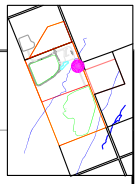


MP Elevation 202.12 masl
Grade 201.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.56	30-Sep-13	198.06
15-Jan-05	199.09	12-Mar-14	198.63
15-Feb-05	197.54	30-Sep-14	198.25
15-Mar-05	198.94	15-Mar-15	198.37
15-Apr-05	199.70	15-Jun-15	198.99
15-May-05	198.93	15-Sep-15	198.07
15-Jun-05	198.42	15-Dec-15	198.32
15-Jan-06	199.49	15-Mar-16	199.03
15-Feb-06	199.27	15-Jun-16	198.26
15-Mar-06	199.22	15-Jul-16	197.87
15-Apr-06	199.08	16-Sep-16	197.58
15-May-06	199.20	15-Nov-16	197.30
15-Jun-06	198.79	17-Mar-17	198.82
15-Jul-06	198.40	28-Jun-17	199.19
15-Aug-06	198.15	14-Sep-17	198.14
15-Sep-06	198.03	08-Dec-17	198.11
15-Oct-06	198.58	05-Mar-18	198.91
15-Nov-06	199.18	18-Jun-18	198.59
15-Dec-06	199.40	11-Sep-18	197.93
15-Jan-07	199.05	10-Dec-18	198.70
15-Feb-07	198.65	08-Mar-19	198.26
15-Mar-07	199.02	23-May-19	199.21
15-Apr-07	199.55	28-Aug-19	198.06
15-May-07	199.04	20-Nov-19	198.08
15-Jun-07	198.48	02-Jun-20	198.60
15-Jul-07	198.22	26-Aug-20	197.81
15-Aug-07	197.99	18-Nov-20	197.92
15-Sep-07	197.70	16-Mar-21	198.48
15-Oct-07	197.54	02-May-21	198.57
15-Nov-07	197.71	26-Sep-21	198.12
15-Dec-07	197.80	18-Nov-21	198.80
15-Apr-08	199.69	01-Mar-22	198.59
15-Sep-08	198.95	01-Sep-22	197.09
15-Apr-09	199.44	01-Mar-23	200.90
06-Oct-09	198.11	01-Jun-23	198.29
21-Sep-10	197.99	01-Sep-23	198.07
15-Mar-11	199.03	28-Nov-23	197.77
15-Sep-11	198.15	07-Mar-24	198.54
15-Mar-12	199.23	03-Jun-24	198.51
15-Sep-12	197.68	01-Sep-24	198.05
12-Mar-13	198.54	27-Nov-24	197.54

BH-85-I





MP Elevation 198.80 masl
Grade 198.1 masl

DATE	ELEVATION	DATE	ELEVATION
15-Feb-05	198.04	15-Sep-15	197.82
15-Mar-05	198.07	15-Dec-15	198.32
15-Apr-05	197.46	04-Mar-16	198.51
15-Jan-06	198.63	15-Jun-16	198.13
15-Feb-06	198.68	15-Jul-16	197.51
15-Mar-06	198.67	16-Sep-16	197.15
15-Apr-06	198.70	15-Nov-16	197.29
15-May-06	198.67	17-Mar-17	198.46
15-Jun-06	198.67	28-Jun-17	198.63
15-Jul-06	198.58	14-Sep-17	198.25
15-Aug-06	198.36	08-Dec-17	198.34
15-Sep-06	198.44	05-Mar-18	198.58
15-Oct-06	198.65	18-Jun-18	198.17
15-Nov-06	198.80	11-Sep-18	197.70
15-Dec-06	198.80	10-Dec-18	198.40
15-Jan-07	198.80	08-Mar-19	198.32
15-Mar-07	198.80	23-May-19	198.61
15-Apr-07	198.80	28-Aug-19	197.75
15-May-07	198.80	20-Nov-19	198.25
15-Jun-07	198.71	31-Mar-20	198.62
15-Jul-07	198.50	02-Jun-20	198.20
15-Aug-07	198.26	26-Aug-20	197.52
15-Sep-07	198.16	18-Nov-20	198.06
15-Oct-07	198.24	16-Mar-21	198.37
15-Nov-07	198.37	02-May-21	197.93
15-Dec-07	198.30	26-Sep-21	197.68
15-Mar-08	198.80	18-Nov-21	198.43
15-Oct-08	198.80	01-Mar-22	198.51
15-Apr-09	FLW	01-Sep-22	197.53
06-Oct-09	198.51	01-Mar-23	198.36
02-Mar-10	198.17	01-Jun-23	197.97
04-Oct-10	197.84	01-Sep-23	197.72
15-Mar-11	198.29	28-Nov-23	197.95
15-Sep-11	198.02	07-Mar-24	198.44
15-Mar-12	198.49	03-Jun-24	198.26
15-Sep-12	197.77	01-Sep-24	197.81
12-Mar-13	198.47	27-Nov-24	198.13
30-Sep-13	197.42		
12-Mar-14	198.37		
30-Sep-14	197.78		
15-Mar-15	197.87		

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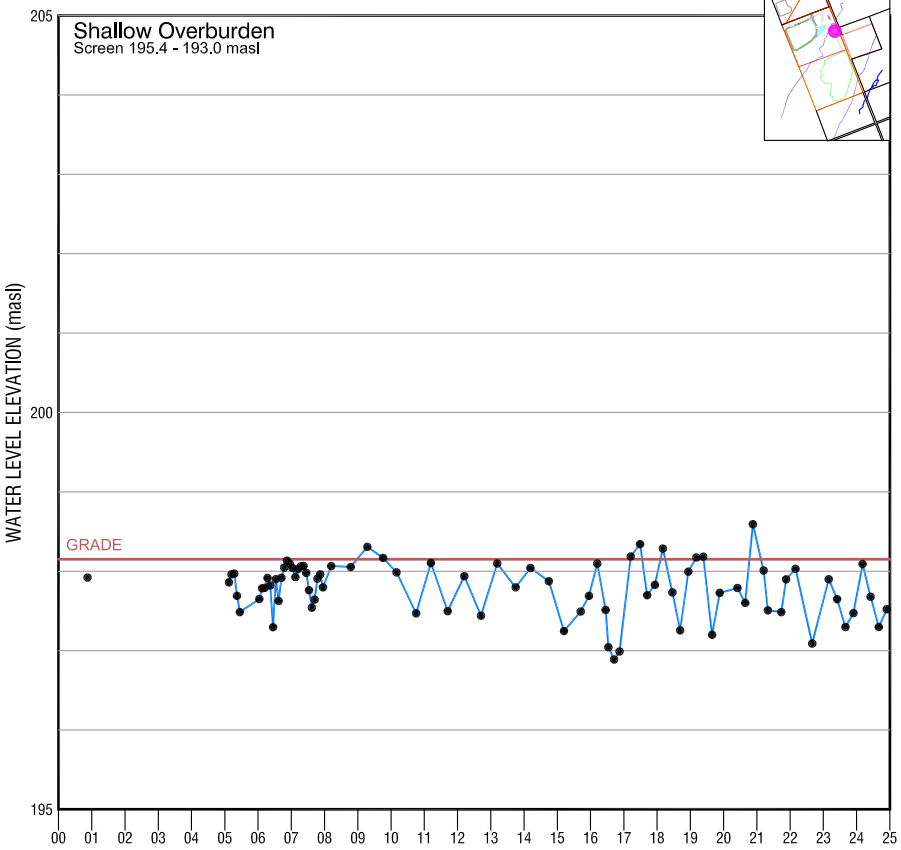

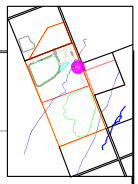

MP Elevation 198.75 masl
Grade 198.1 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	197.92	30-Sep-13	197.80
15-Feb-05	197.86	12-Mar-14	198.04
15-Mar-05	197.96	30-Sep-14	197.87
15-Apr-05	197.97	15-Mar-15	197.25
15-May-05	197.69	15-Sep-15	197.49
15-Jun-05	197.49	15-Dec-15	197.69
15-Jan-06	197.65	15-Mar-16	198.10
15-Feb-06	197.79	15-Jun-16	197.51
15-Mar-06	197.79	15-Jul-16	197.04
15-Apr-06	197.91	16-Sep-16	196.89
15-May-06	197.82	15-Nov-16	196.99
15-Jun-06	197.29	17-Mar-17	198.19
15-Jul-06	197.90	28-Jun-17	198.34
15-Aug-06	197.63	14-Sep-17	197.70
15-Sep-06	197.92	08-Dec-17	197.83
15-Oct-06	198.04	05-Mar-18	198.29
15-Nov-06	198.13	18-Jun-18	197.73
15-Dec-06	198.10	11-Sep-18	197.26
15-Jan-07	198.04	10-Dec-18	197.99
15-Feb-07	197.93	08-Mar-19	198.17
15-Mar-07	198.03	23-May-19	198.18
15-Apr-07	198.06	28-Aug-19	197.20
15-May-07	198.07	20-Nov-19	197.73
15-Jun-07	197.98	02-Jun-20	197.79
15-Jul-07	197.76	26-Aug-20	197.60
15-Aug-07	197.54	18-Nov-20	198.59
15-Sep-07	197.64	16-Mar-21	198.01
15-Oct-07	197.91	02-May-21	197.51
15-Nov-07	197.96	26-Sep-21	197.49
15-Dec-07	197.80	18-Nov-21	197.90
15-Mar-08	198.07	01-Mar-22	198.03
15-Oct-08	198.05	01-Sep-22	197.09
15-Apr-09	198.31	01-Mar-23	197.90
06-Oct-09	198.17	01-Jun-23	197.65
02-Mar-10	197.99	01-Sep-23	197.30
04-Oct-10	197.47	28-Nov-23	197.47
15-Mar-11	198.10	07-Mar-24	198.09
15-Sep-11	197.50	03-Jun-24	197.68
15-Mar-12	197.94	01-Sep-24	197.30
15-Sep-12	197.44	27-Nov-24	197.52
12-Mar-13	198.10		

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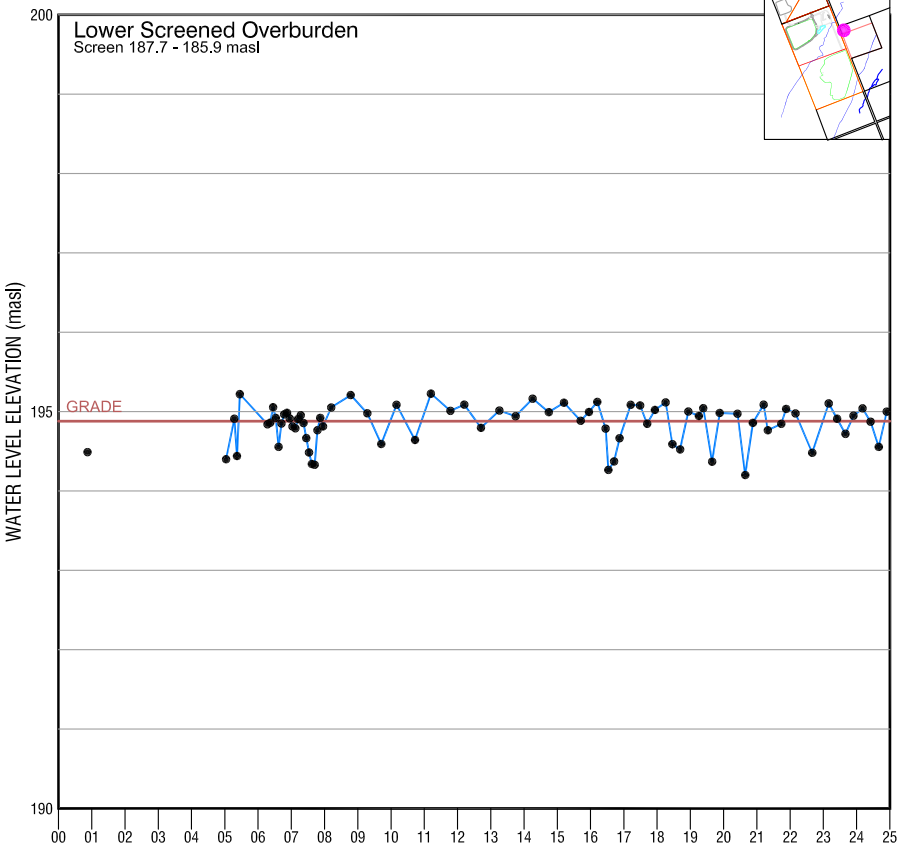

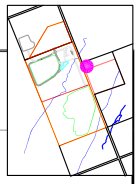

MP Elevation 195.69 masl
Grade 194.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	194.49	15-Sep-15	194.88
15-Jan-05	194.40	15-Dec-15	195.00
15-Apr-05	194.91	15-Mar-16	195.12
15-May-05	194.44	15-Jun-16	194.79
15-Jun-05	195.22	15-Jul-16	194.26
15-Apr-06	194.84	16-Sep-16	194.37
15-May-06	194.86	15-Nov-16	194.66
15-Jun-06	195.05	17-Mar-17	195.09
15-Jul-06	194.92	28-Jun-17	195.08
15-Aug-06	194.56	14-Sep-17	194.85
15-Sep-06	194.85	08-Dec-17	195.02
15-Oct-06	194.96	05-Apr-18	195.12
15-Nov-06	194.99	18-Jun-18	194.59
15-Dec-06	194.91	11-Sep-18	194.52
15-Jan-07	194.81	10-Dec-18	195.00
15-Feb-07	194.79	05-Apr-19	194.95
15-Mar-07	194.90	23-May-19	195.04
15-Apr-07	194.95	28-Aug-19	194.37
15-May-07	194.86	20-Nov-19	194.98
15-Jun-07	194.67	02-Jun-20	194.97
15-Jul-07	194.49	26-Aug-20	194.20
15-Aug-07	194.34	18-Nov-20	194.86
15-Sep-07	194.33	16-Mar-21	195.09
15-Oct-07	194.76	02-May-21	194.76
15-Nov-07	194.92	26-Sep-21	194.85
15-Dec-07	194.81	18-Nov-21	195.03
15-Mar-08	195.05	01-Mar-22	194.98
15-Oct-08	195.21	01-Sep-22	194.48
15-Apr-09	194.98	01-Mar-23	195.10
15-Sep-09	194.59	01-Jun-23	194.91
02-Mar-10	195.09	01-Sep-23	194.72
21-Sep-10	194.64	28-Nov-23	194.95
15-Mar-11	195.23	07-Mar-24	195.04
15-Oct-11	195.01	03-Jun-24	194.87
15-Mar-12	195.09	01-Sep-24	194.55
15-Sep-12	194.80	27-Nov-24	195.00
05-Apr-13	195.01		
30-Sep-13	194.94		
05-Apr-14	195.16		
30-Sep-14	194.99		
15-Mar-15	195.11		

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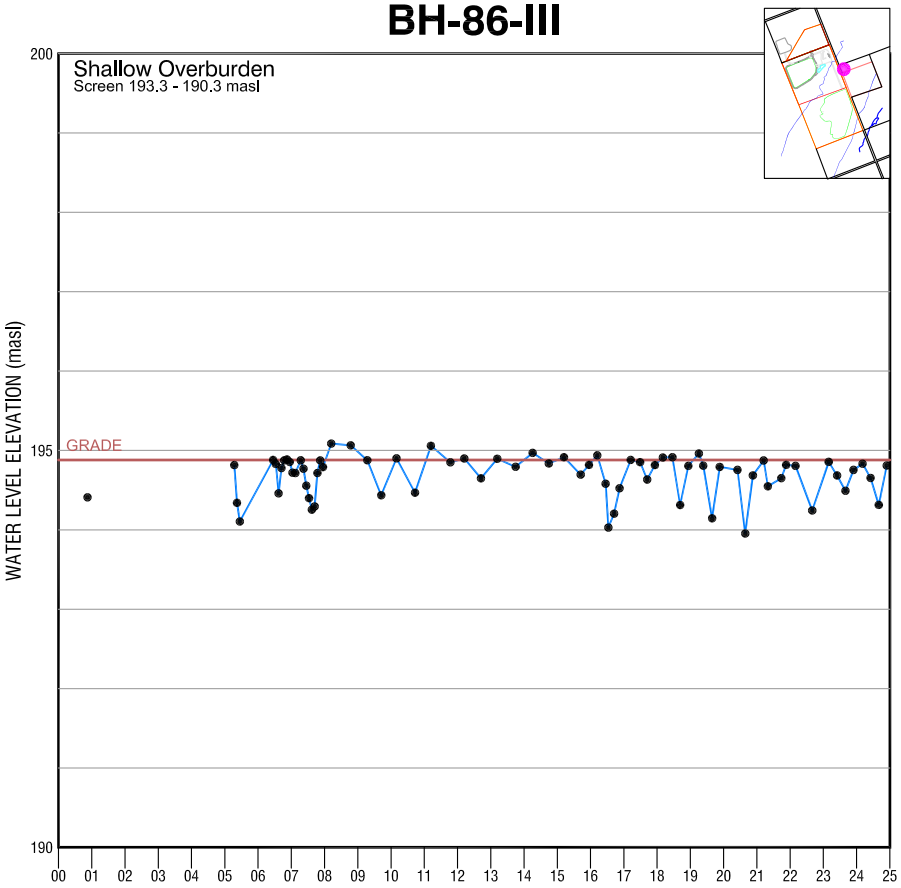

MP Elevation 195.75 masl
Grade 194.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	194.41	15-Jul-16	194.03
15-Apr-05	194.82	16-Sep-16	194.20
15-May-05	194.34	15-Nov-16	194.52
15-Jun-05	194.10	17-Mar-17	194.88
15-Jun-06	194.88	28-Jun-17	194.85
15-Jul-06	194.83	14-Sep-17	194.63
15-Aug-06	194.46	08-Dec-17	194.82
15-Sep-06	194.78	05-Mar-18	194.91
15-Oct-06	194.88	18-Jun-18	194.91
15-Nov-06	194.89	11-Sep-18	194.31
15-Dec-06	194.85	10-Dec-18	194.81
15-Jan-07	194.72	05-Apr-19	194.96
15-Feb-07	194.71	23-May-19	194.81
15-Apr-07	194.88	28-Aug-19	194.15
15-May-07	194.77	20-Nov-19	194.79
15-Jun-07	194.56	02-Jun-20	194.76
15-Jul-07	194.40	26-Aug-20	193.95
15-Aug-07	194.25	18-Nov-20	194.69
15-Sep-07	194.29	16-Mar-21	194.87
15-Oct-07	194.72	02-May-21	194.55
15-Nov-07	194.88	26-Sep-21	194.65
15-Dec-07	194.79	18-Nov-21	194.82
15-Mar-08	195.09	01-Mar-22	194.81
15-Oct-08	195.07	01-Sep-22	194.24
15-Apr-09	194.88	01-Mar-23	194.86
15-Sep-09	194.44	01-Jun-23	194.68
02-Mar-10	194.90	01-Sep-23	194.49
21-Sep-10	194.47	28-Nov-23	194.76
15-Mar-11	195.06	07-Mar-24	194.83
15-Oct-11	194.85	03-Jun-24	194.65
15-Mar-12	194.90	01-Sep-24	194.31
15-Sep-12	194.65	27-Nov-24	194.81
12-Mar-13	194.90		
30-Sep-13	194.79		
05-Apr-14	194.97		
30-Sep-14	194.84		
15-Mar-15	194.91		
15-Sep-15	194.70		
15-Dec-15	194.82		
15-Mar-16	194.94		
15-Jun-16	194.58		

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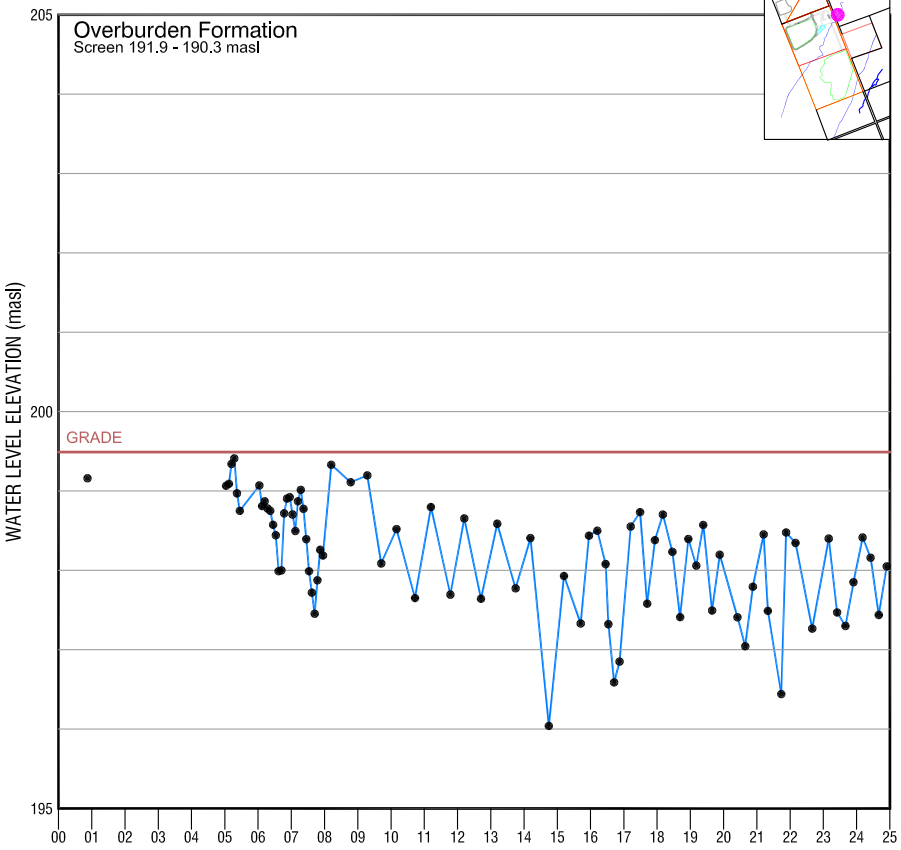

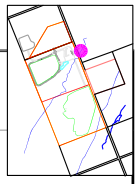

MP Elevation 200.31 masl
Grade 199.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	199.16	12-Mar-13	198.59
15-Jan-05	199.07	30-Sep-13	197.77
15-Feb-05	199.09	12-Mar-14	198.41
15-Mar-05	199.34	30-Sep-14	196.04
15-Apr-05	199.41	15-Mar-15	197.93
15-May-05	198.97	15-Sep-15	197.33
15-Jun-05	198.75	15-Dec-15	198.44
15-Jan-06	199.07	15-Mar-16	198.50
15-Feb-06	198.81	15-Jun-16	198.08
15-Mar-06	198.87	15-Jul-16	197.32
15-Apr-06	198.78	16-Sep-16	196.59
15-May-06	198.75	15-Nov-16	196.85
15-Jun-06	198.57	17-Mar-17	198.55
15-Jul-06	198.44	28-Jun-17	198.73
15-Aug-06	197.99	14-Sep-17	197.58
15-Sep-06	198.00	08-Dec-17	198.38
15-Oct-06	198.72	05-Mar-18	198.70
15-Nov-06	198.90	18-Jun-18	198.23
15-Dec-06	198.92	11-Sep-18	197.41
15-Jan-07	198.70	10-Dec-18	198.40
15-Feb-07	198.49	08-Mar-19	198.06
15-Mar-07	198.87	23-May-19	198.57
15-Apr-07	199.01	28-Aug-19	197.49
15-May-07	198.77	20-Nov-19	198.20
15-Jun-07	198.39	02-Jun-20	197.41
15-Jul-07	197.99	26-Aug-20	197.04
15-Aug-07	197.72	18-Nov-20	197.79
15-Sep-07	197.45	16-Mar-21	198.45
15-Oct-07	197.88	02-May-21	197.49
15-Nov-07	198.26	26-Sep-21	196.44
15-Dec-07	198.19	18-Nov-21	198.48
15-Mar-08	199.33	01-Mar-22	198.35
15-Oct-08	199.11	01-Sep-22	197.27
15-Apr-09	199.20	01-Mar-23	198.40
15-Sep-09	198.09	01-Jun-23	197.47
02-Mar-10	198.52	01-Sep-23	197.30
21-Sep-10	197.65	28-Nov-23	197.85
15-Mar-11	198.80	07-Mar-24	198.41
15-Oct-11	197.69	03-Jun-24	198.16
15-Mar-12	198.65	01-Sep-24	197.44
15-Sep-12	197.64	27-Nov-24	198.05

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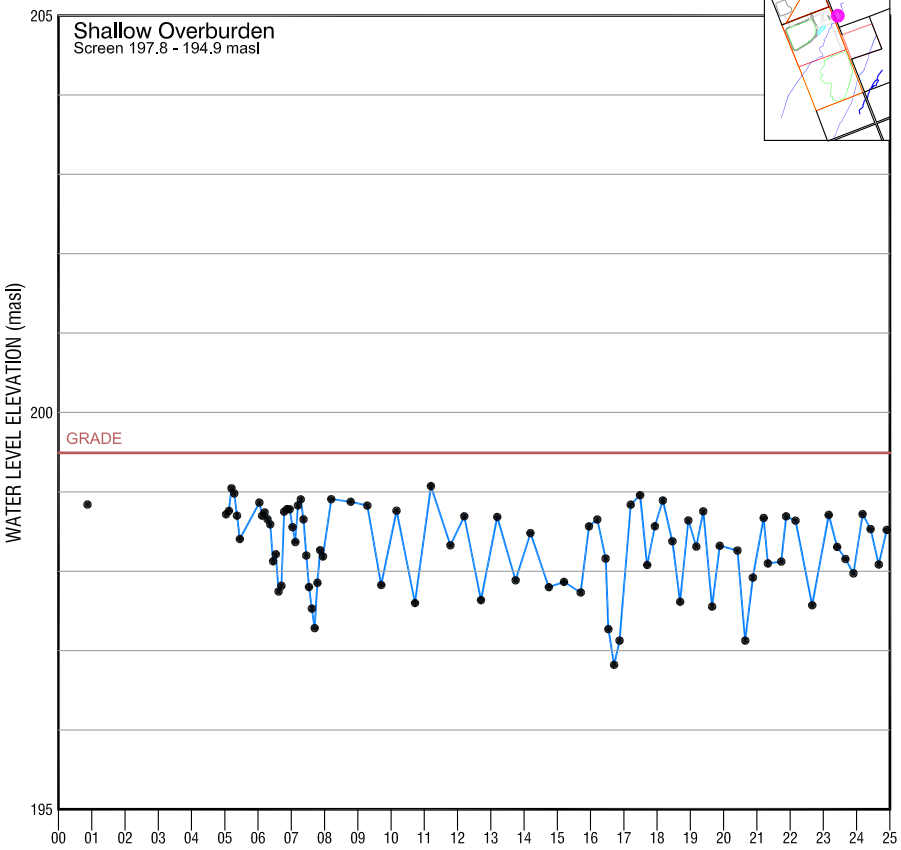

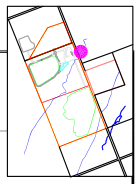

MP Elevation 200.39 masl
Grade 199.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.84	12-Mar-13	198.68
15-Jan-05	198.72	30-Sep-13	197.89
15-Feb-05	198.76	12-Mar-14	198.48
15-Mar-05	199.04	30-Sep-14	197.80
15-Apr-05	198.98	15-Mar-15	197.87
15-May-05	198.70	15-Sep-15	197.73
15-Jun-05	198.40	15-Dec-15	198.57
15-Jan-06	198.87	15-Mar-16	198.65
15-Feb-06	198.70	15-Jun-16	198.16
15-Mar-06	198.74	15-Jul-16	197.27
15-Apr-06	198.65	16-Sep-16	196.82
15-May-06	198.59	15-Nov-16	197.13
15-Jun-06	198.13	17-Mar-17	198.84
15-Jul-06	198.21	28-Jun-17	198.96
15-Aug-06	197.74	14-Sep-17	198.08
15-Sep-06	197.82	08-Dec-17	198.57
15-Oct-06	198.75	05-Mar-18	198.89
15-Nov-06	198.78	18-Jun-18	198.38
15-Dec-06	198.78	11-Sep-18	197.62
15-Jan-07	198.55	10-Dec-18	198.64
15-Feb-07	198.37	08-Mar-19	198.31
15-Mar-07	198.83	23-May-19	198.75
15-Apr-07	198.90	28-Aug-19	197.55
15-May-07	198.65	20-Nov-19	198.32
15-Jun-07	198.20	02-Jun-20	198.26
15-Jul-07	197.80	26-Aug-20	197.13
15-Aug-07	197.53	18-Nov-20	197.92
15-Sep-07	197.28	16-Mar-21	198.67
15-Oct-07	197.85	02-May-21	198.10
15-Nov-07	198.26	26-Sep-21	198.12
15-Dec-07	198.19	18-Nov-21	198.69
15-Mar-08	198.91	01-Mar-22	198.64
15-Oct-08	198.88	01-Sep-22	197.57
15-Apr-09	198.83	01-Mar-23	198.71
15-Sep-09	197.83	01-Jun-23	198.31
02-Mar-10	198.76	01-Sep-23	198.15
21-Sep-10	197.60	28-Nov-23	197.97
15-Mar-11	199.07	07-Mar-24	198.72
15-Oct-11	198.33	03-Jun-24	198.53
15-Mar-12	198.69	01-Sep-24	198.08
15-Sep-12	197.64	27-Nov-24	198.52

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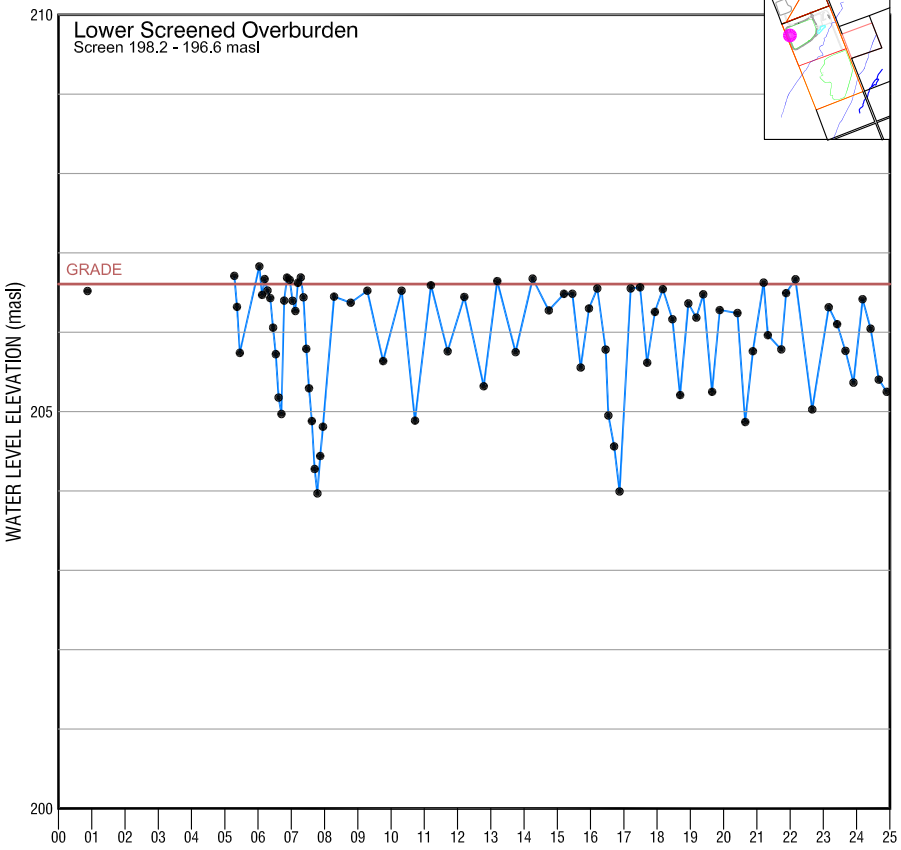

MP Elevation 207.52 masl
Grade 206.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	206.52	30-Sep-14	206.27
15-Apr-05	206.71	15-Mar-15	206.48
15-May-05	206.32	15-Jun-15	206.49
15-Jun-05	205.74	15-Sep-15	205.55
15-Jan-06	206.83	15-Dec-15	206.30
15-Feb-06	206.47	15-Mar-16	206.55
15-Mar-06	206.67	15-Jun-16	205.78
15-Apr-06	206.52	15-Jul-16	204.95
15-May-06	206.43	16-Sep-16	204.56
15-Jun-06	206.06	15-Nov-16	203.99
15-Jul-06	205.72	17-Mar-17	206.55
15-Aug-06	205.18	28-Jun-17	206.57
15-Sep-06	204.97	14-Sep-17	205.62
15-Oct-06	206.40	08-Dec-17	206.26
15-Nov-06	206.69	05-Mar-18	206.54
15-Dec-06	206.66	18-Jun-18	206.16
15-Jan-07	206.40	11-Sep-18	205.21
15-Feb-07	206.27	10-Dec-18	206.36
15-Mar-07	206.62	08-Mar-19	206.18
15-Apr-07	206.69	23-May-19	206.48
15-May-07	206.44	28-Aug-19	205.25
15-Jun-07	205.79	20-Nov-19	206.28
15-Jul-07	205.29	02-Jun-20	206.24
15-Aug-07	204.88	26-Aug-20	204.87
15-Sep-07	204.28	18-Nov-20	205.76
15-Oct-07	203.97	16-Mar-21	206.63
15-Nov-07	204.44	02-May-21	205.96
15-Dec-07	204.81	26-Sep-21	205.78
15-Apr-08	206.45	18-Nov-21	206.49
15-Oct-08	206.37	01-Mar-22	206.67
15-Apr-09	206.52	01-Sep-22	205.03
06-Oct-09	205.64	01-Mar-23	206.32
27-Apr-10	206.52	01-Jun-23	206.10
21-Sep-10	204.89	01-Sep-23	205.77
15-Mar-11	206.59	28-Nov-23	205.37
15-Sep-11	205.76	07-Mar-24	206.42
15-Mar-12	206.45	03-Jun-24	206.04
15-Oct-12	205.32	01-Sep-24	205.40
12-Mar-13	206.65	27-Nov-24	205.25
30-Sep-13	205.75		
05-Apr-14	206.68		

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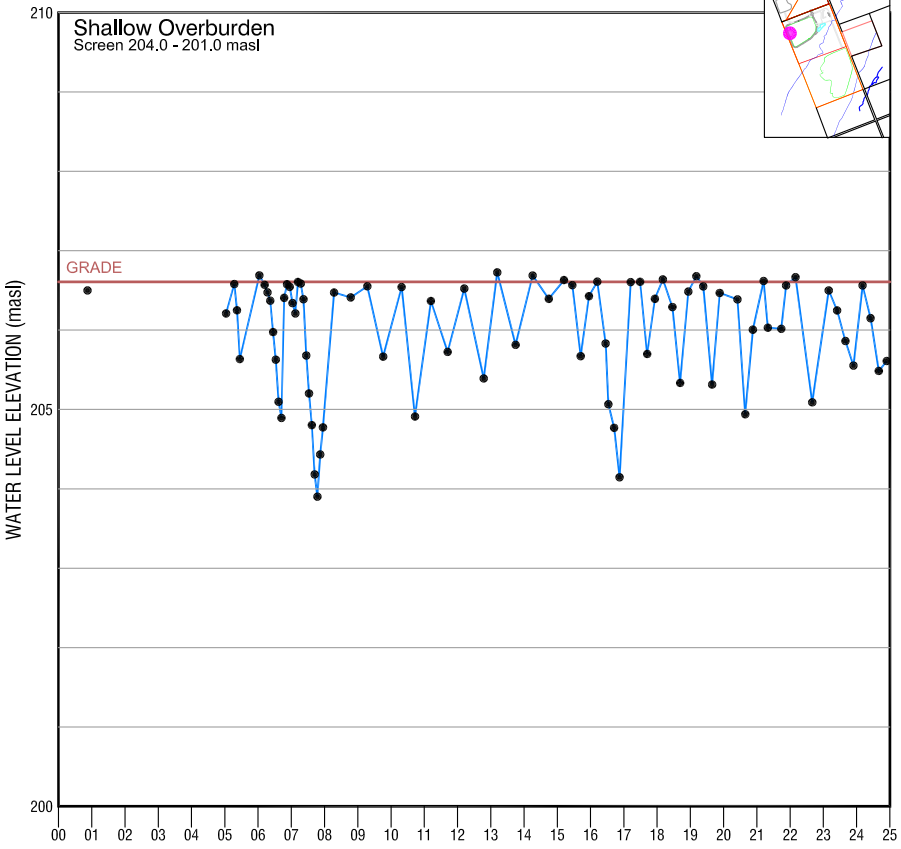

MP Elevation 207.37 masl
Grade 206.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	206.50	30-Sep-14	206.39
15-Jan-05	206.21	15-Mar-15	206.63
15-Apr-05	206.58	15-Jun-15	206.57
15-May-05	206.25	15-Sep-15	205.67
15-Jun-05	205.63	15-Dec-15	206.43
15-Jan-06	206.69	15-Mar-16	206.61
15-Mar-06	206.57	15-Jun-16	205.83
15-Apr-06	206.48	15-Jul-16	205.07
15-May-06	206.37	16-Sep-16	204.77
15-Jun-06	205.98	15-Nov-16	204.15
15-Jul-06	205.63	17-Mar-17	206.60
15-Aug-06	205.10	28-Jun-17	206.61
15-Sep-06	204.89	14-Sep-17	205.70
15-Oct-06	206.41	08-Dec-17	206.39
15-Nov-06	206.58	05-Mar-18	206.64
15-Dec-06	206.54	18-Jun-18	206.29
15-Jan-07	206.34	11-Sep-18	205.33
15-Feb-07	206.21	10-Dec-18	206.49
15-Mar-07	206.61	08-Mar-19	206.68
15-Apr-07	206.59	23-May-19	206.55
15-May-07	206.39	28-Aug-19	205.31
15-Jun-07	205.68	20-Nov-19	206.47
15-Jul-07	205.20	02-Jun-20	206.39
15-Aug-07	204.80	26-Aug-20	204.94
15-Sep-07	204.18	18-Nov-20	206.01
15-Oct-07	203.90	16-Mar-21	206.62
15-Nov-07	204.43	02-May-21	206.03
15-Dec-07	204.77	26-Sep-21	206.02
15-Apr-08	206.47	18-Nov-21	206.56
15-Oct-08	206.41	01-Mar-22	206.67
15-Apr-09	206.55	01-Sep-22	205.09
06-Oct-09	205.67	01-Mar-23	206.50
27-Apr-10	206.54	01-Jun-23	206.25
21-Sep-10	204.91	01-Sep-23	205.86
15-Mar-11	206.37	28-Nov-23	205.55
15-Sep-11	205.73	07-Mar-24	206.56
15-Mar-12	206.52	03-Jun-24	206.15
15-Oct-12	205.39	01-Sep-24	205.49
12-Mar-13	206.73	27-Nov-24	205.61
30-Sep-13	205.81		
05-Apr-14	206.69		

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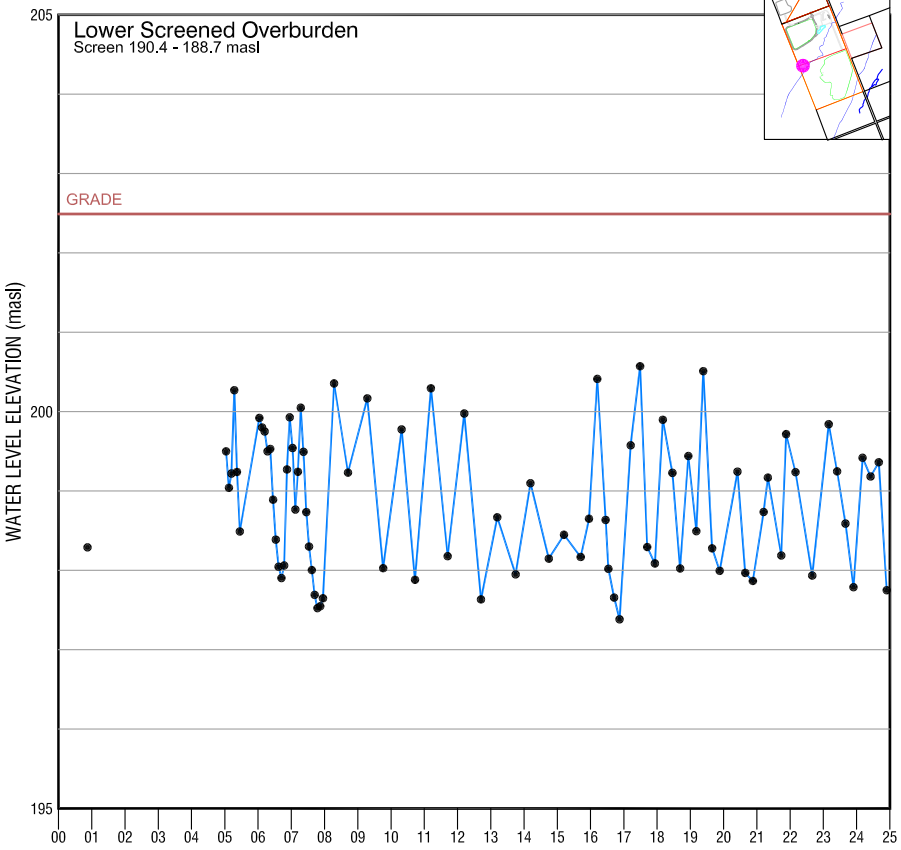

MP Elevation 203.14 masl
Grade 202.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.29	12-Mar-13	198.67
15-Jan-05	199.50	30-Sep-13	197.95
15-Feb-05	199.04	12-Mar-14	199.10
15-Mar-05	199.22	30-Sep-14	198.15
15-Apr-05	200.27	15-Mar-15	198.45
15-May-05	199.24	15-Sep-15	198.17
15-Jun-05	198.49	15-Dec-15	198.65
15-Jan-06	199.92	15-Mar-16	200.41
15-Feb-06	199.80	15-Jun-16	198.63
15-Mar-06	199.75	15-Jul-16	198.02
15-Apr-06	199.50	16-Sep-16	197.66
15-May-06	199.53	15-Nov-16	197.38
15-Jun-06	198.89	17-Mar-17	199.57
15-Jul-06	198.39	28-Jun-17	200.57
15-Aug-06	198.04	14-Sep-17	198.29
15-Sep-06	197.90	08-Dec-17	198.09
15-Oct-06	198.06	05-Mar-18	199.90
15-Nov-06	199.27	18-Jun-18	199.23
15-Dec-06	199.93	11-Sep-18	198.02
15-Jan-07	199.54	10-Dec-18	199.44
15-Feb-07	198.77	08-Mar-19	198.49
15-Mar-07	199.24	23-May-19	200.51
15-Apr-07	200.05	28-Aug-19	198.28
15-May-07	199.49	20-Nov-19	197.99
15-Jun-07	198.73	02-Jun-20	199.24
15-Jul-07	198.30	26-Aug-20	197.97
15-Aug-07	198.00	18-Nov-20	197.87
15-Sep-07	197.69	16-Mar-21	198.74
15-Oct-07	197.52	02-May-21	199.17
15-Nov-07	197.55	26-Sep-21	198.19
15-Dec-07	197.65	18-Nov-21	199.72
15-Apr-08	200.35	01-Mar-22	199.24
15-Sep-08	199.23	01-Sep-22	197.93
15-Apr-09	200.17	01-Mar-23	199.84
06-Oct-09	198.03	01-Jun-23	199.25
27-Apr-10	199.78	01-Sep-23	198.59
21-Sep-10	197.88	28-Nov-23	197.79
15-Mar-11	200.29	07-Mar-24	199.42
15-Sep-11	198.18	03-Jun-24	199.18
15-Mar-12	199.98	01-Sep-24	199.36
15-Sep-12	197.63	27-Nov-24	197.75

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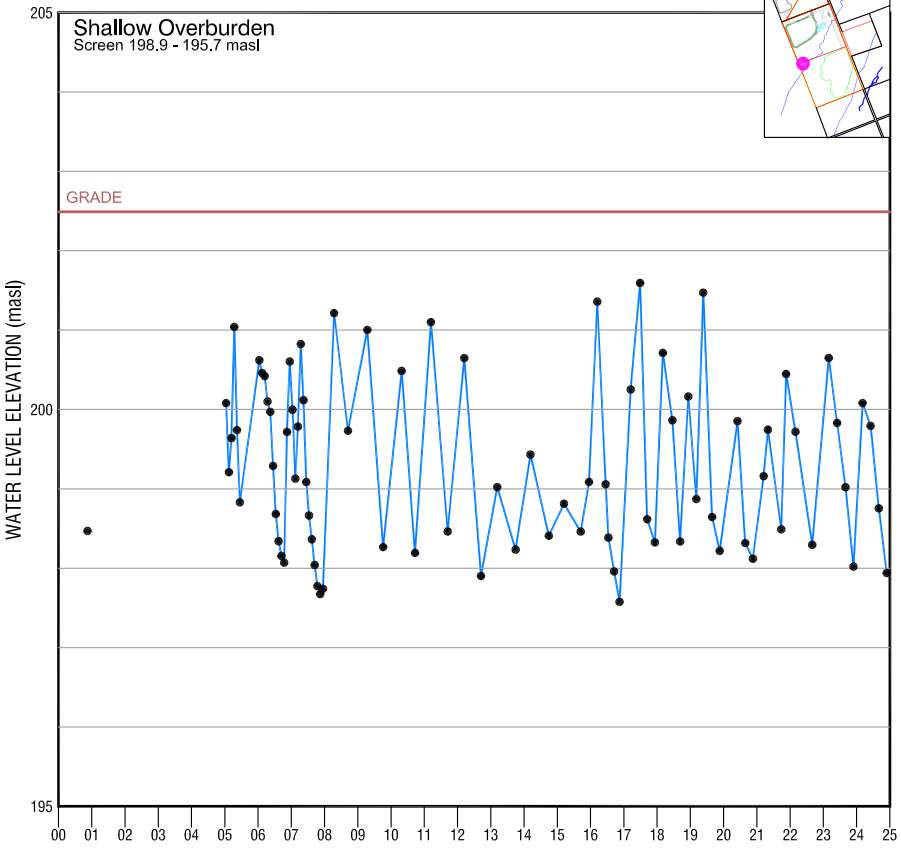

MP Elevation 203.22 masl
Grade 202.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.47	12-Mar-13	199.02
15-Jan-05	200.08	30-Sep-13	198.23
15-Feb-05	199.21	12-Mar-14	199.43
15-Mar-05	199.64	30-Sep-14	198.41
15-Apr-05	201.04	15-Mar-15	198.81
15-May-05	199.74	15-Sep-15	198.46
15-Jun-05	198.83	15-Dec-15	199.09
15-Jan-06	200.62	15-Mar-16	201.36
15-Feb-06	200.46	15-Jun-16	199.06
15-Mar-06	200.42	15-Jul-16	198.38
15-Apr-06	200.10	16-Sep-16	197.96
15-May-06	199.97	15-Nov-16	197.58
15-Jun-06	199.29	17-Mar-17	200.25
15-Jul-06	198.68	28-Jun-17	201.59
15-Aug-06	198.34	14-Sep-17	198.62
15-Sep-06	198.15	08-Dec-17	198.32
15-Oct-06	198.07	05-Mar-18	200.71
15-Nov-06	199.72	18-Jun-18	199.86
15-Dec-06	200.60	11-Sep-18	198.34
15-Jan-07	200.00	10-Dec-18	200.16
15-Feb-07	199.13	08-Mar-19	198.87
15-Mar-07	199.79	23-May-19	201.47
15-Apr-07	200.82	28-Aug-19	198.65
15-May-07	200.12	20-Nov-19	198.22
15-Jun-07	199.09	02-Jun-20	199.85
15-Jul-07	198.66	26-Aug-20	198.32
15-Aug-07	198.36	18-Nov-20	198.12
15-Sep-07	198.04	16-Mar-21	199.16
15-Oct-07	197.77	02-May-21	199.74
15-Nov-07	197.67	26-Sep-21	198.49
15-Dec-07	197.74	18-Nov-21	200.45
15-Apr-08	201.21	01-Mar-22	199.72
15-Sep-08	199.73	01-Sep-22	198.29
15-Apr-09	201.00	01-Mar-23	200.65
06-Oct-09	198.27	01-Jun-23	199.83
27-Apr-10	200.49	01-Sep-23	199.02
21-Sep-10	198.19	28-Nov-23	198.02
15-Mar-11	201.10	07-Mar-24	200.08
15-Sep-11	198.46	03-Jun-24	199.79
15-Mar-12	200.65	01-Sep-24	198.76
15-Sep-12	197.90	27-Nov-24	197.94

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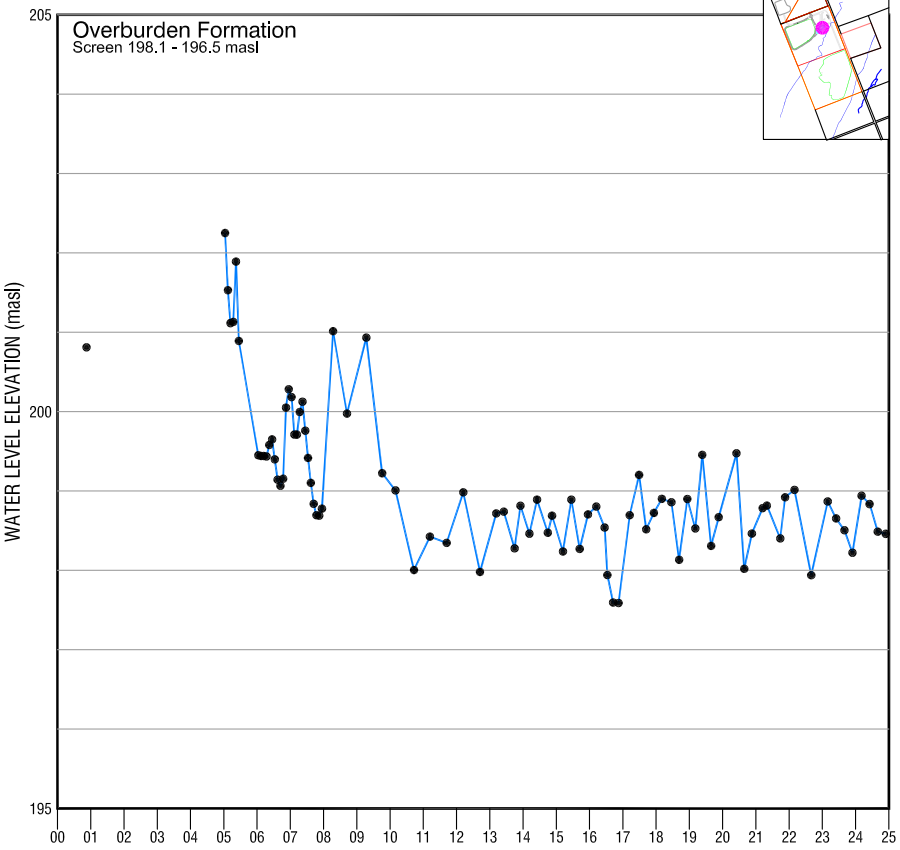

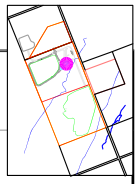

MP Elevation 206.56 masl
Grade 205.7 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	201.89	03-Jun-14	198.89
15-Jun-05	200.89	30-Sep-14	198.47
15-Jan-06	199.45	15-Nov-14	198.69
15-Feb-06	199.44	15-Mar-15	198.24
15-Mar-06	199.44	15-Jun-15	198.89
15-Apr-06	199.43	15-Sep-15	198.27
15-May-06	199.58	15-Dec-15	198.71
15-Jun-06	199.65	15-Mar-16	198.80
15-Jul-06	199.40	15-Jun-16	198.54
15-Aug-06	199.14	15-Jul-16	197.94
15-Sep-06	199.07	16-Sep-16	197.60
15-Oct-06	199.15	15-Nov-16	197.59
15-Nov-06	200.05	17-Mar-17	198.70
15-Dec-06	200.28	28-Jun-17	199.20
15-Jan-07	200.18	14-Sep-17	198.52
15-Feb-07	199.71	08-Dec-17	198.72
15-Mar-07	199.71	05-Mar-18	198.90
15-Apr-07	199.99	18-Jun-18	198.86
15-May-07	200.13	11-Sep-18	198.13
15-Jun-07	199.76	10-Dec-18	198.90
15-Jul-07	199.42	08-Mar-19	198.53
15-Aug-07	199.10	23-May-19	199.46
15-Sep-07	198.84	28-Aug-19	198.31
15-Oct-07	198.70	20-Nov-19	198.67
15-Nov-07	198.69	02-Jun-20	199.48
15-Dec-07	198.78	26-Aug-20	198.02
15-Apr-08	201.01	18-Nov-20	198.46
15-Sep-08	199.98	16-Mar-21	198.78
15-Apr-09	200.93	02-May-21	198.82
06-Oct-09	199.22	26-Sep-21	198.40
02-Mar-10	199.01	18-Nov-21	198.92
21-Sep-10	198.00	01-Mar-22	199.01
15-Mar-11	198.43	01-Sep-22	197.94
15-Sep-11	198.35	01-Mar-23	198.87
15-Mar-12	198.98	01-Jun-23	198.65
15-Sep-12	197.98	01-Sep-23	198.51
12-Mar-13	198.72	28-Nov-23	198.22
03-Jun-13	198.74	07-Mar-24	198.94
30-Sep-13	198.28	03-Jun-24	198.84
03-Dec-13	198.81	01-Sep-24	198.49
12-Mar-14	198.46	27-Nov-24	198.46

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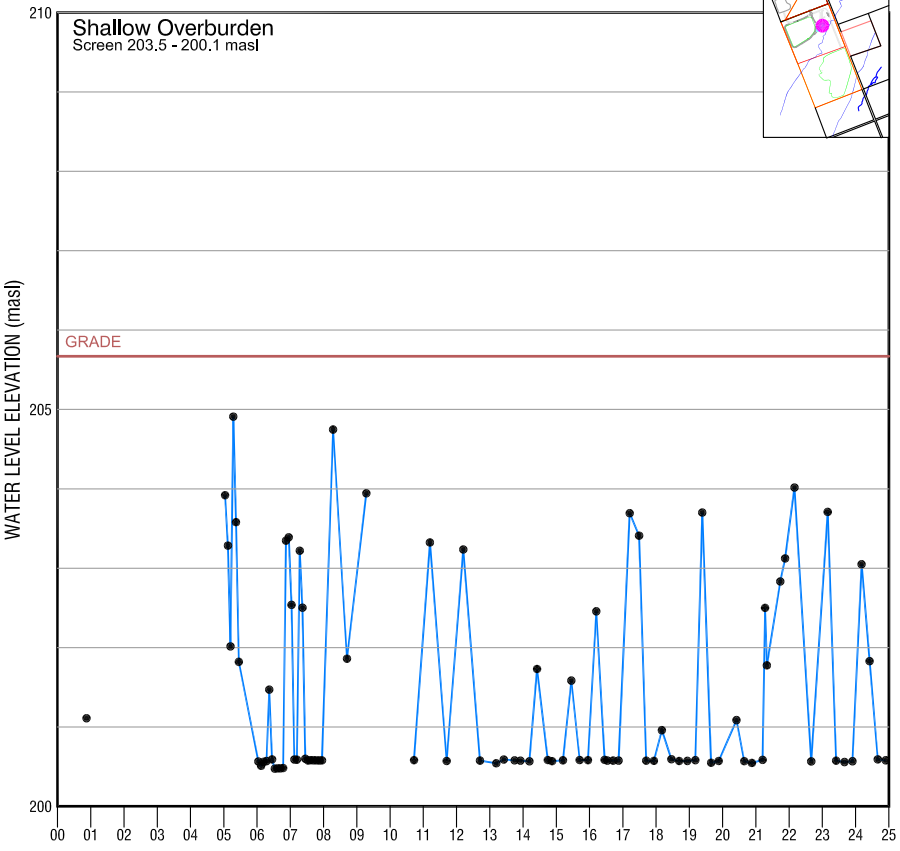

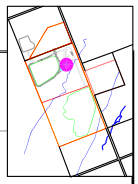

MP Elevation 206.69 masl
Grade 205.7 masl

DATE	ELEVATION	DATE	ELEVATION
15-Apr-05	204.91	30-Sep-14	200.58
15-May-05	203.58	15-Nov-14	200.57
15-Jun-05	201.82	15-Mar-15	200.58
15-Jan-06	200.57	15-Jun-15	201.58
15-Feb-06	200.51	15-Sep-15	200.58
15-Mar-06	200.56	15-Dec-15	200.58
15-Apr-06	200.57	15-Mar-16	202.46
15-May-06	201.47	15-Jun-16	200.59
15-Jun-06	200.59	15-Jul-16	200.58
15-Jul-06	200.47	16-Sep-16	200.58
15-Aug-06	200.48	15-Nov-16	200.58
15-Sep-06	200.48	17-Mar-17	203.69
15-Oct-06	200.48	28-Jun-17	203.41
15-Nov-06	203.35	14-Sep-17	200.57
15-Dec-06	203.39	08-Dec-17	200.57
15-Jan-07	202.54	05-Mar-18	200.96
15-Feb-07	200.59	18-Jun-18	200.59
15-Mar-07	200.59	11-Sep-18	200.57
15-Apr-07	203.22	10-Dec-18	200.57
15-May-07	202.50	08-Mar-19	200.58
15-Jun-07	200.60	23-May-19	203.70
15-Jul-07	200.58	28-Aug-19	200.55
15-Aug-07	200.58	20-Nov-19	200.57
15-Sep-07	200.58	02-Jun-20	201.09
15-Oct-07	200.58	26-Aug-20	200.57
15-Nov-07	200.58	18-Nov-20	200.55
15-Dec-07	200.58	16-Mar-21	200.59
15-Apr-08	204.75	12-Apr-21	202.50
15-Sep-08	201.86	02-May-21	201.78
15-Apr-09	203.94	26-Sep-21	202.83
21-Sep-10	200.58	18-Nov-21	203.12
15-Mar-11	203.32	01-Mar-22	204.02
15-Sep-11	200.57	01-Sep-22	200.57
15-Mar-12	203.24	01-Mar-23	203.71
15-Sep-12	200.58	01-Jun-23	200.57
12-Mar-13	200.54	01-Sep-23	200.56
03-Jun-13	200.59	28-Nov-23	200.57
30-Sep-13	200.58	07-Mar-24	203.05
03-Dec-13	200.57	03-Jun-24	201.83
12-Mar-14	200.57	01-Sep-24	200.59
03-Jun-14	201.73	27-Nov-24	200.58

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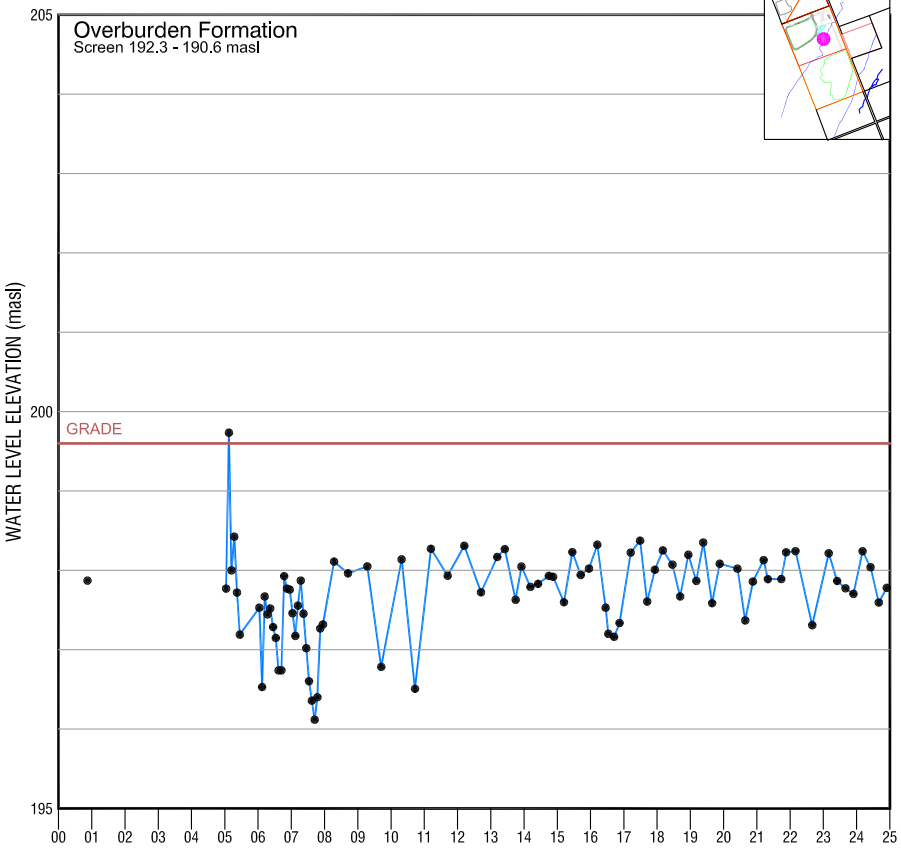

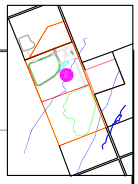

MP Elevation 200.47 masl
Grade 199.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	197.72	03-Jun-14	197.83
15-Jun-05	197.19	30-Sep-14	197.93
15-Jan-06	197.53	15-Nov-14	197.92
15-Feb-06	196.53	15-Mar-15	197.60
15-Mar-06	197.67	15-Jun-15	198.23
15-Apr-06	197.45	15-Sep-15	197.94
15-May-06	197.52	15-Dec-15	198.02
15-Jun-06	197.29	15-Mar-16	198.32
15-Jul-06	197.15	15-Jun-16	197.53
15-Aug-06	196.74	15-Jul-16	197.20
15-Sep-06	196.74	16-Sep-16	197.16
15-Oct-06	197.93	15-Nov-16	197.34
15-Nov-06	197.77	17-Mar-17	198.22
15-Dec-06	197.76	28-Jun-17	198.37
15-Jan-07	197.46	14-Sep-17	197.61
15-Feb-07	197.17	08-Dec-17	198.01
15-Mar-07	197.55	05-Mar-18	198.25
15-Apr-07	197.87	18-Jun-18	198.07
15-May-07	197.45	11-Sep-18	197.67
15-Jun-07	197.02	10-Dec-18	198.20
15-Jul-07	196.60	08-Mar-19	197.87
15-Aug-07	196.36	23-May-19	198.35
15-Sep-07	196.12	28-Aug-19	197.59
15-Oct-07	196.40	20-Nov-19	198.08
15-Nov-07	197.27	02-Jun-20	198.02
15-Dec-07	197.32	26-Aug-20	197.37
15-Apr-08	198.11	18-Nov-20	197.86
15-Sep-08	197.96	16-Mar-21	198.13
15-Apr-09	198.05	02-May-21	197.89
15-Sep-09	196.78	26-Sep-21	197.89
27-Apr-10	198.14	18-Nov-21	198.23
21-Sep-10	196.51	01-Mar-22	198.24
15-Mar-11	198.27	01-Sep-22	197.31
15-Sep-11	197.93	01-Mar-23	198.21
15-Mar-12	198.31	01-Jun-23	197.87
15-Sep-12	197.72	01-Sep-23	197.77
12-Mar-13	198.17	28-Nov-23	197.70
03-Jun-13	198.27	07-Mar-24	198.24
30-Sep-13	197.63	03-Jun-24	198.04
03-Dec-13	198.05	01-Sep-24	197.60
12-Mar-14	197.79	27-Nov-24	197.78

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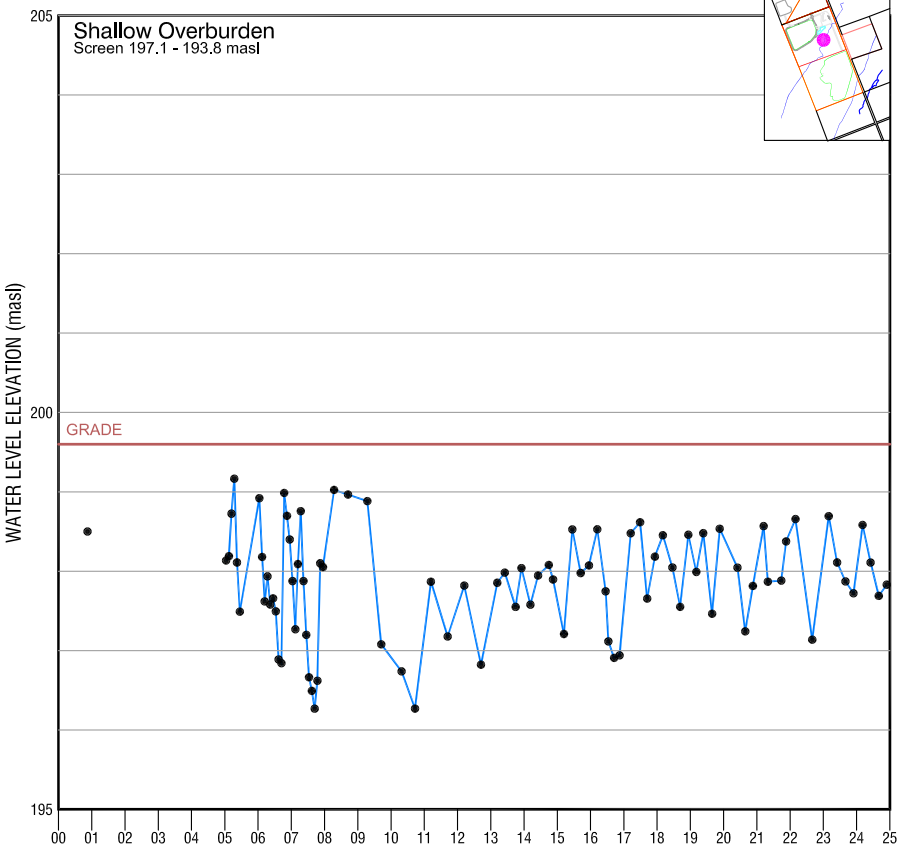

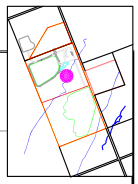

MP Elevation 200.43 masl
Grade 199.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	198.11	03-Jun-14	197.95
15-Jun-05	197.49	30-Sep-14	198.08
15-Jan-06	198.92	15-Nov-14	197.90
15-Feb-06	198.18	15-Mar-15	197.21
15-Mar-06	197.62	15-Jun-15	198.53
15-Apr-06	197.93	15-Sep-15	197.98
15-May-06	197.58	15-Dec-15	198.07
15-Jun-06	197.66	15-Mar-16	198.53
15-Jul-06	197.49	15-Jun-16	197.75
15-Aug-06	196.89	15-Jul-16	197.12
15-Sep-06	196.84	16-Sep-16	196.91
15-Oct-06	198.99	15-Nov-16	196.94
15-Nov-06	198.70	17-Mar-17	198.48
15-Dec-06	198.40	28-Jun-17	198.62
15-Jan-07	197.88	14-Sep-17	197.65
15-Feb-07	197.27	08-Dec-17	198.18
15-Mar-07	198.09	05-Mar-18	198.45
15-Apr-07	198.76	18-Jun-18	198.05
15-May-07	197.88	11-Sep-18	197.55
15-Jun-07	197.20	10-Dec-18	198.46
15-Jul-07	196.66	08-Mar-19	197.99
15-Aug-07	196.49	23-May-19	198.48
15-Sep-07	196.27	28-Aug-19	197.46
15-Oct-07	196.62	20-Nov-19	198.54
15-Nov-07	198.10	02-Jun-20	198.04
15-Dec-07	198.05	26-Aug-20	197.24
15-Apr-08	199.02	18-Nov-20	197.81
15-Sep-08	198.97	16-Mar-21	198.57
15-Apr-09	198.88	02-May-21	197.87
15-Sep-09	197.08	26-Sep-21	197.88
27-Apr-10	196.74	18-Nov-21	198.38
21-Sep-10	196.27	01-Mar-22	198.66
15-Mar-11	197.87	01-Sep-22	197.14
15-Sep-11	197.18	01-Mar-23	198.69
15-Mar-12	197.82	01-Jun-23	198.11
15-Sep-12	196.82	01-Sep-23	197.87
12-Mar-13	197.85	28-Nov-23	197.72
03-Jun-13	197.98	07-Mar-24	198.58
30-Sep-13	197.55	03-Jun-24	198.11
03-Dec-13	198.04	01-Sep-24	197.69
12-Mar-14	197.58	27-Nov-24	197.83

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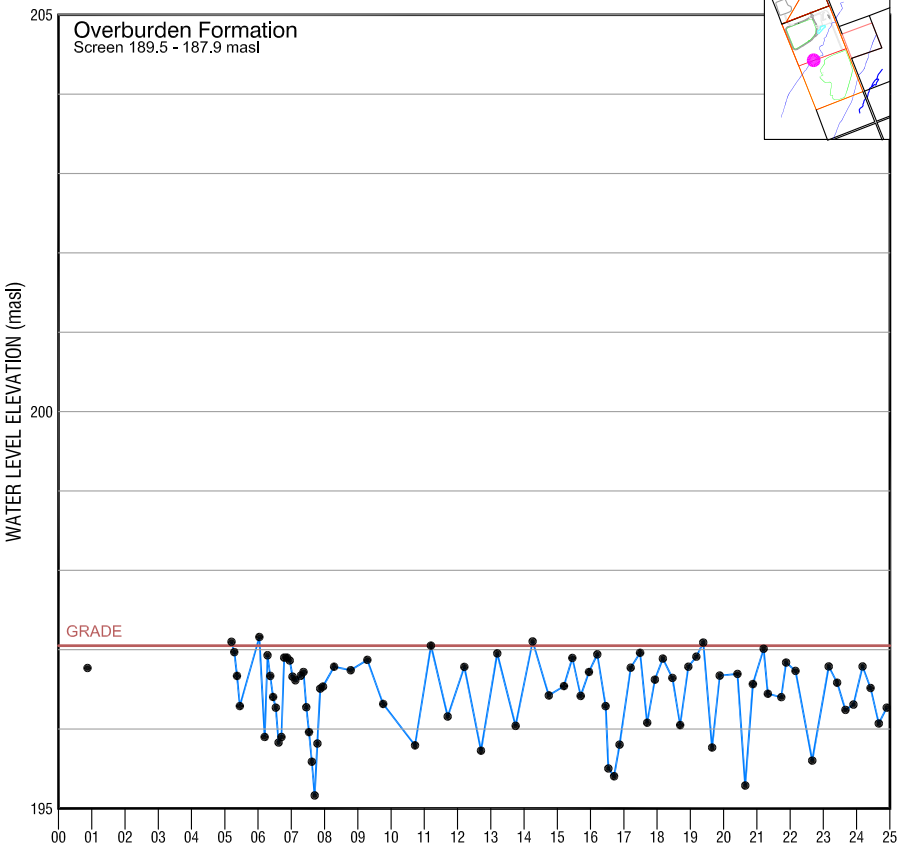

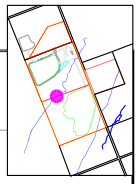

MP Elevation 197.67 masl
Grade 197.1 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	196.77	15-Jun-15	196.90
15-Mar-05	197.10	15-Sep-15	196.42
15-Apr-05	196.97	15-Dec-15	196.72
15-May-05	196.67	15-Mar-16	196.94
15-Jun-05	196.29	15-Jun-16	196.29
15-Jan-06	197.16	15-Jul-16	195.50
15-Mar-06	195.90	16-Sep-16	195.41
15-Apr-06	196.93	15-Nov-16	195.80
15-May-06	196.67	17-Mar-17	196.77
15-Jun-06	196.40	28-Jun-17	196.96
15-Jul-06	196.27	14-Sep-17	196.08
15-Aug-06	195.83	08-Dec-17	196.62
15-Sep-06	195.90	05-Mar-18	196.89
15-Oct-06	196.90	18-Jun-18	196.65
15-Nov-06	196.90	11-Sep-18	196.05
15-Dec-06	196.86	10-Dec-18	196.79
15-Jan-07	196.66	08-Mar-19	196.91
15-Feb-07	196.62	23-May-19	197.09
15-Apr-07	196.67	28-Aug-19	195.77
15-May-07	196.72	20-Nov-19	196.67
15-Jun-07	196.27	02-Jun-20	196.70
15-Jul-07	195.96	26-Aug-20	195.29
15-Aug-07	195.59	18-Nov-20	196.57
15-Sep-07	195.16	16-Mar-21	197.01
15-Oct-07	195.82	02-May-21	196.45
15-Nov-07	196.51	26-Sep-21	196.40
15-Dec-07	196.54	18-Nov-21	196.84
15-Apr-08	196.79	01-Mar-22	196.73
15-Oct-08	196.74	01-Sep-22	195.60
15-Apr-09	196.87	01-Mar-23	196.79
06-Oct-09	196.32	01-Jun-23	196.59
21-Sep-10	195.79	01-Sep-23	196.24
15-Mar-11	197.05	28-Nov-23	196.31
15-Sep-11	196.16	07-Mar-24	196.79
15-Mar-12	196.78	03-Jun-24	196.52
15-Sep-12	195.73	01-Sep-24	196.07
12-Mar-13	196.95	27-Nov-24	196.27
30-Sep-13	196.04		
05-Apr-14	197.10		
30-Sep-14	196.42		
15-Mar-15	196.54		

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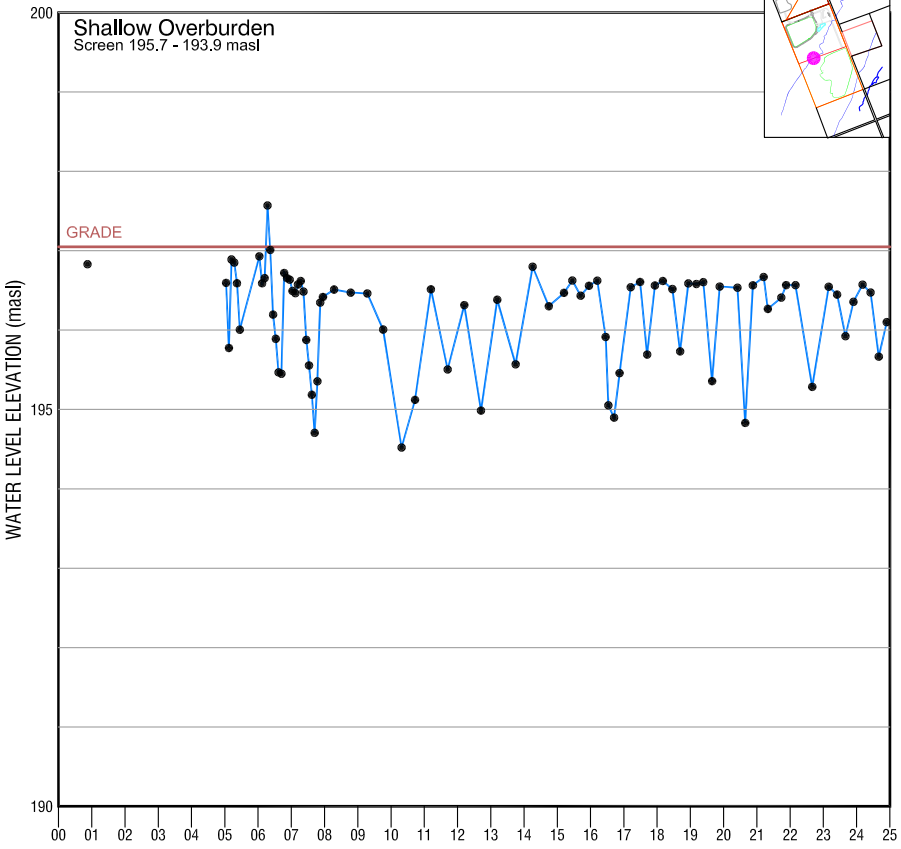

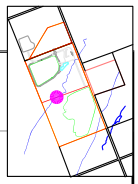

MP Elevation 197.76 masl
Grade 197.1 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jan-05	196.60	30-Sep-13	195.57
15-Feb-05	195.77	05-Apr-14	196.80
15-Mar-05	196.89	30-Sep-14	196.30
15-Apr-05	196.85	15-Mar-15	196.47
15-May-05	196.59	15-Jun-15	196.63
15-Jun-05	196.01	15-Sep-15	196.43
15-Jan-06	196.93	15-Dec-15	196.56
15-Feb-06	196.59	15-Mar-16	196.62
15-Mar-06	196.65	15-Jun-16	195.91
15-Apr-06	197.57	15-Jul-16	195.05
15-May-06	197.01	16-Sep-16	194.90
15-Jun-06	196.20	15-Nov-16	195.46
15-Jul-06	195.89	17-Mar-17	196.54
15-Aug-06	195.47	28-Jun-17	196.61
15-Sep-06	195.45	14-Sep-17	195.69
15-Oct-06	196.72	08-Dec-17	196.56
15-Nov-06	196.65	05-Mar-18	196.62
15-Dec-06	196.63	18-Jun-18	196.52
15-Jan-07	196.49	11-Sep-18	195.73
15-Feb-07	196.46	10-Dec-18	196.59
15-Mar-07	196.57	08-Mar-19	196.58
15-Apr-07	196.62	23-May-19	196.60
15-May-07	196.49	28-Aug-19	195.36
15-Jun-07	195.88	20-Nov-19	196.55
15-Jul-07	195.55	02-Jun-20	196.53
15-Aug-07	195.18	26-Aug-20	194.83
15-Sep-07	194.71	18-Nov-20	196.56
15-Oct-07	195.35	16-Mar-21	196.67
15-Nov-07	196.35	02-May-21	196.27
15-Dec-07	196.42	26-Sep-21	196.41
15-Apr-08	196.51	18-Nov-21	196.57
15-Oct-08	196.47	01-Mar-22	196.57
15-Apr-09	196.46	01-Sep-22	195.29
06-Oct-09	196.01	01-Mar-23	196.55
27-Apr-10	194.52	01-Jun-23	196.45
21-Sep-10	195.12	01-Sep-23	195.92
15-Mar-11	196.51	28-Nov-23	196.36
15-Sep-11	195.50	07-Mar-24	196.57
15-Mar-12	196.32	03-Jun-24	196.47
15-Sep-12	194.99	01-Sep-24	195.66
12-Mar-13	196.38	27-Nov-24	196.10

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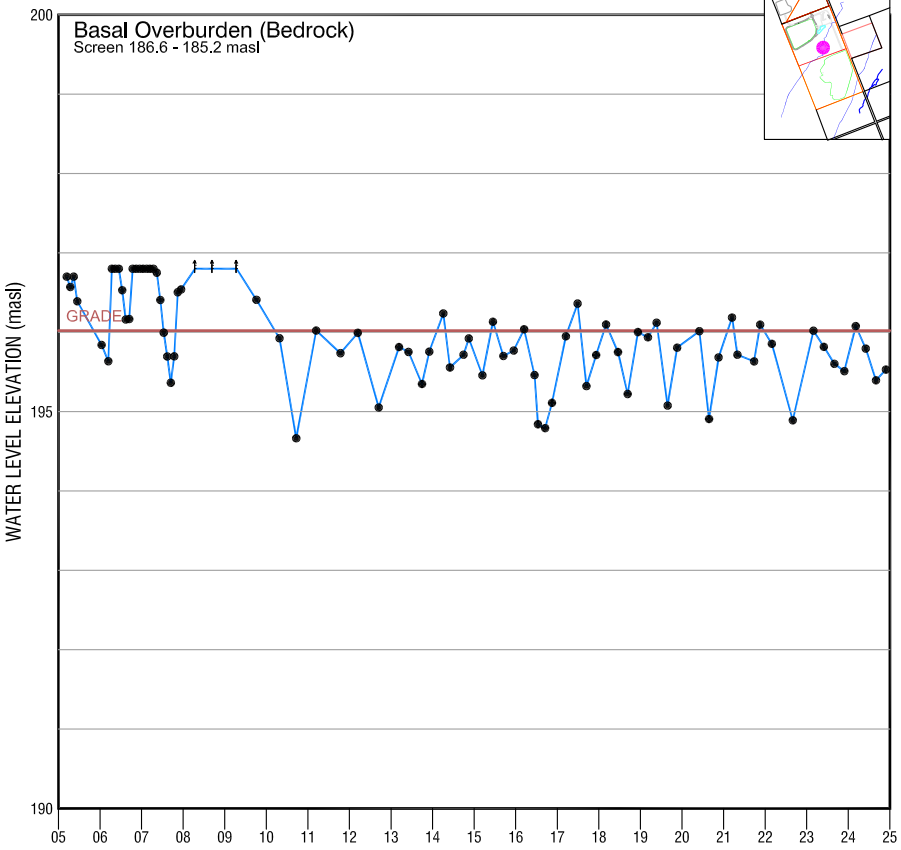

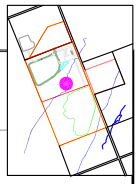

MP Elevation 196.80 masl
Grade 196.0 masl

DATE	ELEVATION	DATE	ELEVATION
15-Apr-05	196.57	03-Jun-14	195.56
15-May-05	196.70	30-Sep-14	195.72
15-Jun-05	196.39	15-Nov-14	195.92
15-Jan-06	195.84	15-Mar-15	195.46
15-Mar-06	195.63	15-Jun-15	196.13
15-Apr-06	196.80	15-Sep-15	195.70
15-May-06	196.80	15-Dec-15	195.77
15-Jun-06	196.80	15-Mar-16	196.04
15-Jul-06	196.53	15-Jun-16	195.46
15-Aug-06	196.16	15-Jul-16	194.84
15-Sep-06	196.17	16-Sep-16	194.79
15-Oct-06	196.80	15-Nov-16	195.11
15-Nov-06	196.80	17-Mar-17	195.95
15-Dec-06	196.80	28-Jun-17	196.36
15-Jan-07	196.80	14-Sep-17	195.32
15-Feb-07	196.80	08-Dec-17	195.71
15-Mar-07	196.80	05-Mar-18	196.10
15-Apr-07	196.80	18-Jun-18	195.75
15-May-07	196.75	11-Sep-18	195.22
15-Jun-07	196.41	10-Dec-18	196.00
15-Jul-07	195.99	08-Mar-19	195.94
15-Aug-07	195.70	23-May-19	196.12
15-Sep-07	195.36	28-Aug-19	195.08
15-Oct-07	195.70	20-Nov-19	195.80
15-Nov-07	196.50	02-Jun-20	196.01
15-Dec-07	196.54	26-Aug-20	194.91
15-Apr-08	196.80	18-Nov-20	195.68
15-Sep-08	196.80	16-Mar-21	196.18
15-Apr-09	196.80	02-May-21	195.72
06-Oct-09	196.41	26-Sep-21	195.63
27-Apr-10	195.92	18-Nov-21	196.10
21-Sep-10	194.66	01-Mar-22	195.85
15-Mar-11	196.02	01-Sep-22	194.89
15-Oct-11	195.74	01-Mar-23	196.02
15-Mar-12	195.99	01-Jun-23	195.82
15-Sep-12	195.05	01-Sep-23	195.60
12-Mar-13	195.81	28-Nov-23	195.51
03-Jun-13	195.75	07-Mar-24	196.08
30-Sep-13	195.35	03-Jun-24	195.79
03-Dec-13	195.76	01-Sep-24	195.39
05-Apr-14	196.24	27-Nov-24	195.53

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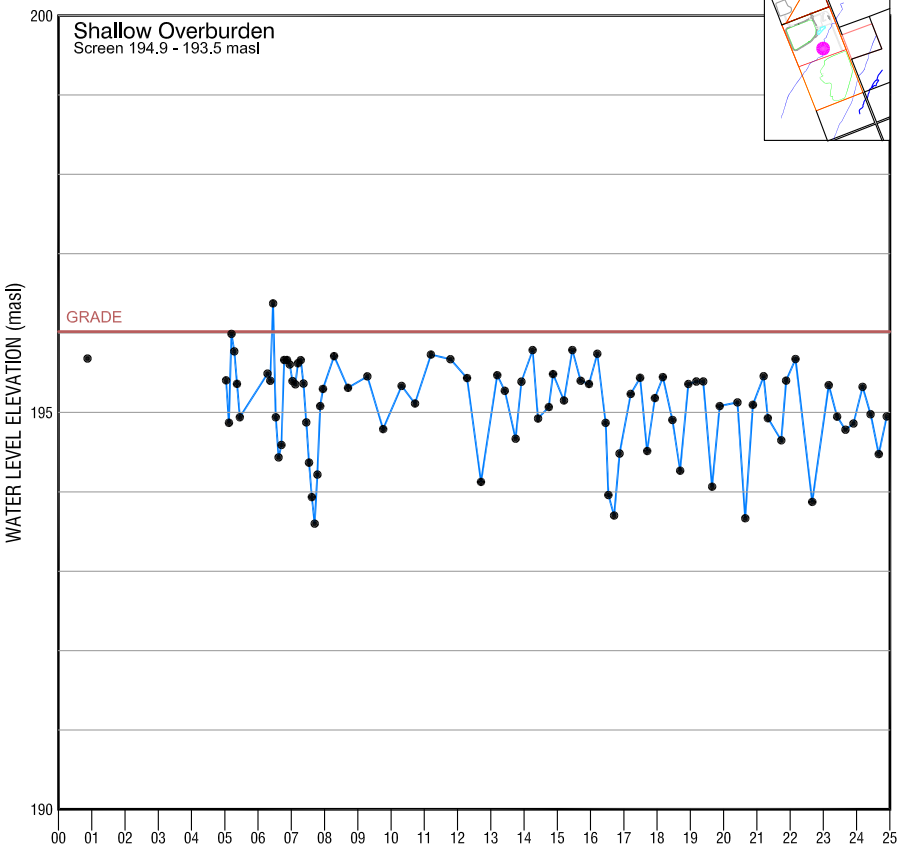

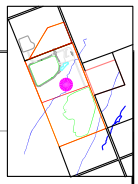

MP Elevation 196.88 masl
Grade 196.0 masl

DATE	ELEVATION	DATE	ELEVATION
15-Feb-05	194.87	03-Jun-14	194.92
15-Mar-05	195.99	30-Sep-14	195.07
15-Apr-05	195.77	15-Nov-14	195.48
15-May-05	195.36	15-Mar-15	195.15
15-Jun-05	194.94	15-Jun-15	195.79
15-Apr-06	195.49	15-Sep-15	195.40
15-May-06	195.40	15-Dec-15	195.36
15-Jun-06	196.37	15-Mar-16	195.74
15-Jul-06	194.94	15-Jun-16	194.87
15-Aug-06	194.43	15-Jul-16	193.96
15-Sep-06	194.59	16-Sep-16	193.70
15-Oct-06	195.66	15-Nov-16	194.48
15-Nov-06	195.66	17-Mar-17	195.23
15-Dec-06	195.60	28-Jun-17	195.44
15-Jan-07	195.40	14-Sep-17	194.51
15-Feb-07	195.35	08-Dec-17	195.18
15-Mar-07	195.62	05-Mar-18	195.45
15-Apr-07	195.66	18-Jun-18	194.91
15-May-07	195.36	11-Sep-18	194.27
15-Jun-07	194.88	10-Dec-18	195.36
15-Jul-07	194.37	08-Mar-19	195.39
15-Aug-07	193.93	23-May-19	195.39
15-Sep-07	193.60	28-Aug-19	194.07
15-Oct-07	194.22	20-Nov-19	195.08
15-Nov-07	195.08	02-Jun-20	195.13
15-Dec-07	195.30	26-Aug-20	193.67
15-Apr-08	195.71	18-Nov-20	195.10
15-Sep-08	195.31	16-Mar-21	195.46
15-Apr-09	195.46	02-May-21	194.93
06-Oct-09	194.79	26-Sep-21	194.65
27-Apr-10	195.34	18-Nov-21	195.40
21-Sep-10	195.11	01-Mar-22	195.67
15-Mar-11	195.73	01-Sep-22	193.87
15-Oct-11	195.67	01-Mar-23	195.34
15-Apr-12	195.43	01-Jun-23	194.95
15-Sep-12	194.13	01-Sep-23	194.78
12-Mar-13	195.47	28-Nov-23	194.86
03-Jun-13	195.27	07-Mar-24	195.32
30-Sep-13	194.67	03-Jun-24	194.98
03-Dec-13	195.39	01-Sep-24	194.48
05-Apr-14	195.79	27-Nov-24	194.95

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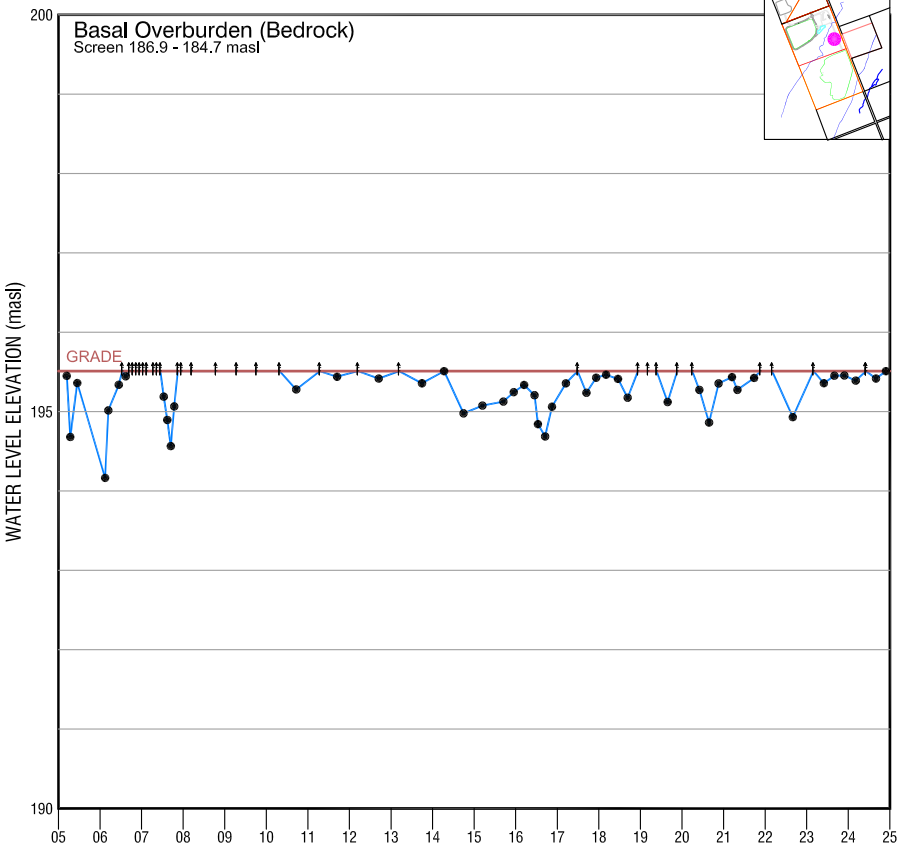

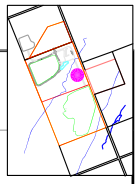

MP Elevation 195.51 masl
Grade 195.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Mar-05	195.45	15-Jun-16	195.21
15-Apr-05	194.68	15-Jul-16	194.84
15-Jun-05	195.36	16-Sep-16	194.69
15-Feb-06	194.16	15-Nov-16	195.06
15-Mar-06	195.01	17-Mar-17	195.36
15-Jun-06	195.34	28-Jun-17	195.51
15-Jul-06	195.51	14-Sep-17	195.24
15-Aug-06	195.45	08-Dec-17	195.43
15-Sep-06	195.51	05-Mar-18	195.46
15-Oct-06	195.51	18-Jun-18	195.41
15-Nov-06	195.51	11-Sep-18	195.18
15-Dec-06	195.51	10-Dec-18	195.51
15-Jan-07	195.51	08-Mar-19	195.51
15-Feb-07	195.51	23-May-19	195.51
15-Apr-07	195.51	28-Aug-19	195.12
15-May-07	195.51	20-Nov-19	195.51
15-Jun-07	195.51	31-Mar-20	195.51
15-Jul-07	195.19	02-Jun-20	195.27
15-Aug-07	194.90	26-Aug-20	194.86
15-Sep-07	194.57	18-Nov-20	195.35
15-Oct-07	195.07	16-Mar-21	195.43
15-Nov-07	195.51	02-May-21	195.27
15-Dec-07	195.51	26-Sep-21	195.42
15-Mar-08	195.51	18-Nov-21	195.51
15-Oct-08	195.51	03-Mar-22	195.51
15-Apr-09	195.51	01-Sep-22	194.93
06-Oct-09	195.51	01-Mar-23	195.51
27-Apr-10	195.51	01-Jun-23	195.36
21-Sep-10	195.28	01-Sep-23	195.45
15-Apr-11	195.51	28-Nov-23	195.46
15-Sep-11	195.44	07-Mar-24	195.39
15-Mar-12	195.51	03-Jun-24	FLW
15-Sep-12	195.42	01-Sep-24	195.42
12-Mar-13	195.51	27-Nov-24	195.51
30-Sep-13	195.36		
12-Apr-14	195.51		
30-Sep-14	194.98		
15-Mar-15	195.08		
15-Sep-15	195.13		
15-Dec-15	195.24		
15-Mar-16	195.34		

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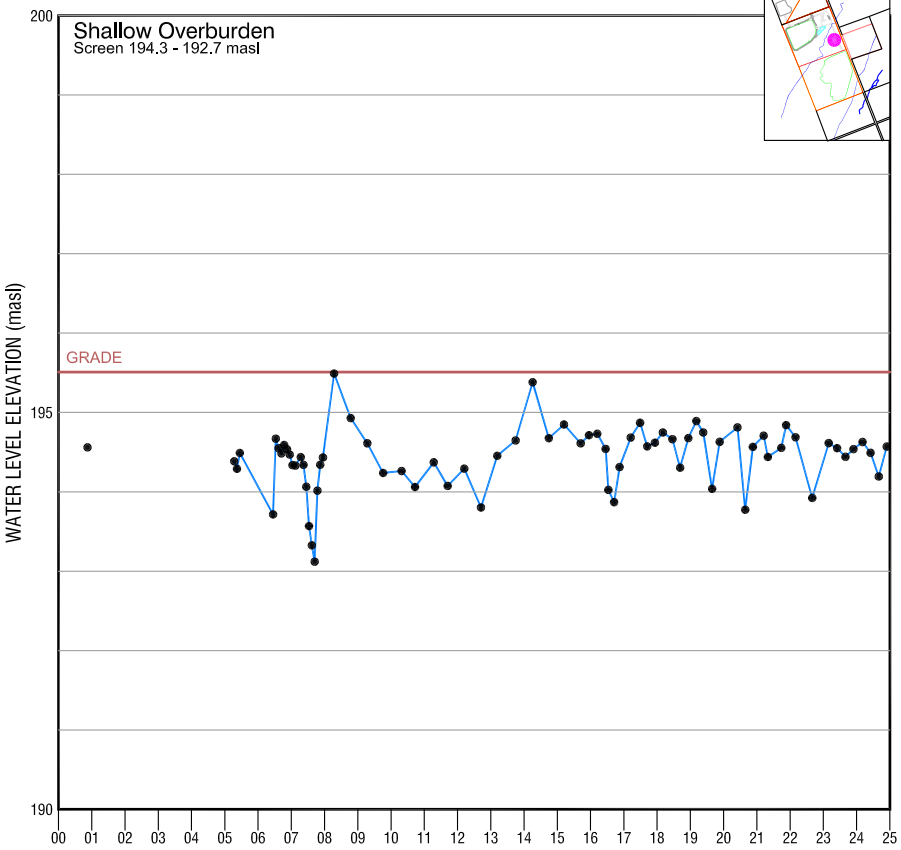
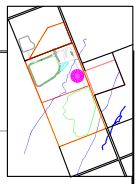
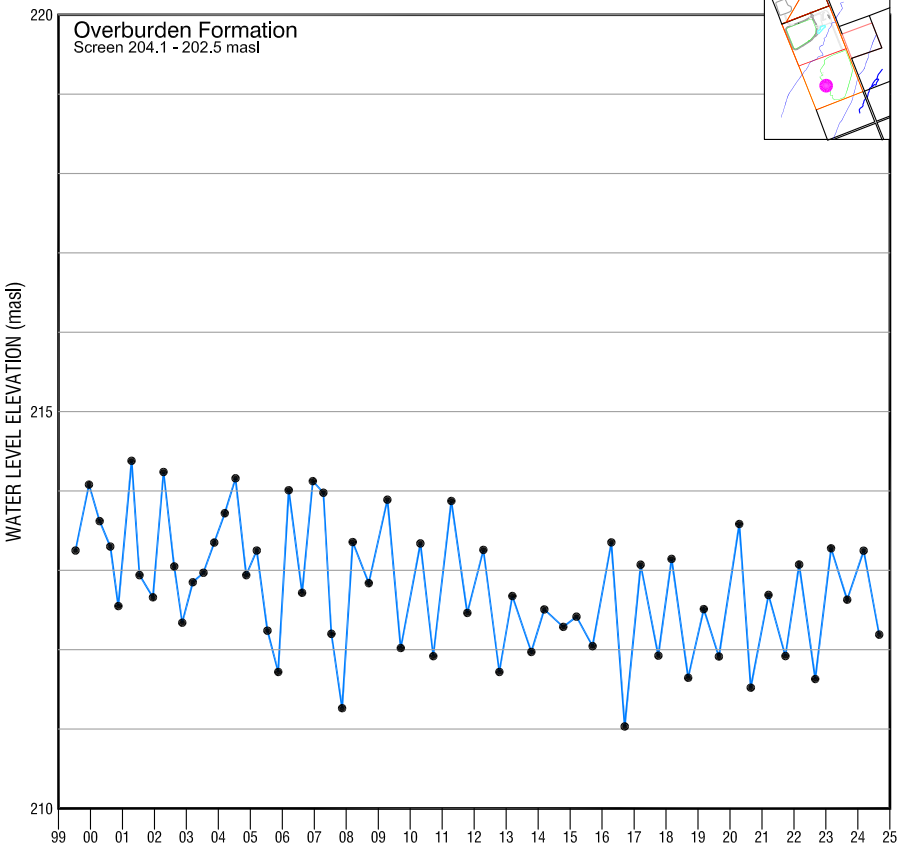




MP Elevation 195.49 masl
Grade 195.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	194.56	15-Jul-16	194.02
15-Apr-05	194.38	16-Sep-16	193.87
15-May-05	194.29	15-Nov-16	194.31
15-Jun-05	194.49	17-Mar-17	194.68
15-Jun-06	193.72	28-Jun-17	194.87
15-Jul-06	194.67	14-Sep-17	194.57
15-Aug-06	194.55	08-Dec-17	194.62
15-Sep-06	194.49	05-Mar-18	194.75
15-Oct-06	194.59	18-Jun-18	194.66
15-Nov-06	194.54	11-Sep-18	194.30
15-Dec-06	194.47	10-Dec-18	194.68
15-Jan-07	194.34	08-Mar-19	194.89
15-Feb-07	194.33	23-May-19	194.75
15-Apr-07	194.44	28-Aug-19	194.04
15-May-07	194.34	20-Nov-19	194.63
15-Jun-07	194.06	02-Jun-20	194.81
15-Jul-07	193.57	26-Aug-20	193.77
15-Aug-07	193.33	18-Nov-20	194.57
15-Sep-07	193.12	16-Mar-21	194.71
15-Oct-07	194.01	02-May-21	194.44
15-Nov-07	194.34	26-Sep-21	194.55
15-Dec-07	194.43	18-Nov-21	194.84
15-Apr-08	195.49	01-Mar-22	194.69
15-Oct-08	194.93	01-Sep-22	193.92
15-Apr-09	194.61	01-Mar-23	194.61
06-Oct-09	194.24	01-Jun-23	194.55
27-Apr-10	194.26	01-Sep-23	194.44
21-Sep-10	194.06	28-Nov-23	194.54
15-Apr-11	194.37	07-Mar-24	194.63
15-Sep-11	194.07	03-Jun-24	194.49
15-Mar-12	194.29	01-Sep-24	194.19
15-Sep-12	193.80	27-Nov-24	194.57
12-Mar-13	194.45		
30-Sep-13	194.65		
05-Apr-14	195.38		
30-Sep-14	194.68		
15-Mar-15	194.85		
15-Sep-15	194.61		
15-Dec-15	194.71		
15-Mar-16	194.73		
15-Jun-16	194.54		

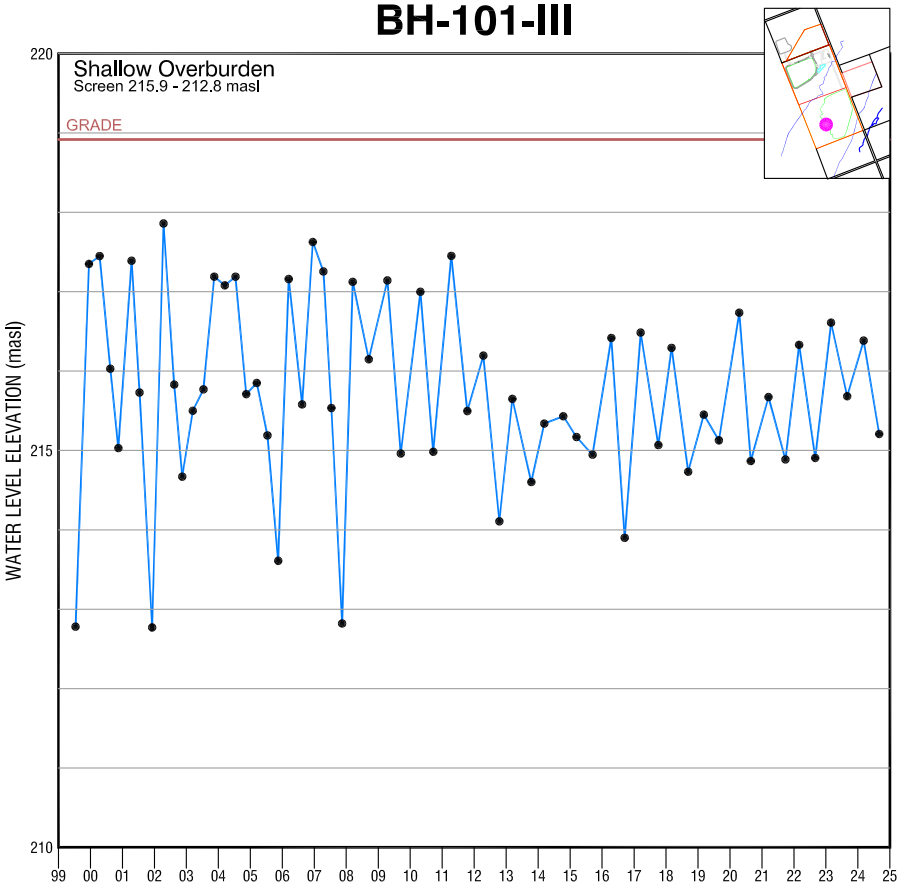
BH-101-II



MP Elevation 219.64 masl
Grade 219.0 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jul-99	213.25	15-Sep-15	212.04
15-Dec-99	214.08	16-Apr-16	213.35
15-Apr-00	213.62	16-Sep-16	211.03
15-Aug-00	213.30	17-Mar-17	213.07
15-Nov-00	212.55	05-Oct-17	211.93
15-Apr-01	214.38	05-Mar-18	213.14
15-Jul-01	212.94	11-Sep-18	211.65
15-Dec-01	212.66	08-Mar-19	212.51
15-Apr-02	214.24	28-Aug-19	211.91
15-Aug-02	213.05	16-Apr-20	213.58
15-Nov-02	212.34	26-Aug-20	211.52
15-Mar-03	212.85	16-Mar-21	212.69
15-Jul-03	212.97	26-Sep-21	211.92
15-Nov-03	213.35	01-Mar-22	213.07
15-Mar-04	213.72	01-Sep-22	211.63
15-Jul-04	214.16	01-Mar-23	213.28
15-Nov-04	212.94	01-Sep-23	212.63
15-Mar-05	213.25	07-Mar-24	213.25
15-Jul-05	212.24	01-Sep-24	212.19
15-Nov-05	211.72		
15-Mar-06	214.01		
15-Aug-06	212.72		
15-Dec-06	214.12		
15-Apr-07	213.98		
15-Jul-07	212.20		
15-Nov-07	211.26		
15-Mar-08	213.36		
15-Sep-08	212.84		
15-Apr-09	213.89		
15-Sep-09	212.02		
27-Apr-10	213.34		
21-Sep-10	211.92		
15-Apr-11	213.87		
15-Oct-11	212.46		
15-Apr-12	213.26		
15-Oct-12	211.72		
12-Mar-13	212.68		
15-Oct-13	211.97		
12-Mar-14	212.51		
15-Oct-14	212.29		
15-Mar-15	212.42		

BH-101-III



MP Elevation 219.51 masl
Grade 218.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jul-99	212.78	15-Sep-15	214.95
15-Dec-99	217.35	16-Apr-16	216.42
15-Apr-00	217.45	16-Sep-16	213.90
15-Aug-00	216.03	17-Mar-17	216.49
15-Nov-00	215.03	05-Oct-17	215.07
15-Apr-01	217.39	05-Mar-18	216.29
15-Jul-01	215.73	11-Sep-18	214.73
06-Dec-01	DRY	08-Mar-19	215.45
15-Apr-02	217.86	28-Aug-19	215.13
15-Aug-02	215.83	16-Apr-20	216.74
15-Nov-02	214.67	26-Aug-20	214.87
15-Mar-03	215.50	16-Mar-21	215.67
15-Jul-03	215.77	26-Sep-21	214.89
15-Nov-03	217.19	01-Mar-22	216.33
15-Mar-04	217.08	01-Sep-22	214.91
15-Jul-04	217.19	01-Mar-23	216.61
15-Nov-04	215.71	01-Sep-23	215.68
15-Mar-05	215.85	07-Mar-24	216.38
15-Jul-05	215.19	01-Sep-24	215.21
15-Nov-05	213.61		
15-Mar-06	217.16		
15-Aug-06	215.58		
15-Dec-06	217.63		
15-Apr-07	217.26		
15-Jul-07	215.54		
15-Nov-07	212.82		
15-Mar-08	217.13		
15-Sep-08	216.15		
15-Apr-09	217.14		
15-Sep-09	214.96		
27-Apr-10	217.00		
21-Sep-10	214.98		
15-Apr-11	217.45		
15-Oct-11	215.50		
15-Apr-12	216.20		
15-Oct-12	214.11		
12-Mar-13	215.65		
15-Oct-13	214.60		
12-Mar-14	215.34		
15-Oct-14	215.43		
15-Mar-15	215.17		

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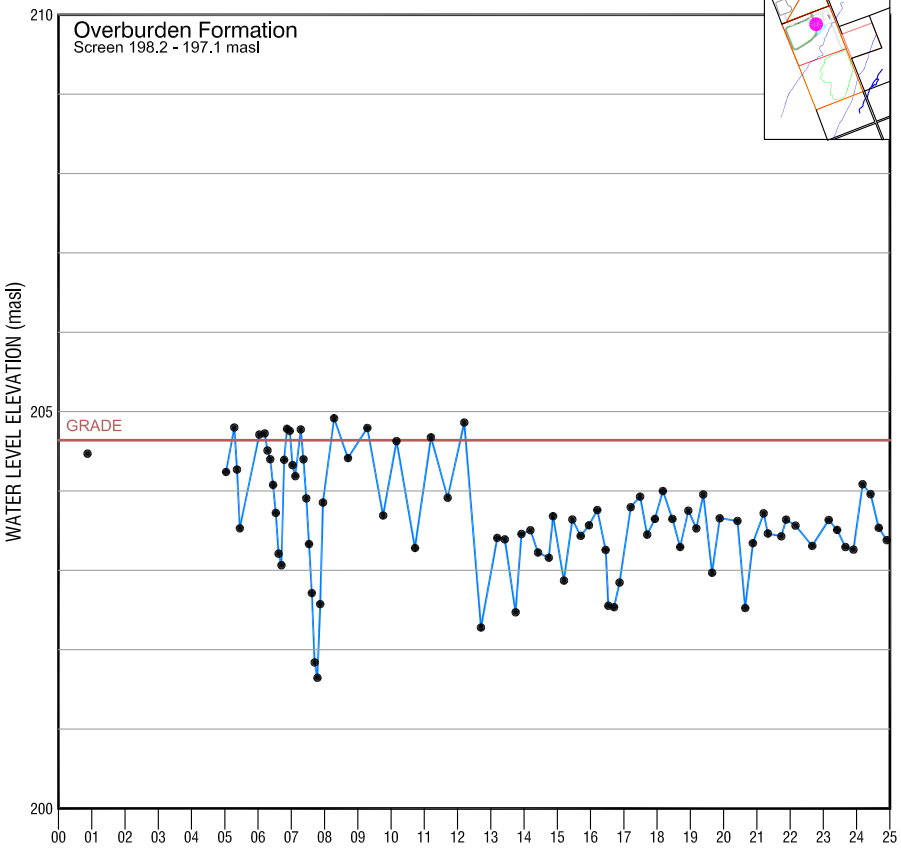

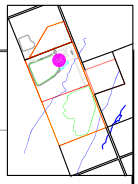

MP Elevation 205.58 masl
Grade 204.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jan-05	204.24	03-Jun-14	203.23
15-Apr-05	204.80	30-Sep-14	203.16
15-May-05	204.27	15-Nov-14	203.68
15-Jun-05	203.53	15-Mar-15	202.87
15-Jan-06	204.71	15-Jun-15	203.64
15-Mar-06	204.73	15-Sep-15	203.43
15-Apr-06	204.51	15-Dec-15	203.57
15-May-06	204.40	15-Mar-16	203.76
15-Jun-06	204.08	15-Jun-16	203.26
15-Jul-06	203.72	15-Jul-16	202.55
15-Aug-06	203.21	16-Sep-16	202.54
15-Sep-06	203.07	15-Nov-16	202.85
15-Oct-06	204.39	17-Mar-17	203.79
15-Nov-06	204.78	28-Jun-17	203.93
15-Dec-06	204.76	14-Sep-17	203.45
15-Jan-07	204.32	08-Dec-17	203.65
15-Feb-07	204.19	05-Mar-18	204.00
15-Apr-07	204.77	18-Jun-18	203.65
15-May-07	204.40	11-Sep-18	203.29
15-Jun-07	203.91	10-Dec-18	203.75
15-Jul-07	203.33	08-Mar-19	203.53
15-Aug-07	202.71	23-May-19	203.96
15-Sep-07	201.84	28-Aug-19	202.97
15-Oct-07	201.65	20-Nov-19	203.66
15-Nov-07	202.57	02-Jun-20	203.62
15-Dec-07	203.85	26-Aug-20	202.52
15-Apr-08	204.92	18-Nov-20	203.34
15-Sep-08	204.41	16-Mar-21	203.72
15-Apr-09	204.79	02-May-21	203.46
06-Oct-09	203.69	26-Sep-21	203.43
02-Mar-10	204.63	18-Nov-21	203.64
21-Sep-10	203.28	01-Mar-22	203.56
15-Mar-11	204.68	01-Sep-22	203.31
15-Sep-11	203.91	01-Mar-23	203.63
15-Mar-12	204.86	01-Jun-23	203.51
15-Sep-12	202.28	01-Sep-23	203.29
12-Mar-13	203.41	28-Nov-23	203.26
03-Jun-13	203.39	07-Mar-24	204.09
30-Sep-13	202.47	03-Jun-24	203.96
03-Dec-13	203.46	01-Sep-24	203.54
12-Mar-14	203.51	27-Nov-24	203.38

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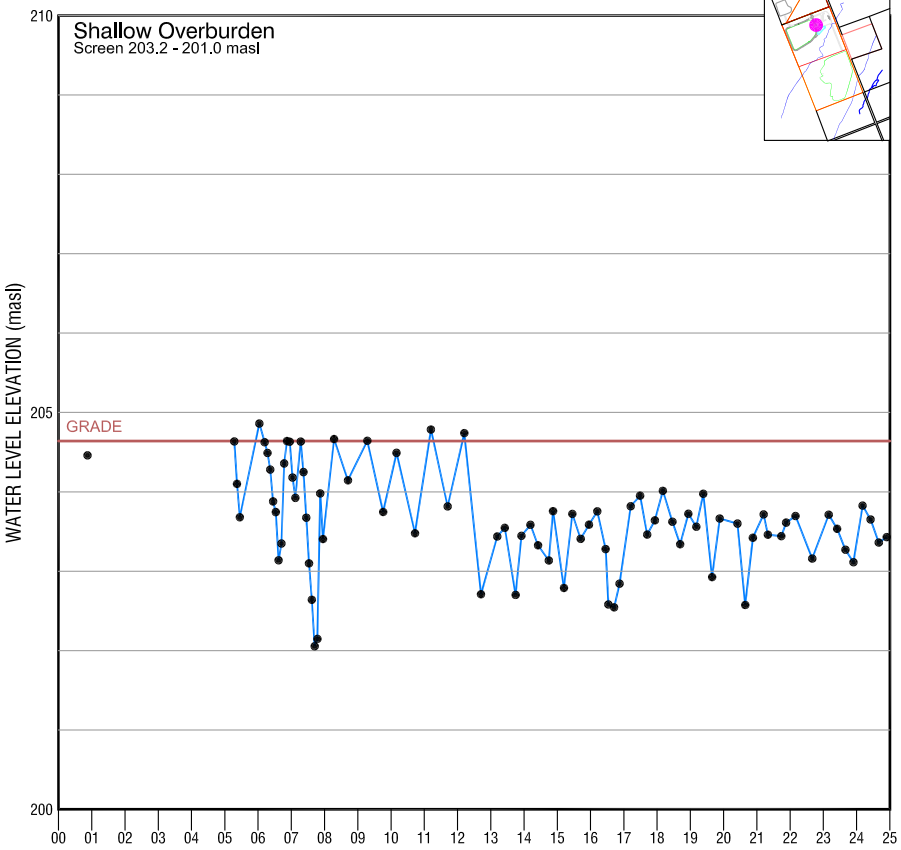

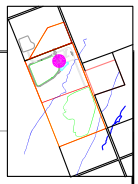

MP Elevation 205.53 masl
Grade 204.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	204.46	03-Jun-14	203.33
15-Apr-05	204.63	30-Sep-14	203.13
15-May-05	204.10	15-Nov-14	203.76
15-Jun-05	203.68	15-Mar-15	202.79
15-Jan-06	204.86	15-Jun-15	203.72
15-Mar-06	204.63	15-Sep-15	203.41
15-Apr-06	204.49	15-Dec-15	203.59
15-May-06	204.28	15-Mar-16	203.76
15-Jun-06	203.88	15-Jun-16	203.28
15-Jul-06	203.74	15-Jul-16	202.58
15-Aug-06	203.14	16-Sep-16	202.54
15-Sep-06	203.35	15-Nov-16	202.84
15-Oct-06	204.36	17-Mar-17	203.82
15-Nov-06	204.64	28-Jun-17	203.95
15-Dec-06	204.63	14-Sep-17	203.46
15-Jan-07	204.18	08-Dec-17	203.64
15-Feb-07	203.92	05-Mar-18	204.01
15-Apr-07	204.63	18-Jun-18	203.62
15-May-07	204.25	11-Sep-18	203.34
15-Jun-07	203.67	10-Dec-18	203.72
15-Jul-07	203.10	08-Mar-19	203.56
15-Aug-07	202.64	23-May-19	203.98
15-Sep-07	202.05	28-Aug-19	202.93
15-Oct-07	202.15	20-Nov-19	203.66
15-Nov-07	203.98	02-Jun-20	203.60
15-Dec-07	203.40	26-Aug-20	202.57
15-Apr-08	204.66	18-Nov-20	203.42
15-Sep-08	204.15	16-Mar-21	203.72
15-Apr-09	204.64	02-May-21	203.46
06-Oct-09	203.75	26-Sep-21	203.44
02-Mar-10	204.49	18-Nov-21	203.61
21-Sep-10	203.48	01-Mar-22	203.70
15-Mar-11	204.79	01-Sep-22	203.16
15-Sep-11	203.82	01-Mar-23	203.71
15-Mar-12	204.74	01-Jun-23	203.53
15-Sep-12	202.71	01-Sep-23	203.27
12-Mar-13	203.44	28-Nov-23	203.11
03-Jun-13	203.55	07-Mar-24	203.83
30-Sep-13	202.70	03-Jun-24	203.65
03-Dec-13	203.45	01-Sep-24	203.36
12-Mar-14	203.58	27-Nov-24	203.43

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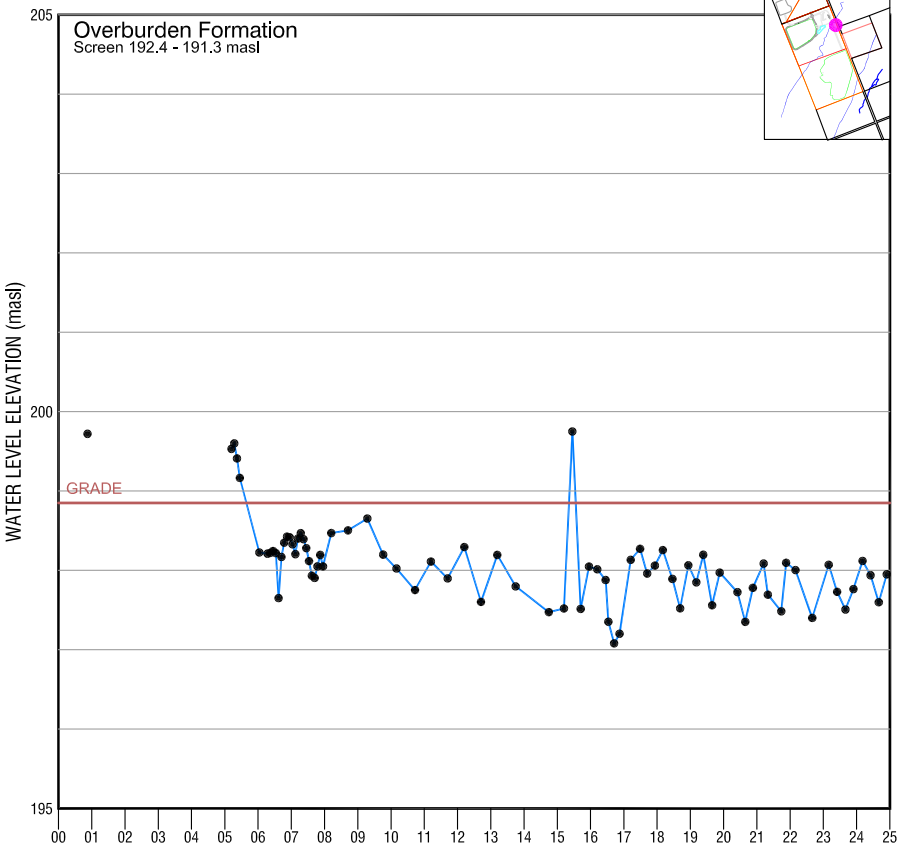

MP Elevation 199.75 masl
Grade 198.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	199.72	15-Jun-15	199.75
15-Mar-05	199.53	15-Sep-15	197.51
15-Apr-05	199.60	15-Dec-15	198.05
15-May-05	199.41	15-Mar-16	198.01
15-Jun-05	199.16	15-Jun-16	197.88
15-Jan-06	198.23	15-Jul-16	197.35
15-Apr-06	198.21	16-Sep-16	197.08
15-May-06	198.22	15-Nov-16	197.20
15-Jun-06	198.24	17-Mar-17	198.13
15-Jul-06	198.22	28-Jun-17	198.27
15-Aug-06	197.65	14-Sep-17	197.96
15-Sep-06	198.17	08-Dec-17	198.06
15-Oct-06	198.35	05-Mar-18	198.26
15-Nov-06	198.43	18-Jun-18	197.89
15-Dec-06	198.42	11-Sep-18	197.52
15-Jan-07	198.33	10-Dec-18	198.06
15-Feb-07	198.20	08-Mar-19	197.85
15-Mar-07	198.40	23-May-19	198.20
15-Apr-07	198.47	28-Aug-19	197.56
15-May-07	198.39	20-Nov-19	197.97
15-Jun-07	198.28	02-Jun-20	197.73
15-Jul-07	198.12	26-Aug-20	197.35
15-Aug-07	197.93	18-Nov-20	197.78
15-Sep-07	197.90	16-Mar-21	198.09
15-Oct-07	198.05	02-May-21	197.69
15-Nov-07	198.19	26-Sep-21	197.48
15-Dec-07	198.05	18-Nov-21	198.10
15-Mar-08	198.47	01-Mar-22	198.00
15-Sep-08	198.50	01-Sep-22	197.40
15-Apr-09	198.65	01-Mar-23	198.07
06-Oct-09	198.20	01-Jun-23	197.73
02-Mar-10	198.02	01-Sep-23	197.51
21-Sep-10	197.75	28-Nov-23	197.76
15-Mar-11	198.11	07-Mar-24	198.12
15-Sep-11	197.90	03-Jun-24	197.94
15-Mar-12	198.29	01-Sep-24	197.60
15-Sep-12	197.60	27-Nov-24	197.95
12-Mar-13	198.19		
30-Sep-13	197.80		
30-Sep-14	197.47		
15-Mar-15	197.52		

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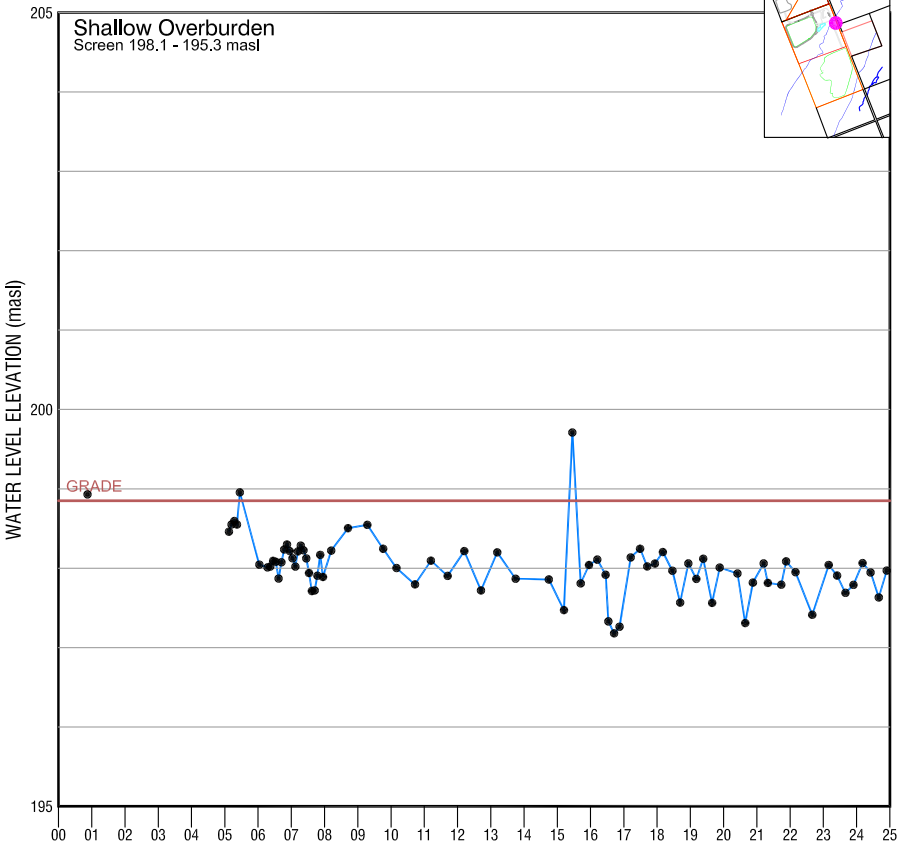

MP Elevation 199.71 masl
Grade 198.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.93	15-Mar-15	197.47
15-Feb-05	198.46	15-Jun-15	199.71
15-Mar-05	198.55	15-Sep-15	197.81
15-Apr-05	198.60	15-Dec-15	198.04
15-May-05	198.55	15-Mar-16	198.11
15-Jun-05	198.96	15-Jun-16	197.92
15-Jan-06	198.04	15-Jul-16	197.33
15-Apr-06	198.01	16-Sep-16	197.18
15-May-06	198.02	15-Nov-16	197.26
15-Jun-06	198.09	17-Mar-17	198.14
15-Jul-06	198.08	28-Jun-17	198.24
15-Aug-06	197.87	14-Sep-17	198.02
15-Sep-06	198.07	08-Dec-17	198.06
15-Oct-06	198.24	05-Mar-18	198.20
15-Nov-06	198.30	18-Jun-18	197.97
15-Dec-06	198.22	11-Sep-18	197.57
15-Jan-07	198.13	10-Dec-18	198.06
15-Feb-07	198.02	08-Mar-19	197.87
15-Mar-07	198.21	23-May-19	198.12
15-Apr-07	198.29	28-Aug-19	197.56
15-May-07	198.23	20-Nov-19	198.01
15-Jun-07	198.12	02-Jun-20	197.93
15-Jul-07	197.94	26-Aug-20	197.31
15-Aug-07	197.71	18-Nov-20	197.82
15-Sep-07	197.72	16-Mar-21	198.06
15-Oct-07	197.90	02-May-21	197.81
15-Nov-07	198.17	26-Sep-21	197.79
15-Dec-07	197.89	18-Nov-21	198.09
15-Mar-08	198.22	01-Mar-22	197.95
15-Sep-08	198.51	01-Sep-22	197.41
15-Apr-09	198.55	01-Mar-23	198.04
06-Oct-09	198.24	01-Jun-23	197.91
02-Mar-10	198.00	01-Sep-23	197.69
21-Sep-10	197.80	28-Nov-23	197.79
15-Mar-11	198.10	07-Mar-24	198.07
15-Sep-11	197.90	03-Jun-24	197.95
15-Mar-12	198.22	01-Sep-24	197.63
15-Sep-12	197.72	27-Nov-24	197.97
12-Mar-13	198.20		
30-Sep-13	197.87		
30-Sep-14	197.86		

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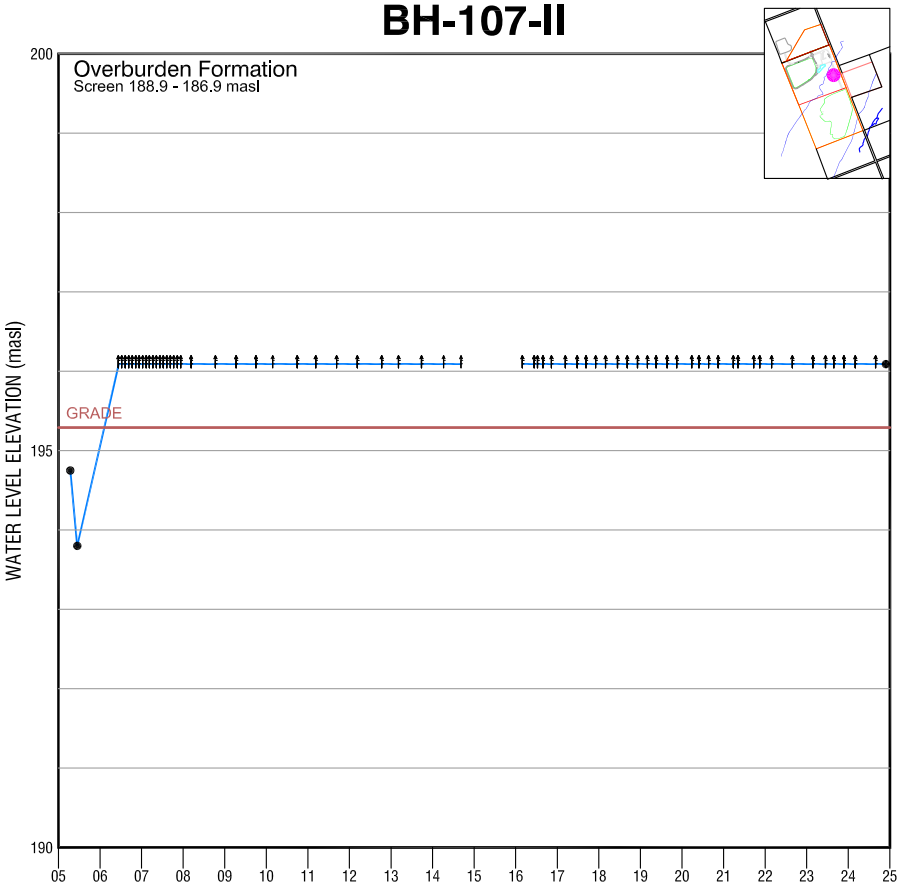

MP Elevation 196.09 masl
Grade 195.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Apr-05	194.75	28-Jun-17	FLW
15-Jun-05	193.80	14-Sep-17	FLW
15-Jun-06	FLW	08-Dec-17	FLW
15-Jul-06	FLW	05-Mar-18	FLW
15-Aug-06	FLW	18-Jun-18	FLW
15-Sep-06	FLW	11-Sep-18	FLW
15-Oct-06	FLW	10-Dec-18	FLW
15-Nov-06	FLW	08-Mar-19	FLW
15-Dec-06	FLW	23-May-19	FLW
15-Jan-07	FLW	28-Aug-19	FLW
15-Feb-07	FLW	20-Nov-19	FLW
15-Mar-07	FLW	31-Mar-20	FLW
15-Apr-07	FLW	02-Jun-20	FLW
15-May-07	FLW	26-Aug-20	FLW
15-Jun-07	FLW	18-Nov-20	FLW
15-Jul-07	FLW	31-Mar-21	FLW
15-Aug-07	FLW	12-May-21	FLW
15-Sep-07	FLW	26-Sep-21	FLW
15-Oct-07	FLW	18-Nov-21	FLW
15-Nov-07	FLW	03-Mar-22	FLW
15-Dec-07	FLW	01-Sep-22	FLW
15-Mar-08	FLW	01-Mar-23	FLW
15-Oct-08	FLW	19-Jun-23	FLW
15-Apr-09	FLW	01-Sep-23	FLW
06-Oct-09	FLW	28-Nov-23	FLW
02-Mar-10	196.09	07-Mar-24	FLW
04-Oct-10	FLW	01-Sep-24	FLW
15-Mar-11	FLW	27-Nov-24	196.09
15-Sep-11	FLW		
15-Mar-12	FLW		
15-Oct-12	FLW		
12-Mar-13	FLW		
30-Sep-13	FLW		
12-Apr-14	196.09		
12-Sep-14	196.09		
04-Mar-16	FLW		
15-Jun-16	FLW		
15-Jul-16	FLW		
01-Sep-16	FLW		
15-Nov-16	FLW		
17-Mar-17	FLW		

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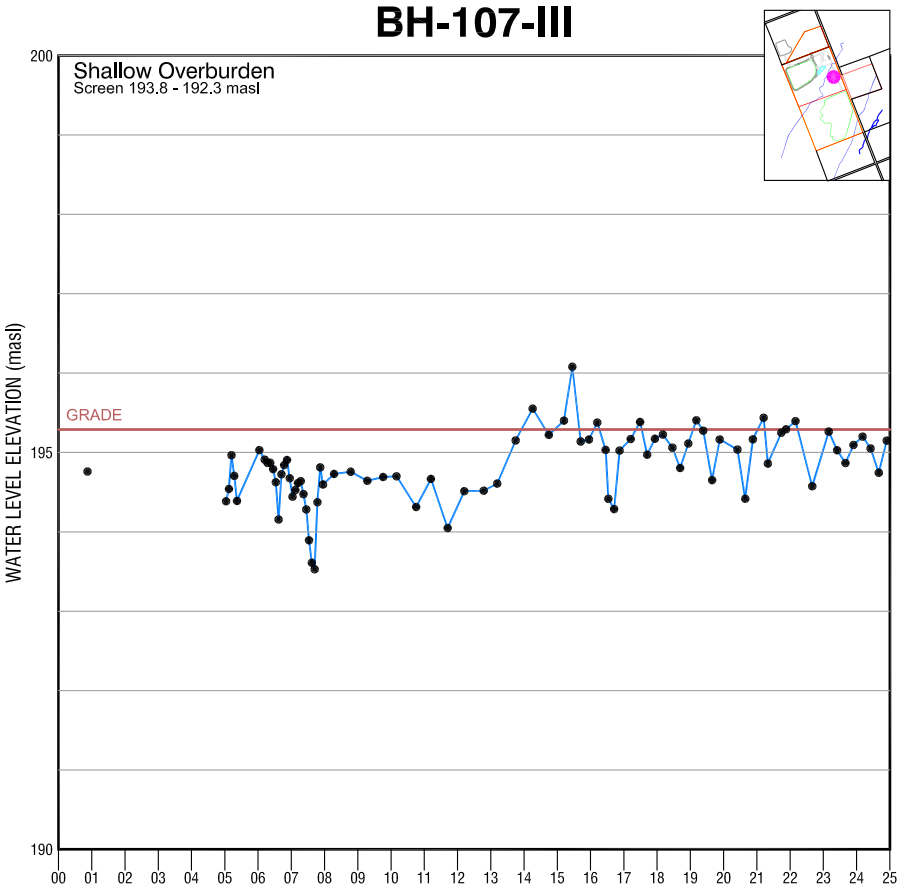

MP Elevation 196.08 masl
Grade 195.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	194.76	05-Apr-14	195.55
15-Jan-05	194.38	30-Sep-14	195.22
15-Feb-05	194.54	15-Mar-15	195.40
15-Mar-05	194.96	15-Jun-15	196.08
15-Apr-05	194.71	15-Sep-15	195.14
15-May-05	194.39	15-Dec-15	195.16
15-Jan-06	195.03	15-Mar-16	195.38
15-Mar-06	194.91	15-Jun-16	195.03
15-Apr-06	194.87	15-Jul-16	194.42
15-May-06	194.87	16-Sep-16	194.29
15-Jun-06	194.79	15-Nov-16	195.02
15-Jul-06	194.63	17-Mar-17	195.17
15-Aug-06	194.15	28-Jun-17	195.38
15-Sep-06	194.73	14-Sep-17	194.97
15-Oct-06	194.84	08-Dec-17	195.17
15-Nov-06	194.90	05-Mar-18	195.23
15-Dec-06	194.68	18-Jun-18	195.06
15-Jan-07	194.44	11-Sep-18	194.80
15-Feb-07	194.53	10-Dec-18	195.11
15-Mar-07	194.62	08-Mar-19	195.41
15-Apr-07	194.64	23-May-19	195.27
15-May-07	194.48	28-Aug-19	194.65
15-Jun-07	194.28	20-Nov-19	195.16
15-Jul-07	193.89	02-Jun-20	195.04
15-Aug-07	193.61	26-Aug-20	194.42
15-Sep-07	193.53	18-Nov-20	195.17
15-Oct-07	194.37	16-Mar-21	195.44
15-Nov-07	194.81	02-May-21	194.86
15-Dec-07	194.60	26-Sep-21	195.25
15-Apr-08	194.73	18-Nov-21	195.29
15-Oct-08	194.76	01-Mar-22	195.40
15-Apr-09	194.64	01-Sep-22	194.57
06-Oct-09	194.69	01-Mar-23	195.26
02-Mar-10	194.70	01-Jun-23	195.03
04-Oct-10	194.31	01-Sep-23	194.87
15-Mar-11	194.67	28-Nov-23	195.10
15-Sep-11	194.05	07-Mar-24	195.20
15-Mar-12	194.51	03-Jun-24	195.05
15-Oct-12	194.52	01-Sep-24	194.74
12-Mar-13	194.61	27-Nov-24	195.15
30-Sep-13	195.15		

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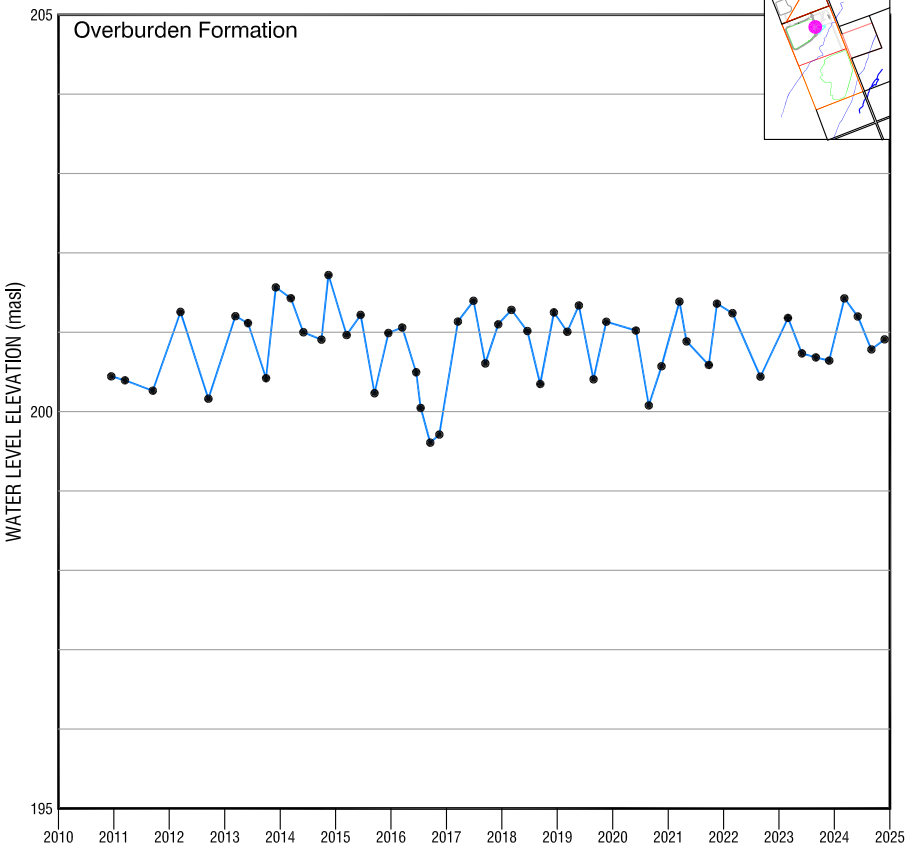

MP Elevation 206.32 masl
Grade 205.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	200.44	01-Mar-22	201.24
15-Mar-11	200.39	01-Sep-22	200.44
15-Sep-11	200.26	01-Mar-23	201.18
15-Mar-12	201.26	01-Jun-23	200.73
15-Sep-12	200.16	01-Sep-23	200.68
12-Mar-13	201.20	28-Nov-23	200.64
03-Jun-13	201.12	07-Mar-24	201.43
30-Sep-13	200.42	03-Jun-24	201.20
03-Dec-13	201.57	01-Sep-24	200.78
12-Mar-14	201.43	27-Nov-24	200.91
03-Jun-14	201.00		
30-Sep-14	200.91		
15-Nov-14	201.72		
15-Mar-15	200.96		
15-Jun-15	201.22		
15-Sep-15	200.23		
15-Dec-15	200.99		
15-Mar-16	201.06		
15-Jun-16	200.50		
15-Jul-16	200.05		
16-Sep-16	199.61		
15-Nov-16	199.71		
17-Mar-17	201.13		
28-Jun-17	201.40		
14-Sep-17	200.61		
08-Dec-17	201.10		
05-Mar-18	201.28		
18-Jun-18	201.02		
11-Sep-18	200.35		
10-Dec-18	201.25		
08-Mar-19	201.01		
23-May-19	201.34		
28-Aug-19	200.41		
20-Nov-19	201.13		
02-Jun-20	201.02		
26-Aug-20	200.08		
18-Nov-20	200.57		
16-Mar-21	201.39		
02-May-21	200.88		
26-Sep-21	200.59		
18-Nov-21	201.36		

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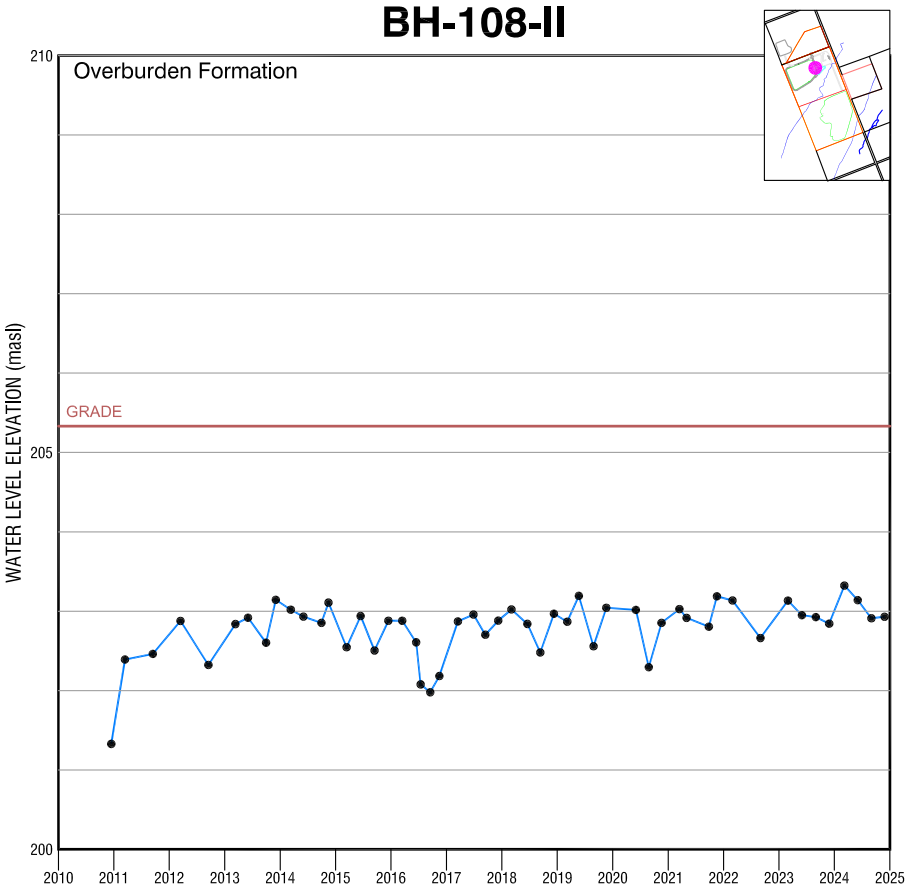

MP Elevation 206.13 masl
Grade 205.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	201.33	01-Mar-22	203.13
15-Mar-11	202.39	01-Sep-22	202.66
15-Sep-11	202.46	01-Mar-23	203.13
15-Mar-12	202.88	01-Jun-23	202.95
15-Sep-12	202.32	01-Sep-23	202.93
12-Mar-13	202.84	28-Nov-23	202.84
03-Jun-13	202.92	07-Mar-24	203.32
30-Sep-13	202.60	03-Jun-24	203.14
03-Dec-13	203.14	01-Sep-24	202.91
12-Mar-14	203.02	27-Nov-24	202.93
03-Jun-14	202.93		
30-Sep-14	202.85		
15-Nov-14	203.11		
15-Mar-15	202.55		
15-Jun-15	202.94		
15-Sep-15	202.51		
15-Dec-15	202.88		
15-Mar-16	202.88		
15-Jun-16	202.61		
15-Jul-16	202.08		
16-Sep-16	201.98		
15-Nov-16	202.18		
17-Mar-17	202.87		
28-Jun-17	202.96		
14-Sep-17	202.70		
08-Dec-17	202.88		
05-Mar-18	203.02		
18-Jun-18	202.84		
11-Sep-18	202.48		
10-Dec-18	202.97		
08-Mar-19	202.87		
23-May-19	203.19		
28-Aug-19	202.56		
20-Nov-19	203.04		
02-Jun-20	203.02		
26-Aug-20	202.29		
18-Nov-20	202.85		
16-Mar-21	203.03		
02-May-21	202.92		
26-Sep-21	202.80		
18-Nov-21	203.19		

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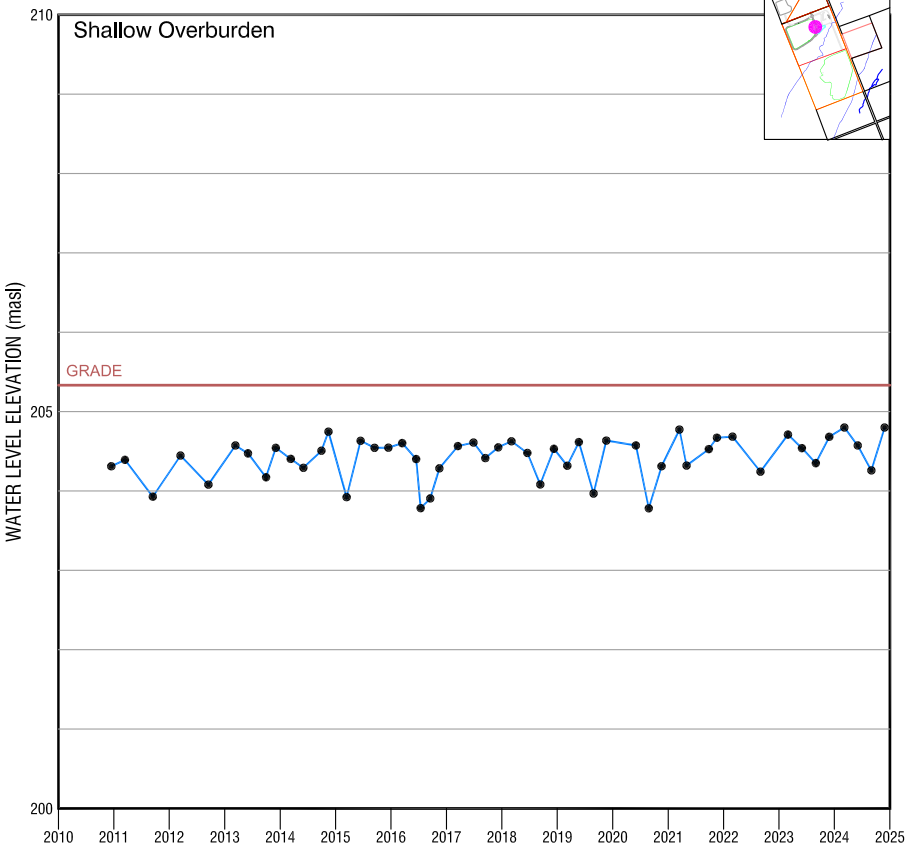

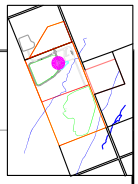

MP Elevation 205.91 masl
Grade 205.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	204.31	01-Mar-22	204.68
15-Mar-11	204.39	01-Sep-22	204.24
15-Sep-11	203.93	01-Mar-23	204.71
15-Mar-12	204.45	01-Jun-23	204.54
15-Sep-12	204.08	01-Sep-23	204.35
12-Mar-13	204.57	28-Nov-23	204.68
03-Jun-13	204.47	07-Mar-24	204.80
30-Sep-13	204.17	03-Jun-24	204.57
03-Dec-13	204.54	01-Sep-24	204.26
12-Mar-14	204.40	27-Nov-24	204.80
03-Jun-14	204.29		
30-Sep-14	204.51		
15-Nov-14	204.75		
15-Mar-15	203.92		
15-Jun-15	204.63		
15-Sep-15	204.54		
15-Dec-15	204.54		
15-Mar-16	204.60		
15-Jun-16	204.40		
15-Jul-16	203.78		
16-Sep-16	203.91		
15-Nov-16	204.29		
17-Mar-17	204.57		
28-Jun-17	204.61		
14-Sep-17	204.41		
08-Dec-17	204.55		
05-Mar-18	204.63		
18-Jun-18	204.48		
11-Sep-18	204.08		
10-Dec-18	204.53		
08-Mar-19	204.32		
23-May-19	204.62		
28-Aug-19	203.97		
20-Nov-19	204.63		
02-Jun-20	204.57		
26-Aug-20	203.78		
18-Nov-20	204.31		
16-Mar-21	204.77		
02-May-21	204.32		
26-Sep-21	204.53		
18-Nov-21	204.67		

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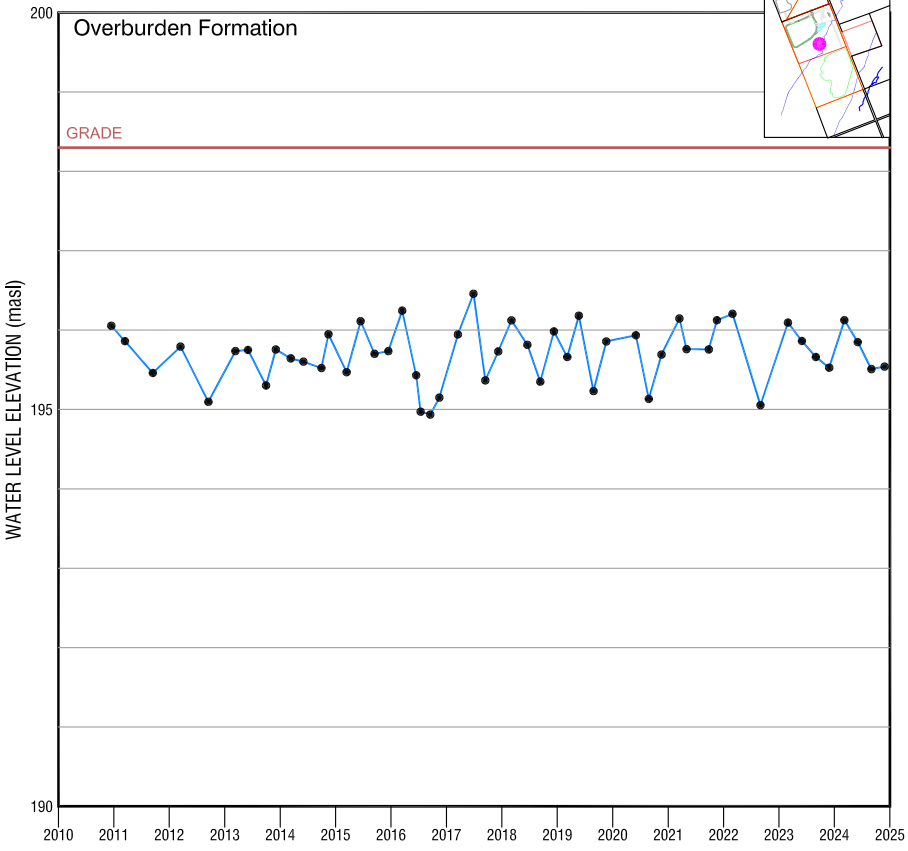

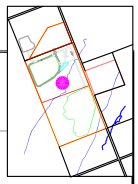

MP Elevation 199.19 masl
Grade 198.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	196.05	01-Mar-22	196.21
15-Mar-11	195.86	01-Sep-22	195.05
15-Sep-11	195.46	01-Mar-23	196.09
15-Mar-12	195.79	01-Jun-23	195.86
15-Sep-12	195.10	01-Sep-23	195.66
12-Mar-13	195.74	28-Nov-23	195.53
03-Jun-13	195.75	07-Mar-24	196.13
30-Sep-13	195.30	03-Jun-24	195.85
03-Dec-13	195.76	01-Sep-24	195.51
12-Mar-14	195.64	27-Nov-24	195.54
03-Jun-14	195.60		
30-Sep-14	195.52		
15-Nov-14	195.95		
15-Mar-15	195.47		
15-Jun-15	196.11		
15-Sep-15	195.70		
15-Dec-15	195.74		
15-Mar-16	196.24		
15-Jun-16	195.43		
15-Jul-16	194.97		
16-Sep-16	194.94		
15-Nov-16	195.15		
17-Mar-17	195.95		
28-Jun-17	196.46		
14-Sep-17	195.37		
08-Dec-17	195.73		
05-Mar-18	196.12		
18-Jun-18	195.82		
11-Sep-18	195.35		
10-Dec-18	195.98		
08-Mar-19	195.66		
23-May-19	196.18		
28-Aug-19	195.23		
20-Nov-19	195.86		
02-Jun-20	195.93		
26-Aug-20	195.13		
18-Nov-20	195.69		
16-Mar-21	196.15		
02-May-21	195.76		
26-Sep-21	195.76		
18-Nov-21	196.12		

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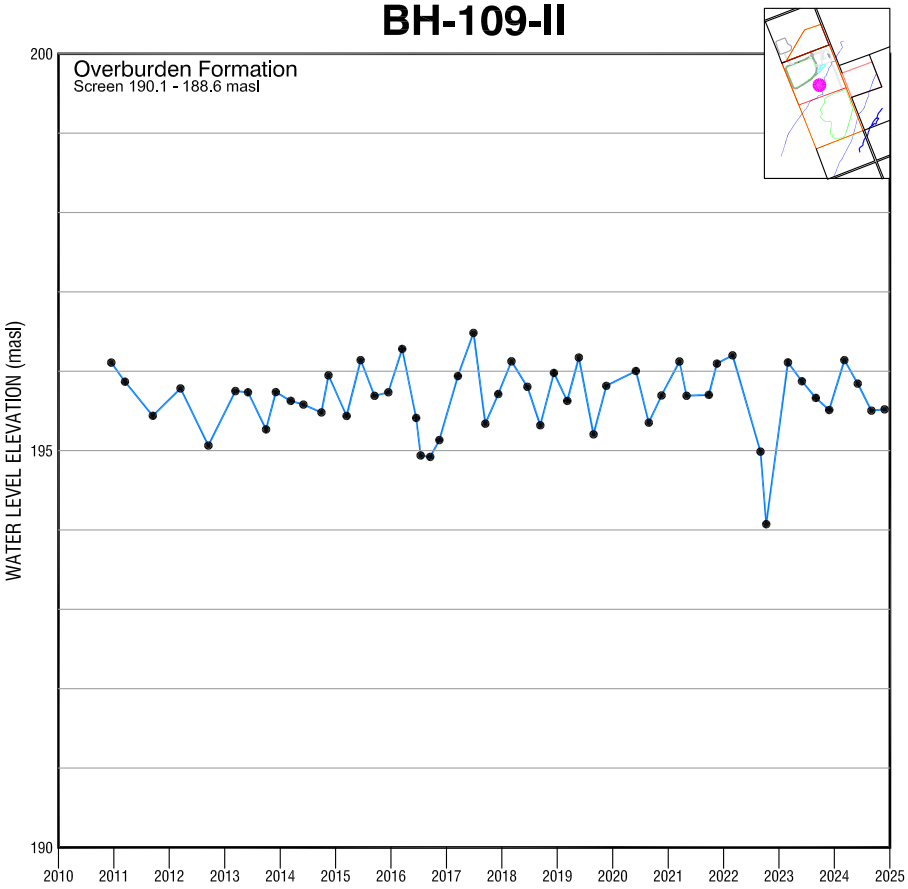

MP Elevation 200.10 masl
Grade 199.1 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	196.11	01-Mar-22	196.20
15-Mar-11	195.87	01-Sep-22	194.99
15-Sep-11	195.44	09-Oct-22	194.07
15-Mar-12	195.78	01-Mar-23	196.11
15-Sep-12	195.06	01-Jun-23	195.87
12-Mar-13	195.75	01-Sep-23	195.66
03-Jun-13	195.74	28-Nov-23	195.51
30-Sep-13	195.27	07-Mar-24	196.14
03-Dec-13	195.74	03-Jun-24	195.84
12-Mar-14	195.63	01-Sep-24	195.50
03-Jun-14	195.58	27-Nov-24	195.52
30-Sep-14	195.48		
15-Nov-14	195.95		
15-Mar-15	195.44		
15-Jun-15	196.14		
15-Sep-15	195.69		
15-Dec-15	195.74		
15-Mar-16	196.28		
15-Jun-16	195.41		
15-Jul-16	194.94		
16-Sep-16	194.92		
15-Nov-16	195.13		
17-Mar-17	195.94		
28-Jun-17	196.48		
14-Sep-17	195.34		
08-Dec-17	195.71		
05-Mar-18	196.13		
18-Jun-18	195.80		
11-Sep-18	195.32		
10-Dec-18	195.98		
08-Mar-19	195.63		
23-May-19	196.17		
28-Aug-19	195.21		
20-Nov-19	195.82		
02-Jun-20	196.00		
26-Aug-20	195.35		
18-Nov-20	195.70		
16-Mar-21	196.12		
02-May-21	195.69		
26-Sep-21	195.70		
18-Nov-21	196.10		

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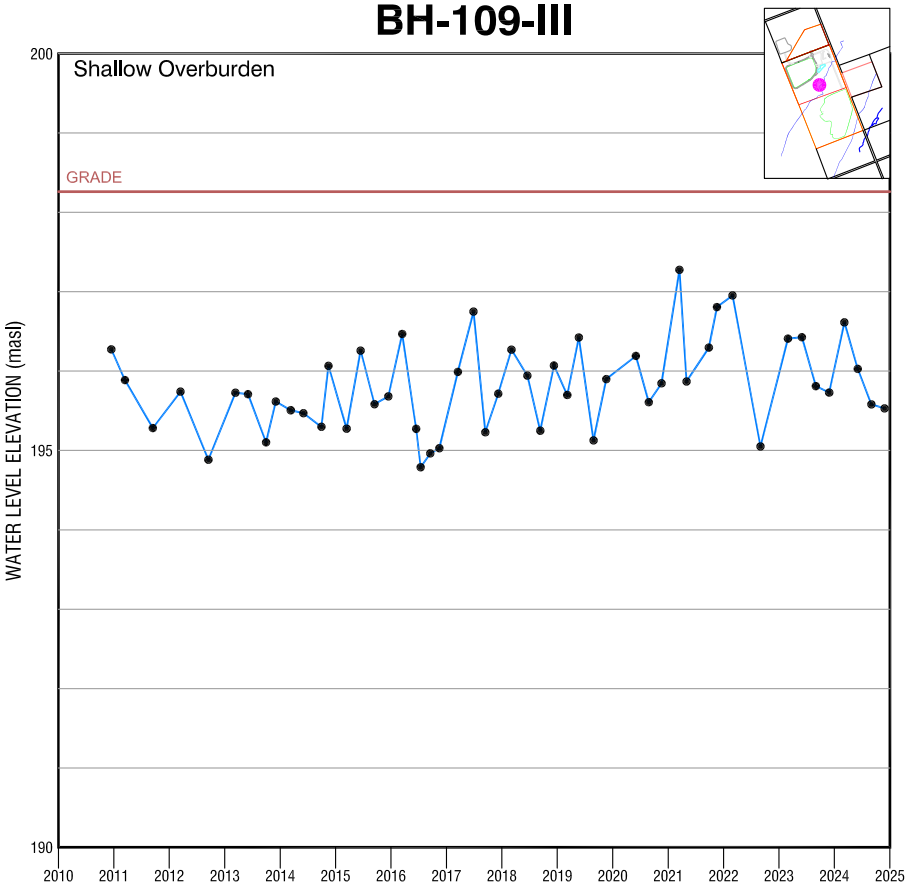

MP Elevation 199.04 masl
Grade 198.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	196.27	01-Mar-22	196.95
15-Mar-11	195.89	01-Sep-22	195.05
15-Sep-11	195.28	01-Mar-23	196.41
15-Mar-12	195.74	01-Jun-23	196.43
15-Sep-12	194.88	01-Sep-23	195.81
12-Mar-13	195.73	28-Nov-23	195.73
03-Jun-13	195.71	07-Mar-24	196.61
30-Sep-13	195.10	03-Jun-24	196.03
03-Dec-13	195.62	01-Sep-24	195.58
12-Mar-14	195.51	27-Nov-24	195.53
03-Jun-14	195.47		
30-Sep-14	195.30		
15-Nov-14	196.07		
15-Mar-15	195.27		
15-Jun-15	196.26		
15-Sep-15	195.58		
15-Dec-15	195.68		
15-Mar-16	196.47		
15-Jun-16	195.27		
15-Jul-16	194.79		
16-Sep-16	194.96		
15-Nov-16	195.03		
17-Mar-17	195.99		
28-Jun-17	196.75		
14-Sep-17	195.23		
08-Dec-17	195.71		
05-Mar-18	196.27		
18-Jun-18	195.94		
11-Sep-18	195.25		
10-Dec-18	196.07		
08-Mar-19	195.70		
23-May-19	196.42		
28-Aug-19	195.13		
20-Nov-19	195.90		
02-Jun-20	196.19		
26-Aug-20	195.61		
18-Nov-20	195.85		
16-Mar-21	197.28		
02-May-21	195.87		
26-Sep-21	196.30		
18-Nov-21	196.81		

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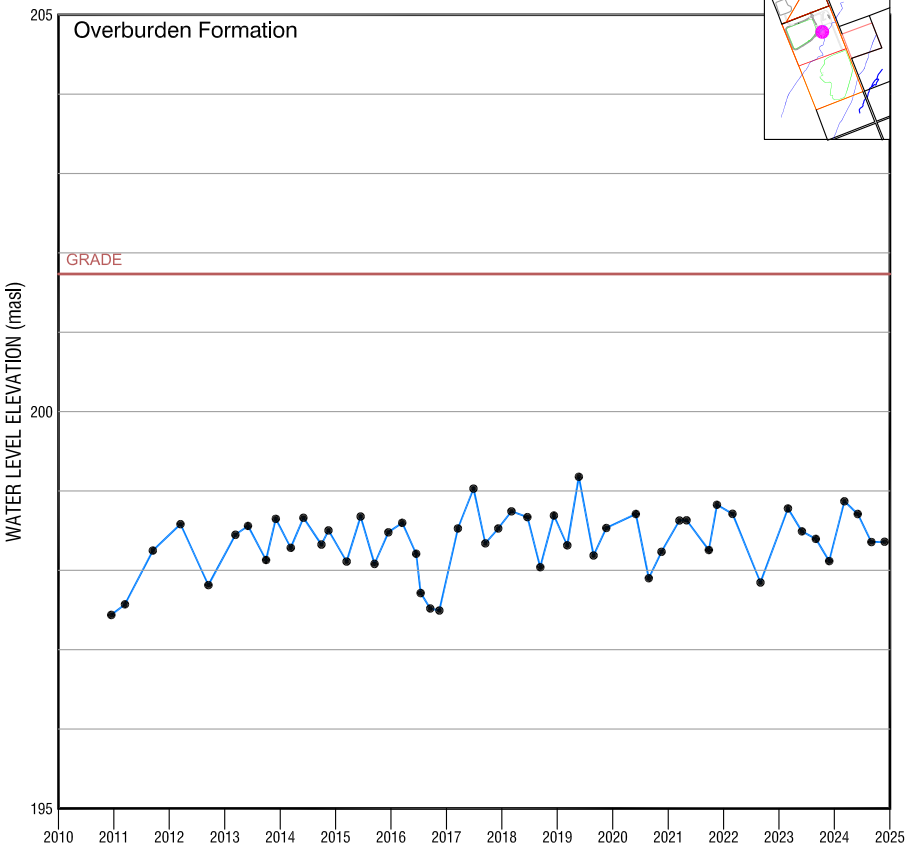

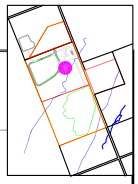

MP Elevation 202.55 masl
Grade 201.7 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	197.44	01-Mar-22	198.71
15-Mar-11	197.57	01-Sep-22	197.85
15-Sep-11	198.25	01-Mar-23	198.78
15-Mar-12	198.58	01-Jun-23	198.49
15-Sep-12	197.81	01-Sep-23	198.40
12-Mar-13	198.45	28-Nov-23	198.12
03-Jun-13	198.56	07-Mar-24	198.87
30-Sep-13	198.13	03-Jun-24	198.71
03-Dec-13	198.65	01-Sep-24	198.36
12-Mar-14	198.28	27-Nov-24	198.36
03-Jun-14	198.66		
30-Sep-14	198.32		
15-Nov-14	198.50		
15-Mar-15	198.11		
15-Jun-15	198.68		
15-Sep-15	198.08		
15-Dec-15	198.48		
15-Mar-16	198.60		
15-Jun-16	198.21		
15-Jul-16	197.71		
16-Sep-16	197.52		
15-Nov-16	197.49		
17-Mar-17	198.53		
28-Jun-17	199.03		
14-Sep-17	198.34		
08-Dec-17	198.53		
05-Mar-18	198.74		
18-Jun-18	198.67		
11-Sep-18	198.04		
10-Dec-18	198.69		
08-Mar-19	198.32		
23-May-19	199.18		
28-Aug-19	198.19		
20-Nov-19	198.53		
02-Jun-20	198.71		
26-Aug-20	197.90		
18-Nov-20	198.23		
16-Mar-21	198.63		
02-May-21	198.63		
26-Sep-21	198.26		
18-Nov-21	198.83		

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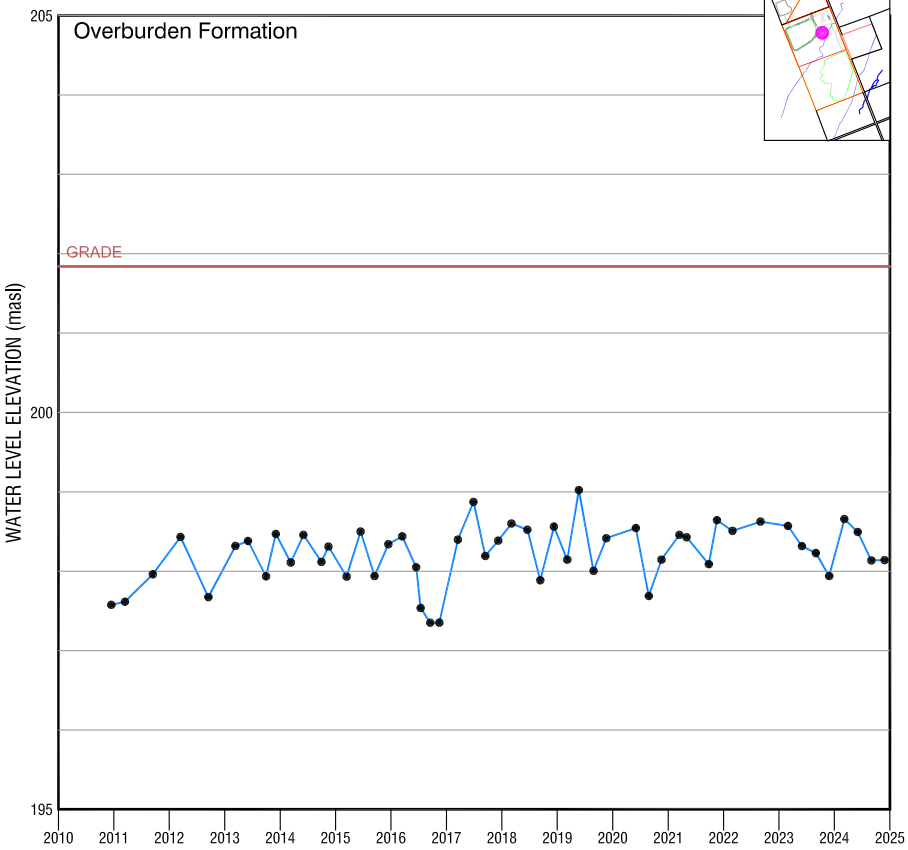

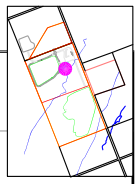

MP Elevation 202.73 masl
Grade 201.8 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	197.58	01-Mar-22	198.51
15-Mar-11	197.62	01-Sep-22	198.63
15-Sep-11	197.96	01-Mar-23	198.57
15-Mar-12	198.43	01-Jun-23	198.32
15-Sep-12	197.67	01-Sep-23	198.23
12-Mar-13	198.32	28-Nov-23	197.94
03-Jun-13	198.38	07-Mar-24	198.66
30-Sep-13	197.93	03-Jun-24	198.49
03-Dec-13	198.47	01-Sep-24	198.14
12-Mar-14	198.11	27-Nov-24	198.14
03-Jun-14	198.46		
30-Sep-14	198.12		
15-Nov-14	198.31		
15-Mar-15	197.93		
15-Jun-15	198.50		
15-Sep-15	197.94		
15-Dec-15	198.34		
15-Mar-16	198.44		
15-Jun-16	198.05		
15-Jul-16	197.54		
16-Sep-16	197.35		
15-Nov-16	197.35		
17-Mar-17	198.40		
28-Jun-17	198.87		
14-Sep-17	198.19		
08-Dec-17	198.38		
05-Mar-18	198.60		
18-Jun-18	198.52		
11-Sep-18	197.89		
10-Dec-18	198.56		
08-Mar-19	198.15		
23-May-19	199.02		
28-Aug-19	198.01		
20-Nov-19	198.41		
02-Jun-20	198.54		
26-Aug-20	197.69		
18-Nov-20	198.15		
16-Mar-21	198.46		
02-May-21	198.43		
26-Sep-21	198.09		
18-Nov-21	198.64		

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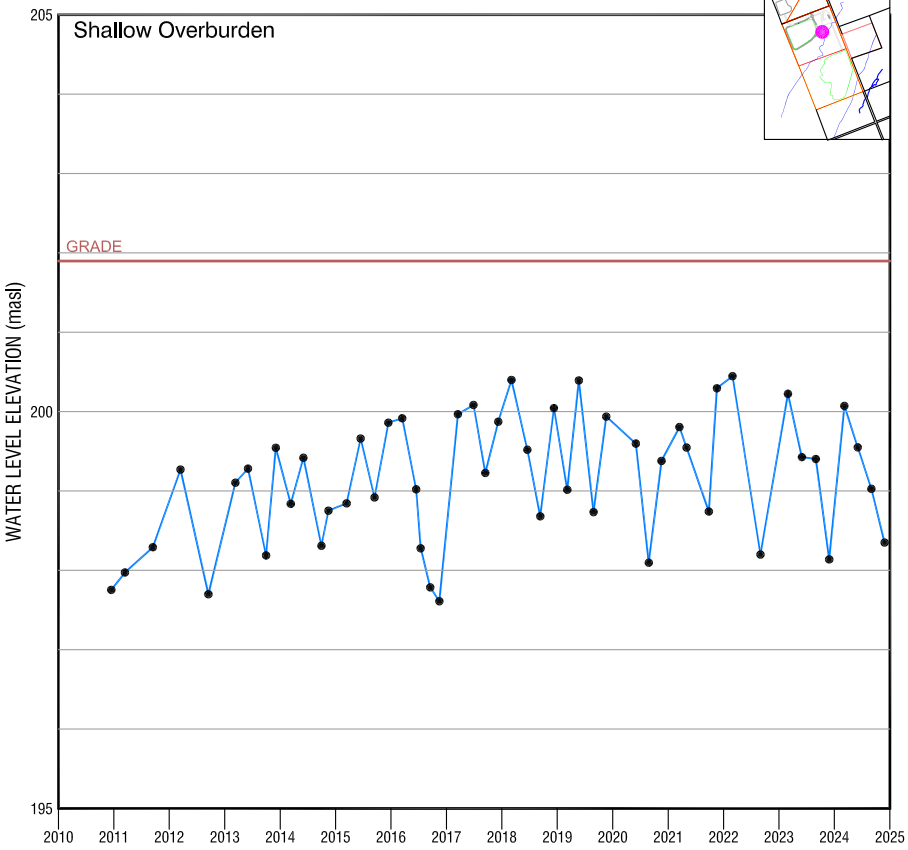

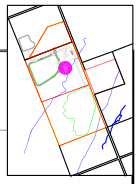

MP Elevation 202.55 masl
Grade 201.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Dec-10	197.75	01-Mar-22	200.45
15-Mar-11	197.97	01-Sep-22	198.20
15-Sep-11	198.29	01-Mar-23	200.22
15-Mar-12	199.27	01-Jun-23	199.43
15-Sep-12	197.70	01-Sep-23	199.40
12-Mar-13	199.10	28-Nov-23	198.14
03-Jun-13	199.28	07-Mar-24	200.07
30-Sep-13	198.19	03-Jun-24	199.55
03-Dec-13	199.54	01-Sep-24	199.03
12-Mar-14	198.84	27-Nov-24	198.35
03-Jun-14	199.42		
30-Sep-14	198.31		
15-Nov-14	198.75		
15-Mar-15	198.84		
15-Jun-15	199.66		
15-Sep-15	198.92		
15-Dec-15	199.86		
15-Mar-16	199.92		
15-Jun-16	199.02		
15-Jul-16	198.28		
16-Sep-16	197.79		
15-Nov-16	197.61		
17-Mar-17	199.97		
28-Jun-17	200.08		
14-Sep-17	199.23		
08-Dec-17	199.87		
05-Mar-18	200.40		
18-Jun-18	199.52		
11-Sep-18	198.68		
10-Dec-18	200.04		
08-Mar-19	199.01		
23-May-19	200.39		
28-Aug-19	198.73		
20-Nov-19	199.94		
02-Jun-20	199.60		
26-Aug-20	198.10		
18-Nov-20	199.38		
16-Mar-21	199.80		
02-May-21	199.55		
26-Sep-21	198.74		
18-Nov-21	200.29		

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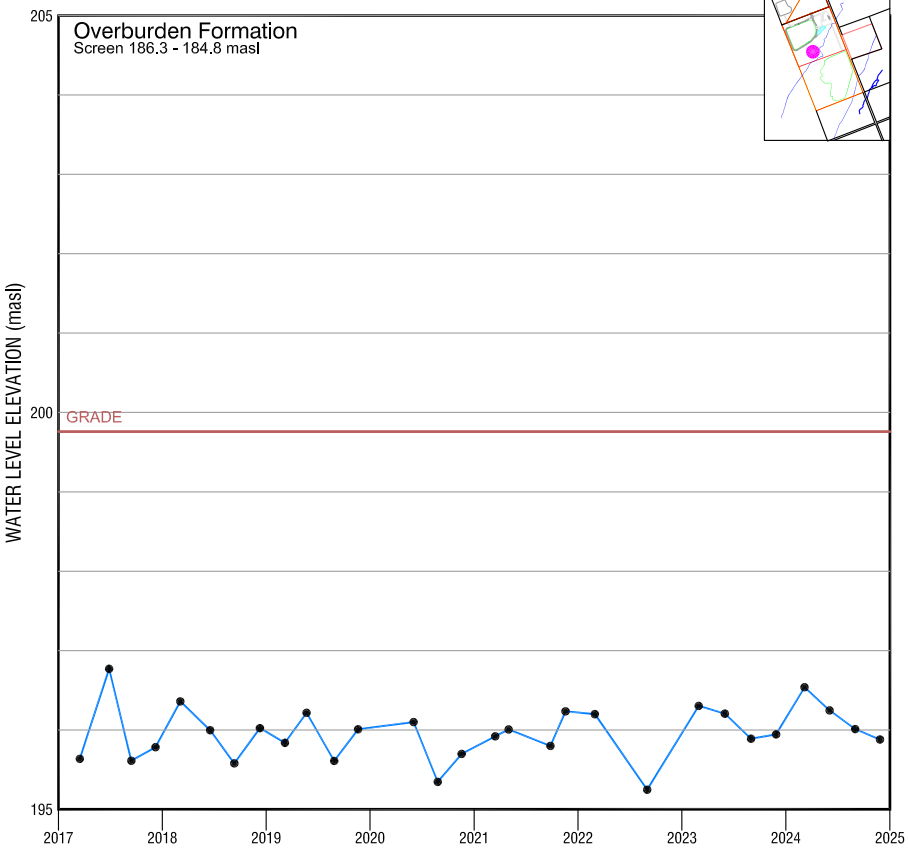

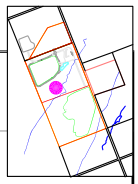

MP Elevation 200.28 masl
Grade 199.8 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	195.64		
28-Jun-17	196.77		
14-Sep-17	195.61		
08-Dec-17	195.78		
05-Mar-18	196.36		
18-Jun-18	196.00		
11-Sep-18	195.58		
10-Dec-18	196.02		
08-Mar-19	195.84		
23-May-19	196.22		
28-Aug-19	195.61		
20-Nov-19	196.01		
02-Jun-20	196.10		
26-Aug-20	195.35		
18-Nov-20	195.70		
16-Mar-21	195.92		
02-May-21	196.01		
26-Sep-21	195.80		
18-Nov-21	196.24		
01-Mar-22	196.20		
01-Sep-22	195.25		
01-Mar-23	196.30		
01-Jun-23	196.21		
01-Sep-23	195.89		
28-Nov-23	195.94		
07-Mar-24	196.54		
03-Jun-24	196.25		
01-Sep-24	196.01		
27-Nov-24	195.88		

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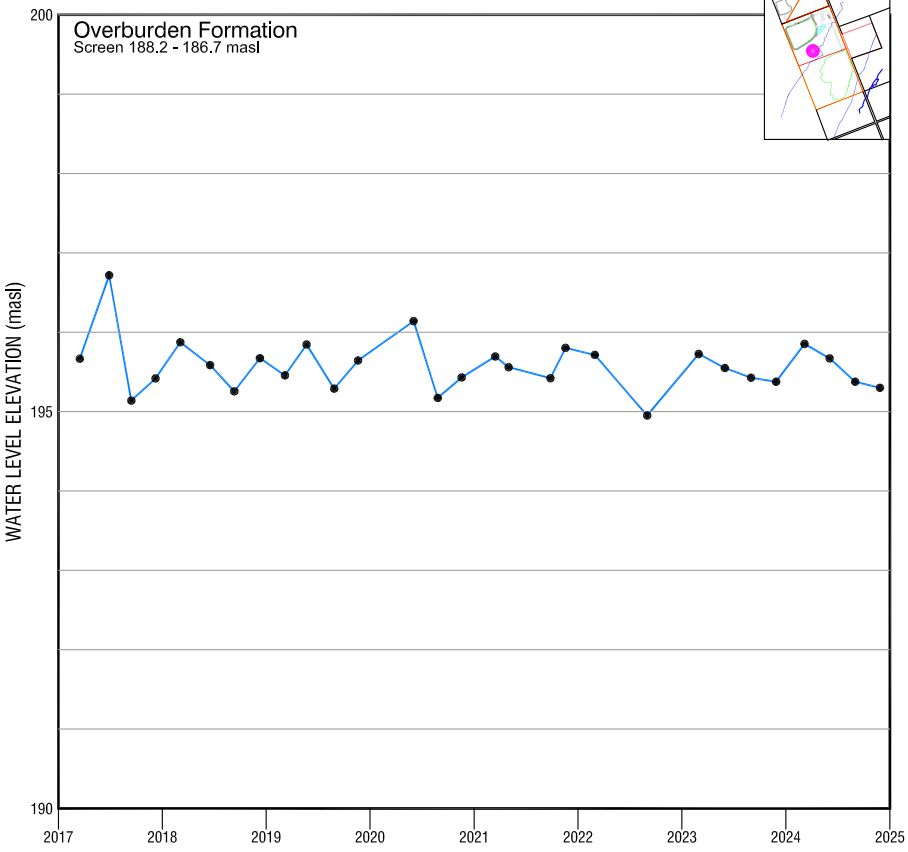

MP Elevation 200.29 masl
Grade 199.7 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	195.67		
28-Jun-17	196.72		
14-Sep-17	195.14		
08-Dec-17	195.42		
05-Mar-18	195.87		
18-Jun-18	195.59		
11-Sep-18	195.26		
10-Dec-18	195.67		
08-Mar-19	195.46		
23-May-19	195.85		
28-Aug-19	195.29		
20-Nov-19	195.64		
02-Jun-20	196.14		
26-Aug-20	195.17		
18-Nov-20	195.43		
16-Mar-21	195.70		
02-May-21	195.56		
26-Sep-21	195.42		
18-Nov-21	195.80		
01-Mar-22	195.71		
01-Sep-22	194.95		
01-Mar-23	195.73		
01-Jun-23	195.55		
01-Sep-23	195.43		
28-Nov-23	195.38		
07-Mar-24	195.85		
03-Jun-24	195.67		
01-Sep-24	195.38		
27-Nov-24	195.30		

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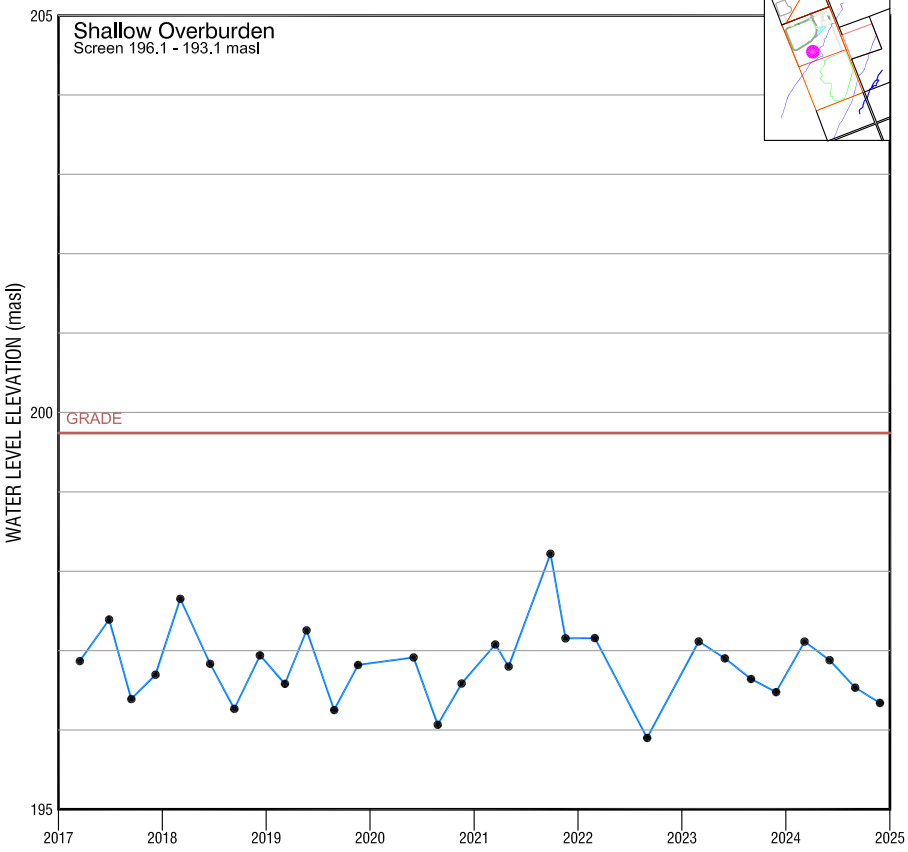

MP Elevation 200.41 masl
Grade 199.7 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	196.87		
28-Jun-17	197.39		
14-Sep-17	196.39		
08-Dec-17	196.70		
05-Mar-18	197.65		
18-Jun-18	196.83		
11-Sep-18	196.27		
10-Dec-18	196.94		
08-Mar-19	196.58		
23-May-19	197.26		
28-Aug-19	196.25		
20-Nov-19	196.82		
02-Jun-20	196.91		
26-Aug-20	196.07		
18-Nov-20	196.59		
16-Mar-21	197.08		
02-May-21	196.80		
26-Sep-21	198.22		
18-Nov-21	197.15		
01-Mar-22	197.16		
01-Sep-22	195.90		
01-Mar-23	197.12		
01-Jun-23	196.90		
01-Sep-23	196.64		
28-Nov-23	196.48		
07-Mar-24	197.11		
03-Jun-24	196.88		
01-Sep-24	196.53		
27-Nov-24	196.34		

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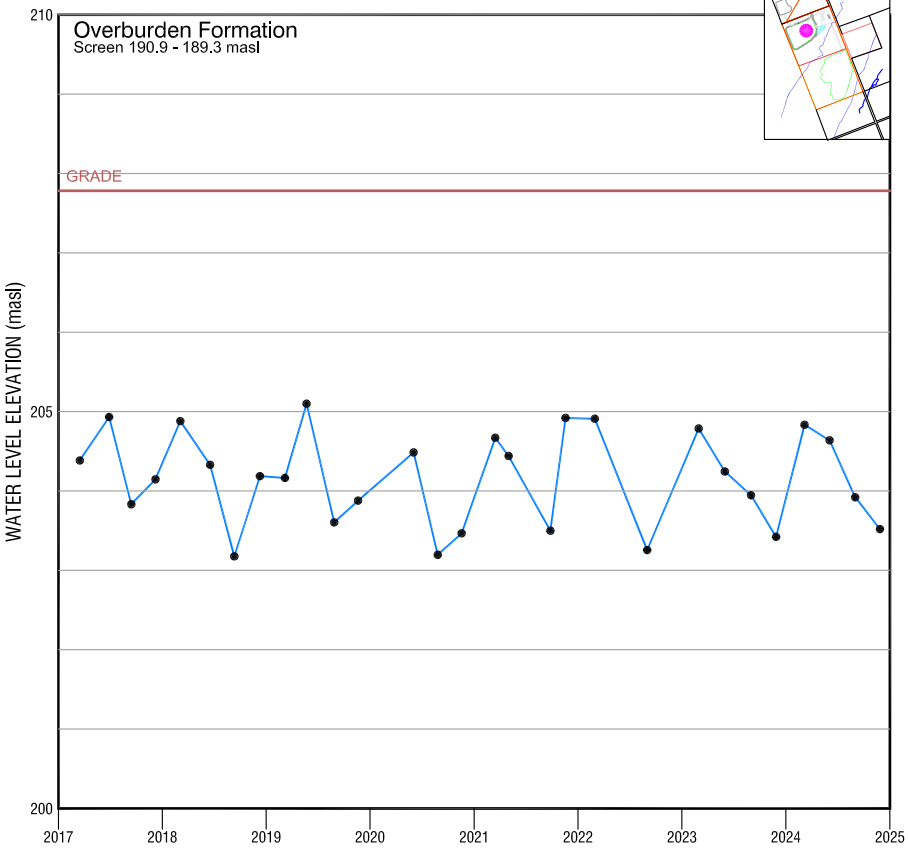

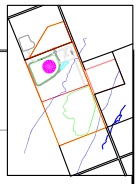

MP Elevation 208.59 masl
Grade 207.8 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	204.38		
28-Jun-17	204.93		
14-Sep-17	203.83		
08-Dec-17	204.15		
05-Mar-18	204.88		
18-Jun-18	204.33		
11-Sep-18	203.18		
10-Dec-18	204.19		
08-Mar-19	204.16		
23-May-19	205.10		
28-Aug-19	203.60		
20-Nov-19	203.88		
02-Jun-20	204.49		
26-Aug-20	203.20		
18-Nov-20	203.47		
16-Mar-21	204.67		
02-May-21	204.44		
26-Sep-21	203.50		
18-Nov-21	204.92		
01-Mar-22	204.91		
01-Sep-22	203.26		
01-Mar-23	204.79		
01-Jun-23	204.24		
01-Sep-23	203.95		
28-Nov-23	203.42		
07-Mar-24	204.83		
03-Jun-24	204.64		
01-Sep-24	203.92		
27-Nov-24	203.52		

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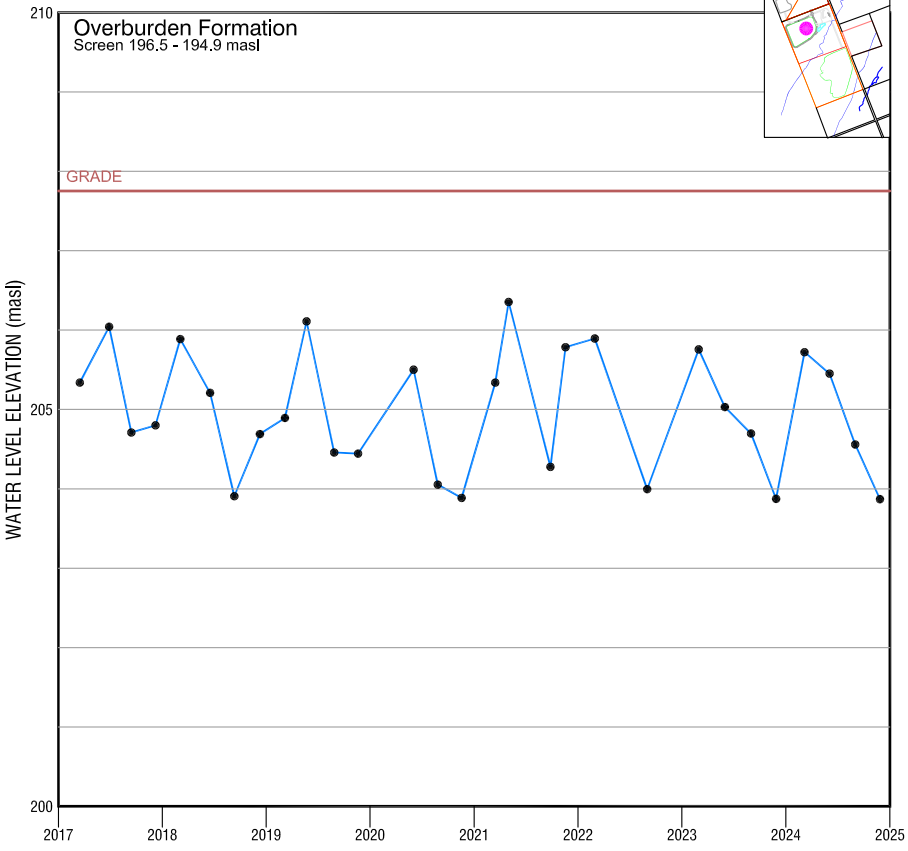
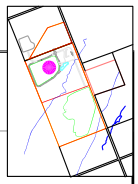
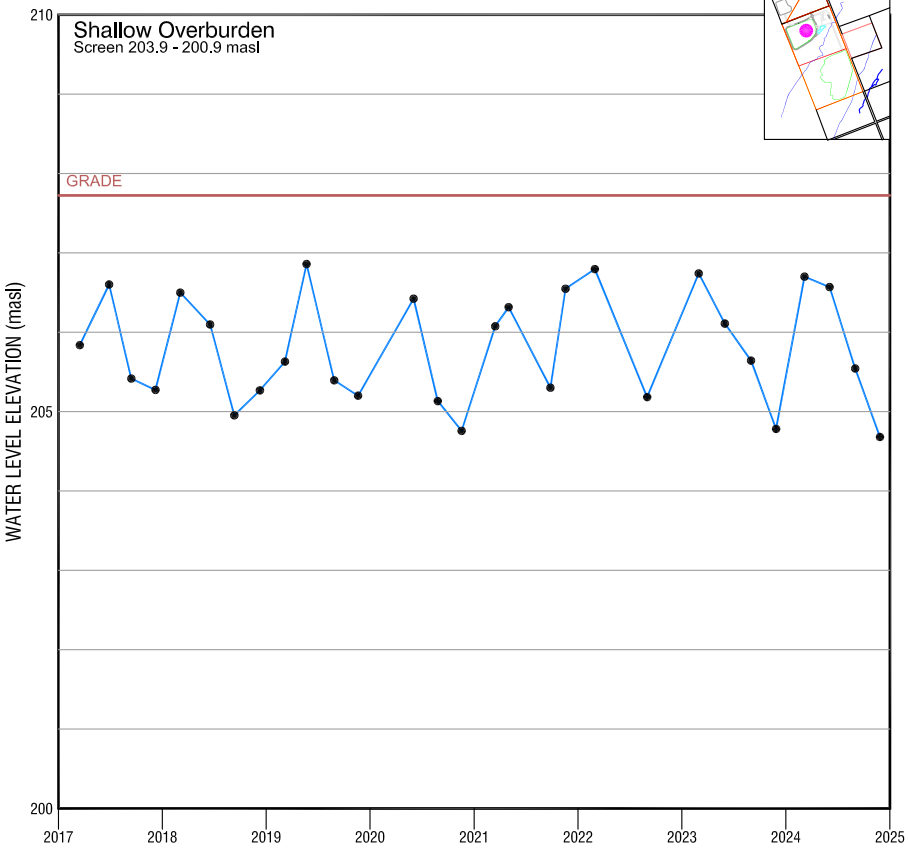


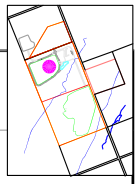


MP Elevation 208.59 masl
Grade 207.8 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	205.34		
28-Jun-17	206.04		
14-Sep-17	204.71		
08-Dec-17	204.80		
05-Mar-18	205.89		
18-Jun-18	205.21		
11-Sep-18	203.91		
10-Dec-18	204.69		
08-Mar-19	204.89		
23-May-19	206.11		
28-Aug-19	204.46		
20-Nov-19	204.44		
02-Jun-20	205.50		
26-Aug-20	204.05		
18-Nov-20	203.89		
16-Mar-21	205.34		
02-May-21	206.35		
26-Sep-21	204.28		
18-Nov-21	205.79		
01-Mar-22	205.89		
01-Sep-22	204.00		
01-Mar-23	205.76		
01-Jun-23	205.03		
01-Sep-23	204.70		
28-Nov-23	203.87		
07-Mar-24	205.72		
03-Jun-24	205.45		
01-Sep-24	204.56		
27-Nov-24	203.87		

BH-112-III

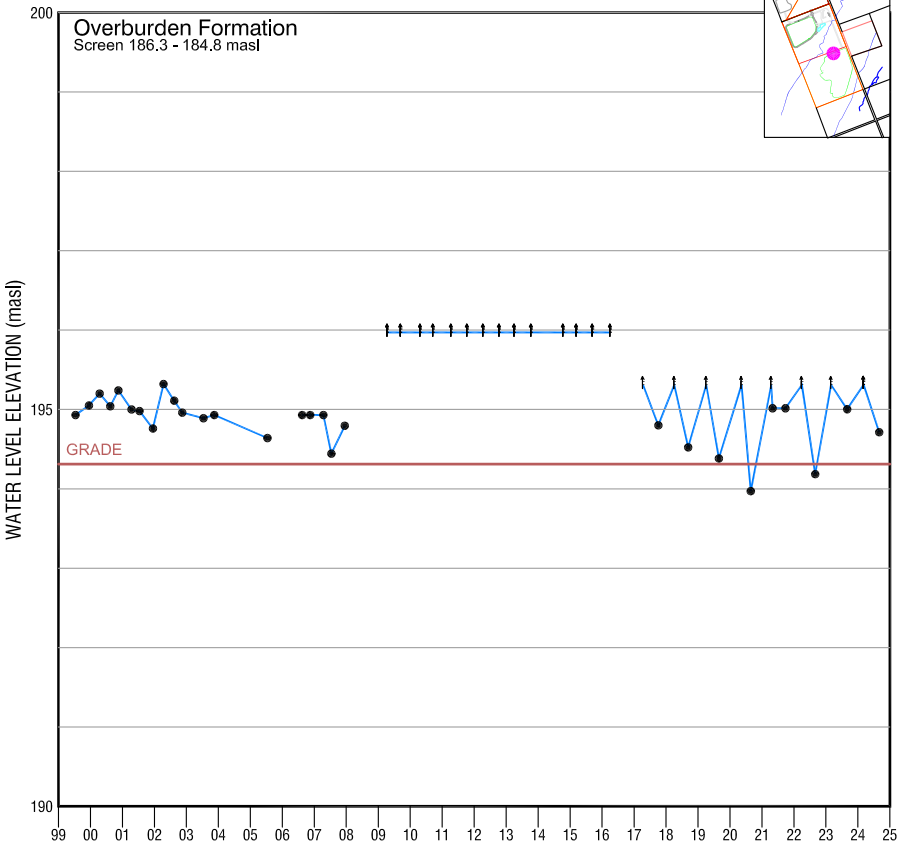


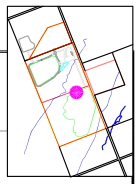


MP Elevation 208.60 masl
Grade 207.7 masl

DATE	ELEVATION	DATE	ELEVATION
17-Mar-17	205.84		
28-Jun-17	206.60		
14-Sep-17	205.42		
08-Dec-17	205.27		
05-Mar-18	206.50		
18-Jun-18	206.10		
11-Sep-18	204.95		
10-Dec-18	205.27		
08-Mar-19	205.63		
23-May-19	206.86		
28-Aug-19	205.39		
20-Nov-19	205.20		
02-Jun-20	206.42		
26-Aug-20	205.13		
18-Nov-20	204.76		
16-Mar-21	206.07		
02-May-21	206.32		
26-Sep-21	205.30		
18-Nov-21	206.55		
01-Mar-22	206.80		
01-Sep-22	205.18		
01-Mar-23	206.74		
01-Jun-23	206.11		
01-Sep-23	205.64		
28-Nov-23	204.78		
07-Mar-24	206.70		
03-Jun-24	206.57		
01-Sep-24	205.54		
27-Nov-24	204.68		

BH-113-II

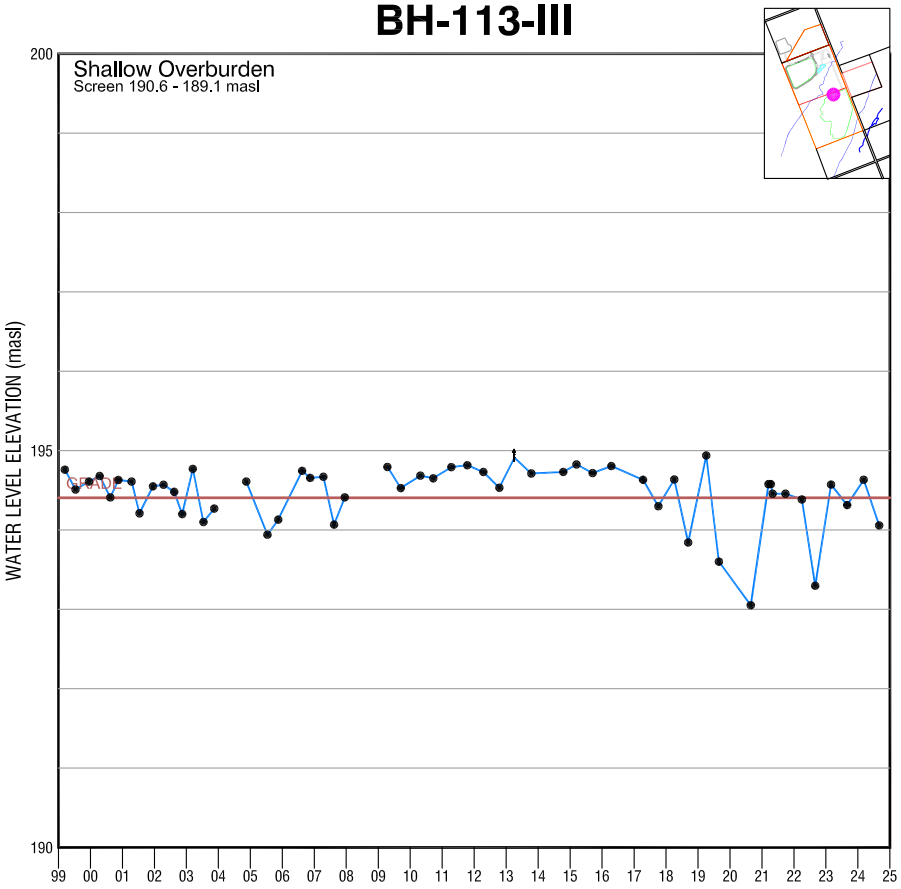




MP Elevation 195.31 masl
Grade 194.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jul-99	194.93	16-Apr-21	195.31
15-Dec-99	195.05	02-May-21	195.01
15-Apr-00	195.20	26-Sep-21	195.01
15-Aug-00	195.04	01-Apr-22	195.31
15-Nov-00	195.24	01-Sep-22	194.18
15-Apr-01	195.00	01-Mar-23	195.31
15-Jul-01	194.98	01-Sep-23	195.00
15-Dec-01	194.76	07-Mar-24	FLW
15-Apr-02	195.32	01-Sep-24	194.71
15-Aug-02	195.11		
15-Nov-02	194.96		
15-Jul-03	194.89		
15-Nov-03	194.93		
15-Jul-05	194.64		
15-Aug-06	194.93		
15-Nov-06	194.93		
15-Apr-07	194.93		
15-Jul-07	194.44		
15-Dec-07	194.79		
15-Apr-09	FLW		
15-Sep-09	FLW		
27-Apr-10	FLW		
21-Sep-10	FLW		
15-Apr-11	FLW		
15-Oct-11	FLW		
15-Apr-12	FLW		
15-Oct-12	FLW		
05-Apr-13	FLW		
15-Oct-13	FLW		
15-Oct-14	FLW		
15-Mar-15	FLW		
15-Sep-15	FLW		
04-Apr-16	FLW		
13-Apr-17	195.31		
05-Oct-17	194.80		
05-Apr-18	195.31		
11-Sep-18	194.52		
05-Apr-19	195.31		
28-Aug-19	194.38		
12-May-20	195.31		
26-Aug-20	193.97		

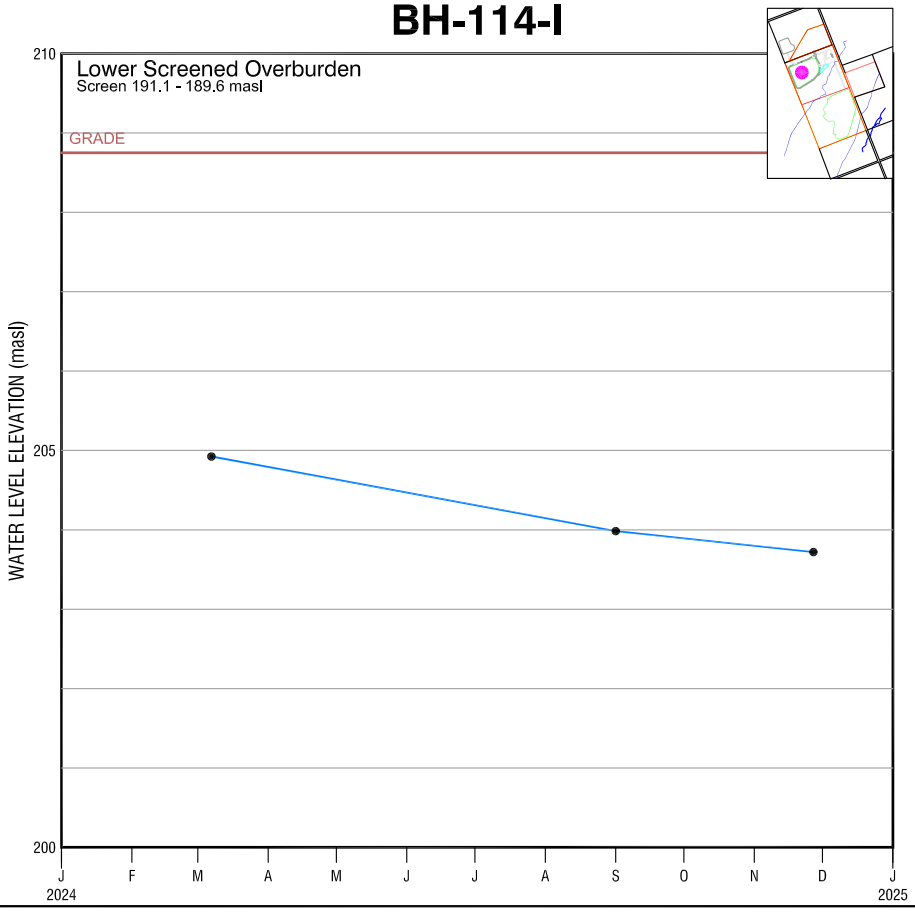
BH-113-III



MP Elevation 195.25 masl
Grade 194.4 masl

DATE	ELEVATION	DATE	ELEVATION
15-Mar-99	194.76	05-Apr-19	194.94
15-Jul-99	194.51	28-Aug-19	193.60
15-Dec-99	194.61	26-Aug-20	193.05
15-Apr-00	194.68	16-Mar-21	194.58
15-Aug-00	194.41	12-Apr-21	194.58
15-Nov-00	194.63	02-May-21	194.46
15-Apr-01	194.61	26-Sep-21	194.46
15-Jul-01	194.21	01-Apr-22	194.38
15-Dec-01	194.55	01-Sep-22	193.30
15-Apr-02	194.57	01-Mar-23	194.57
15-Aug-02	194.48	01-Sep-23	194.31
15-Nov-02	194.20	07-Mar-24	194.63
15-Mar-03	194.77	01-Sep-24	194.06
15-Jul-03	194.10		
15-Nov-03	194.27		
15-Nov-04	194.61		
15-Jul-05	193.94		
15-Nov-05	194.13		
15-Aug-06	194.74		
15-Nov-06	194.66		
15-Apr-07	194.67		
15-Aug-07	194.07		
15-Dec-07	194.41		
15-Apr-09	194.79		
15-Sep-09	194.53		
27-Apr-10	194.68		
21-Sep-10	194.65		
15-Apr-11	194.79		
15-Oct-11	194.82		
15-Apr-12	194.73		
15-Oct-12	194.53		
05-Apr-13	FLW		
15-Oct-13	194.71		
15-Oct-14	194.73		
15-Mar-15	194.83		
15-Sep-15	194.72		
16-Apr-16	194.80		
13-Apr-17	194.63		
05-Oct-17	194.30		
05-Apr-18	194.64		
11-Sep-18	193.84		

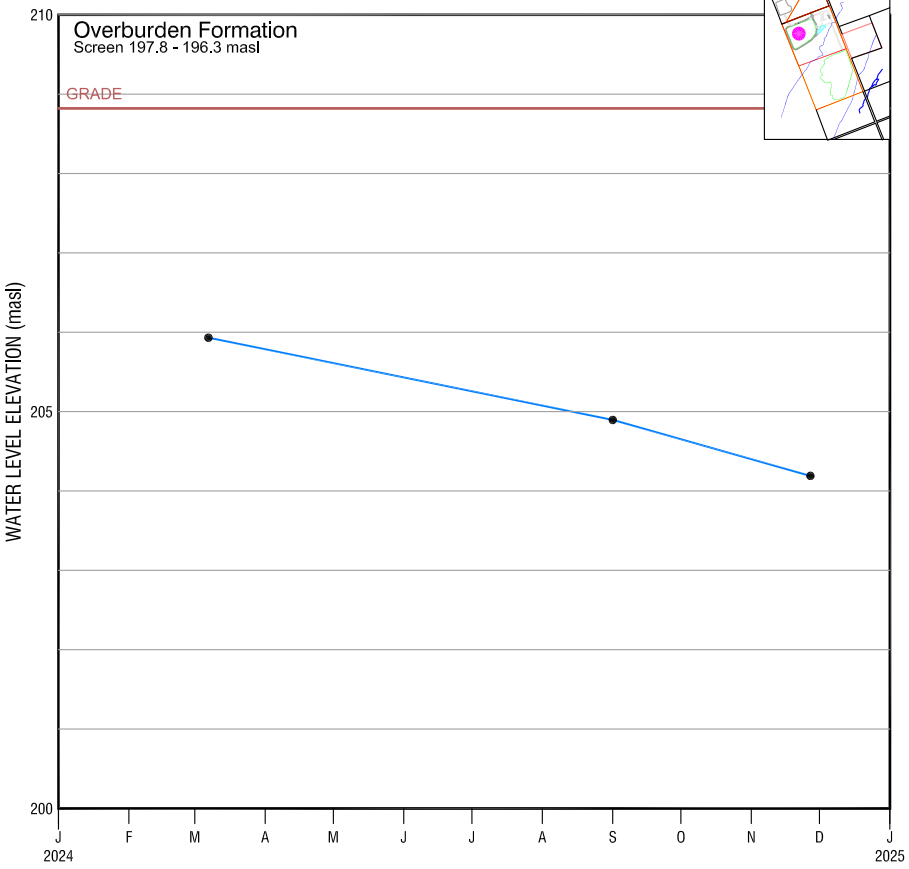
BH-114-I

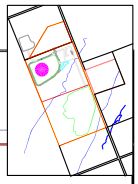


MP Elevation 209.74 masl
Grade 208.8 masl

DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	204.92		
01-Sep-24	203.98		
27-Nov-24	203.72		

BH-114-II

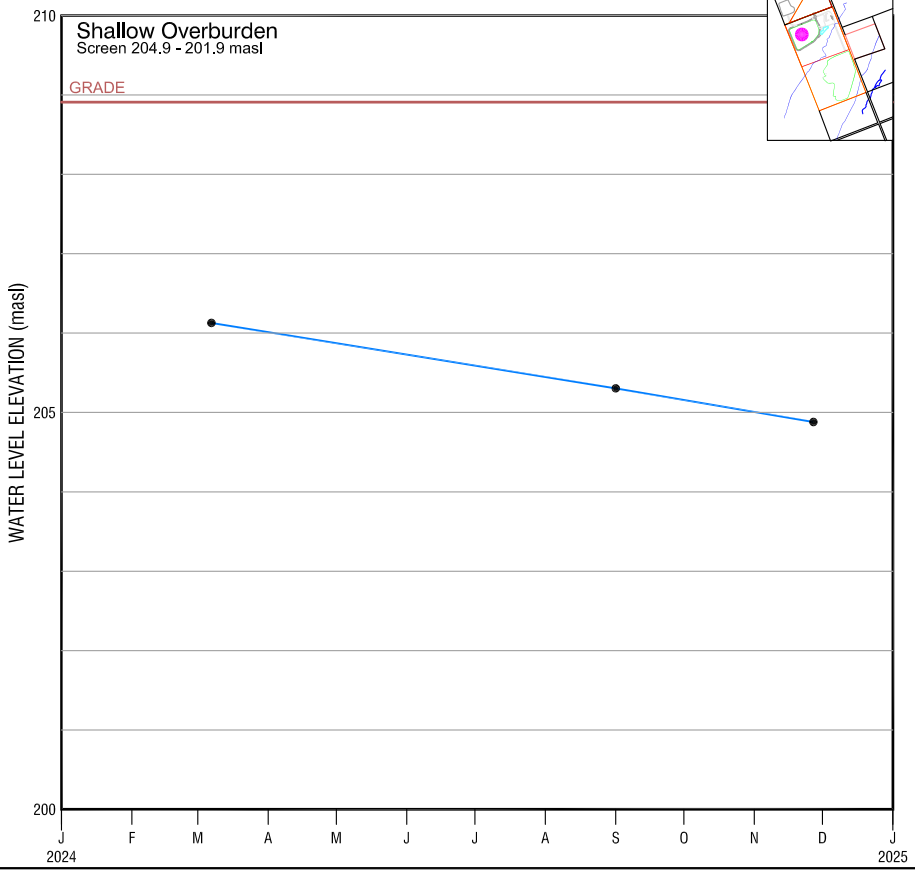


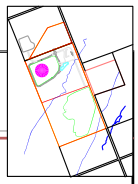


MP Elevation 209.86 masl
Grade 208.8 masl

DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	205.93		
01-Sep-24	204.90		
27-Nov-24	204.19		

BH-114-III





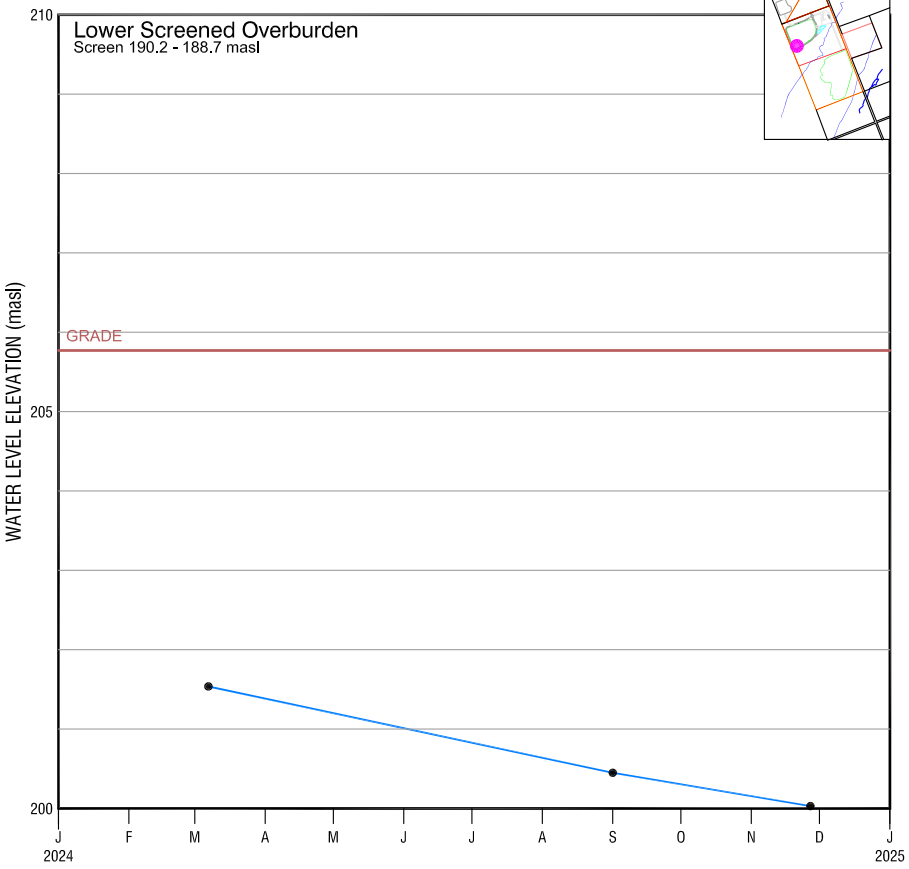
MP Elevation 209.94 masl
Grade 208.9 masl

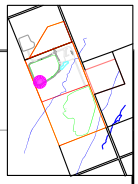
DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	206.13		
01-Sep-24	205.30		
27-Nov-24	204.88		

CITY OF PETERBOROUGH
BENSFORT LANDFILL & ORGANICS FACILITY

CA008825 17 Mar 25	wsp	E124040

BH-115-I

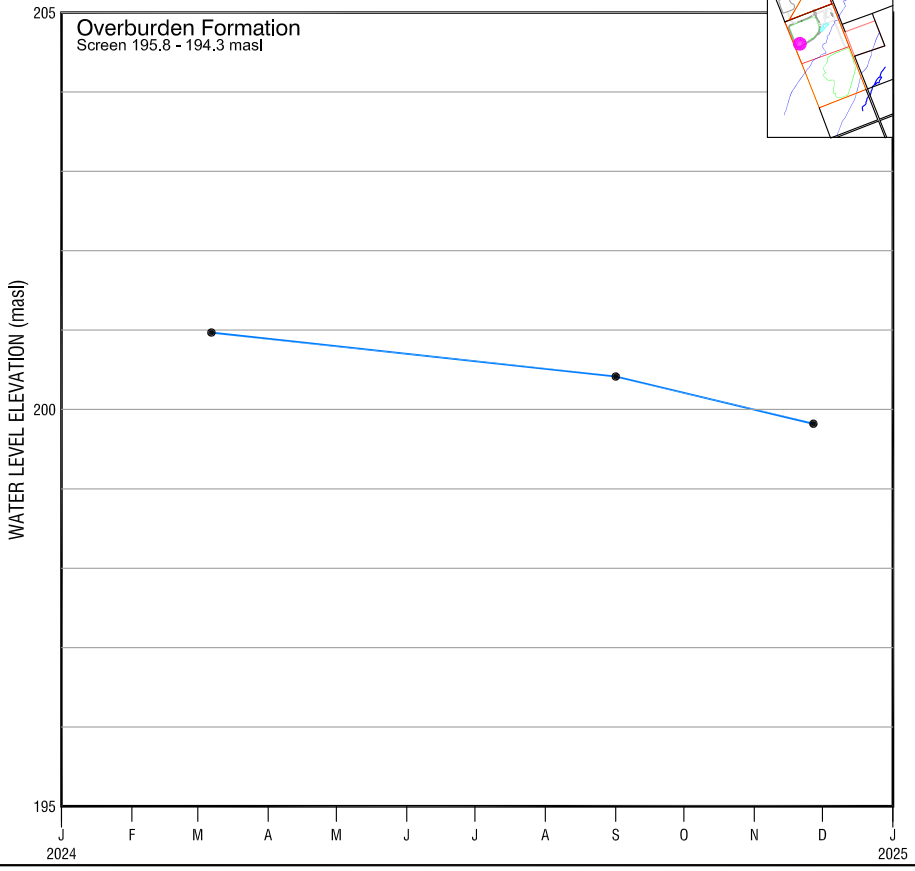


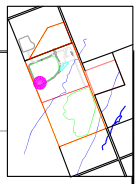


MP Elevation 206.68 masl
Grade 205.8 masl

DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	201.54		
01-Sep-24	200.45		
27-Nov-24	200.03		

BH-115-II

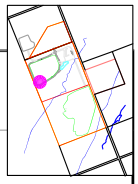




MP Elevation 206.72 masl
Grade 205.8 masl

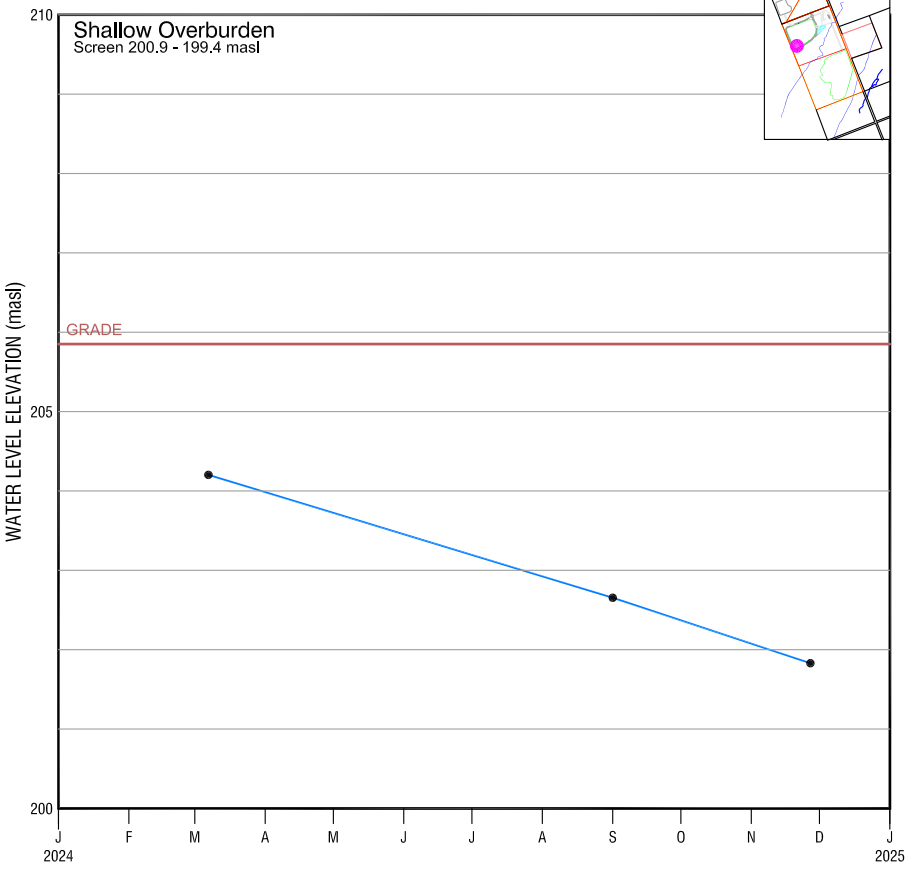
DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	200.97		
01-Sep-24	200.41		
27-Nov-24	199.82		

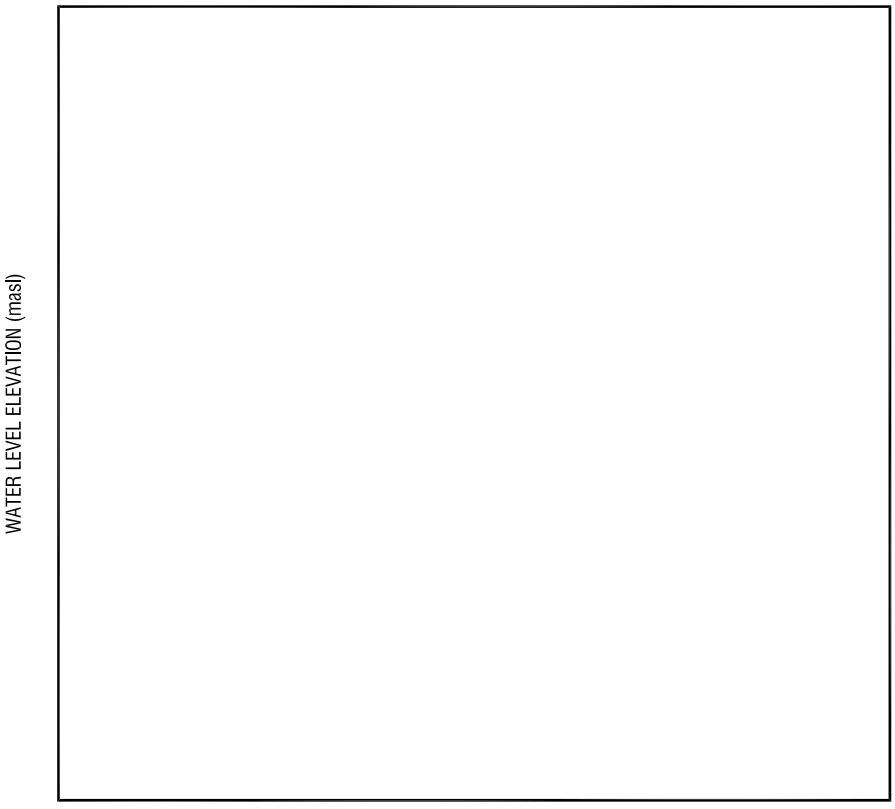
BH-115-III



MP Elevation 206.85 masl
Grade 205.9 masl

DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	204.20		
01-Sep-24	202.65		
27-Nov-24	201.83		

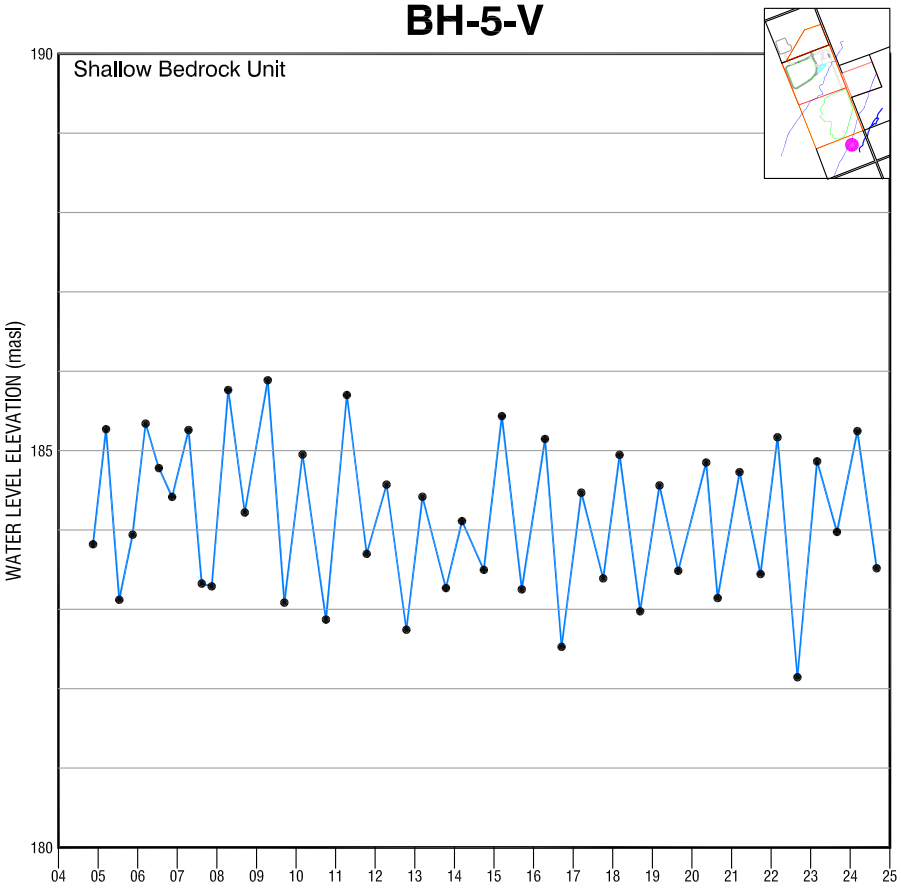




CITY OF PETERBOROUGH
BENSFORT LANDFILL & ORGANICS FACILITY

CA008825	wsp	E124042
17 Mar 25		

BH-5-V



MP Elevation 187.98 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-04	183.82	01-Sep-23	183.98
15-Mar-05	185.27	07-Mar-24	185.25
15-Jul-05	183.12	01-Sep-24	183.52
15-Nov-05	183.94		
15-Mar-06	185.34		
15-Jul-06	184.78		
15-Nov-06	184.42		
15-Apr-07	185.26		
15-Aug-07	183.32		
15-Nov-07	183.29		
15-Apr-08	185.76		
15-Sep-08	184.22		
15-Apr-09	185.89		
15-Sep-09	183.09		
02-Mar-10	184.95		
04-Oct-10	182.87		
15-Apr-11	185.70		
15-Oct-11	183.70		
15-Apr-12	184.57		
15-Oct-12	182.74		
12-Mar-13	184.42		
15-Oct-13	183.27		
12-Mar-14	184.11		
30-Sep-14	183.50		
15-Mar-15	185.43		
15-Sep-15	183.25		
16-Apr-16	185.15		
16-Sep-16	182.53		
17-Mar-17	184.47		
05-Oct-17	183.39		
05-Mar-18	184.95		
11-Sep-18	182.98		
08-Mar-19	184.56		
28-Aug-19	183.49		
12-May-20	184.85		
26-Aug-20	183.14		
16-Mar-21	184.73		
26-Sep-21	183.45		
01-Mar-22	185.17		
01-Sep-22	182.15		
01-Mar-23	184.87		

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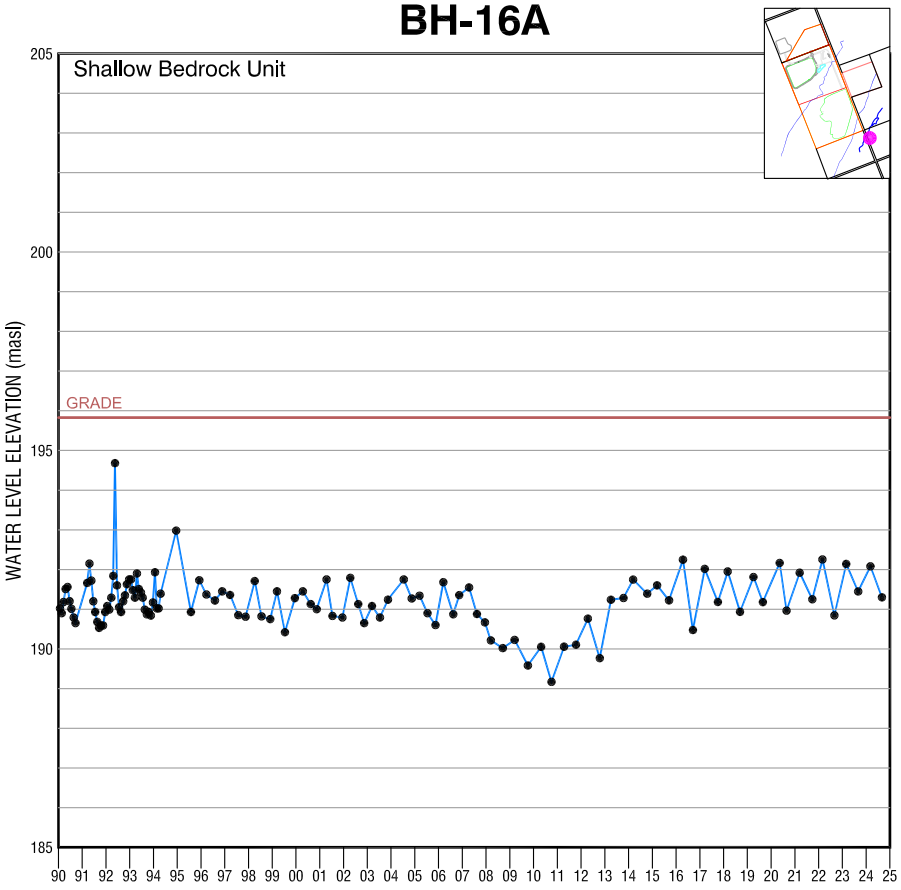

MP Elevation 196.64 masl
Grade 195.8 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-93	191.29	15-Nov-05	190.60
20-Aug-93	190.99	15-Mar-06	191.68
21-Sep-93	190.87	15-Aug-06	190.87
21-Oct-93	190.93	15-Nov-06	191.36
22-Nov-93	190.84	15-Apr-07	191.55
23-Dec-93	191.17	15-Aug-07	190.88
24-Jan-94	191.93	15-Dec-07	190.67
21-Feb-94	191.02	15-Mar-08	190.21
21-Mar-94	191.02	15-Sep-08	190.02
21-Apr-94	191.39	16-Mar-09	190.23
16-Dec-94	192.98	06-Oct-09	189.58
31-Jul-95	190.93	27-Apr-10	190.05
06-Dec-95	191.73	04-Oct-10	189.17
25-Mar-96	191.37	15-Apr-11	190.05
03-Aug-96	191.22	15-Oct-11	190.10
22-Nov-96	191.45	15-Apr-12	190.76
23-Mar-97	191.36	15-Oct-12	189.77
28-Jul-97	190.85	05-Apr-13	191.24
17-Nov-97	190.81	15-Oct-13	191.28
07-Apr-98	191.71	12-Mar-14	191.75
20-Jul-98	190.82	15-Oct-14	191.39
01-Dec-98	190.75	15-Mar-15	191.60
15-Mar-99	191.45	15-Sep-15	191.22
15-Jul-99	190.42	16-Apr-16	192.25
15-Dec-99	191.28	16-Sep-16	190.48
15-Apr-00	191.45	17-Mar-17	192.02
15-Aug-00	191.13	05-Oct-17	191.18
15-Nov-00	191.00	05-Mar-18	191.95
15-Apr-01	191.75	11-Sep-18	190.93
15-Jul-01	190.83	05-Apr-19	191.81
15-Dec-01	190.79	28-Aug-19	191.18
15-Apr-02	191.79	12-May-20	192.16
15-Aug-02	191.13	26-Aug-20	190.96
15-Nov-02	190.65	16-Mar-21	191.92
15-Mar-03	191.08	26-Sep-21	191.25
15-Jul-03	190.79	01-Mar-22	192.25
15-Nov-03	191.24	01-Sep-22	190.85
15-Jul-04	191.75	01-Mar-23	192.14
15-Nov-04	191.27	01-Sep-23	191.45
15-Mar-05	191.34	07-Mar-24	192.08
15-Jul-05	190.90	01-Sep-24	191.30

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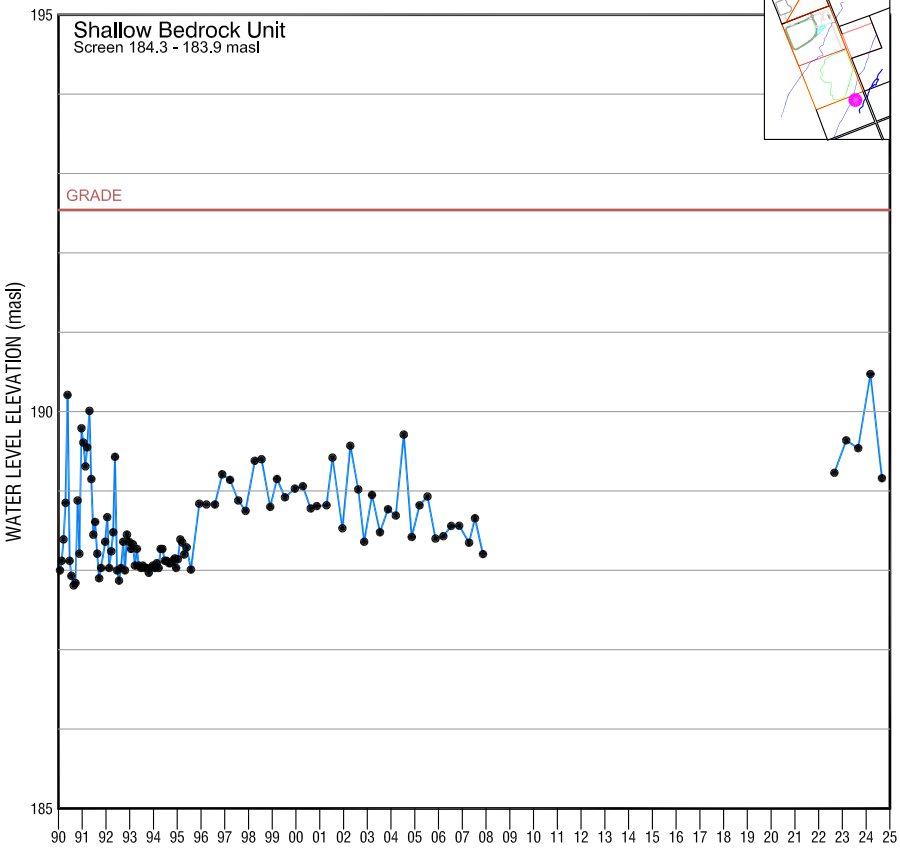
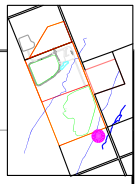
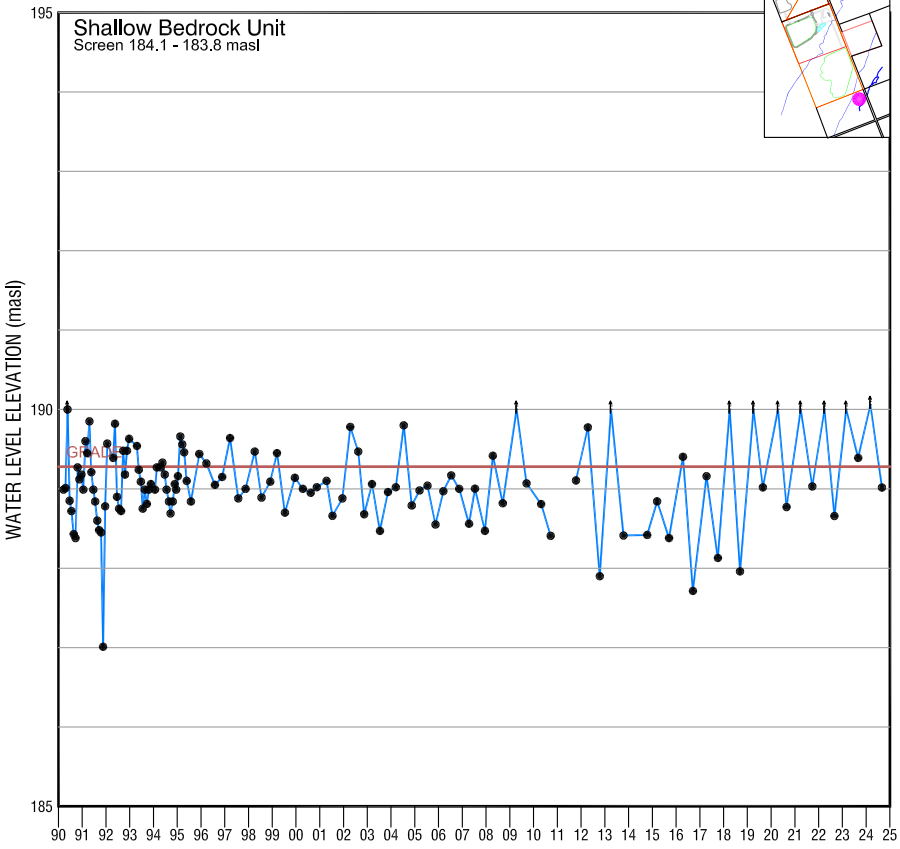


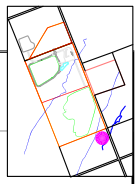


MP Elevation 193.31 masl
Grade 192.5 masl

DATE	ELEVATION	DATE	ELEVATION
23-Mar-92	188.24	25-Mar-96	188.83
22-Apr-92	188.48	03-Aug-96	188.83
19-May-92	189.43	22-Nov-96	189.21
19-Jun-92	188.00	23-Mar-97	189.14
20-Jul-92	187.87	28-Jul-97	188.88
20-Aug-92	188.03	17-Nov-97	188.75
22-Sep-92	188.36	07-Apr-98	189.38
20-Oct-92	188.00	20-Jul-98	189.40
19-Nov-92	188.45	01-Dec-98	188.80
22-Dec-92	188.36	15-Mar-99	189.15
20-Jan-93	188.27	15-Jul-99	188.92
18-Feb-93	188.33	15-Dec-99	189.03
22-Mar-93	188.06	15-Apr-00	189.06
21-Apr-93	188.27	15-Aug-00	188.78
20-May-93	188.06	15-Nov-00	188.81
21-Jun-93	188.03	15-Apr-01	188.82
20-Jul-93	188.06	15-Jul-01	189.42
20-Aug-93	188.03	15-Dec-01	188.53
21-Sep-93	188.03	15-Apr-02	189.57
21-Oct-93	187.97	15-Aug-02	189.02
22-Nov-93	188.03	15-Nov-02	188.36
23-Dec-93	188.06	15-Mar-03	188.95
24-Jan-94	188.03	15-Jul-03	188.48
21-Feb-94	188.09	15-Nov-03	188.77
21-Mar-94	188.03	15-Mar-04	188.69
21-Apr-94	188.27	15-Jul-04	189.71
19-May-94	188.27	15-Nov-04	188.42
23-Jun-94	188.12	15-Mar-05	188.82
21-Jul-94	188.12	15-Jul-05	188.93
26-Aug-94	188.09	15-Nov-05	188.40
20-Sep-94	188.09	15-Mar-06	188.43
25-Oct-94	188.12	15-Jul-06	188.56
24-Nov-94	188.15	15-Nov-06	188.56
16-Dec-94	188.03	15-Apr-07	188.35
12-Jan-95	188.14	15-Jul-07	188.66
17-Feb-95	188.39	15-Nov-07	188.21
20-Mar-95	188.35	01-Sep-22	189.23
18-Apr-95	188.20	01-Mar-23	189.64
26-May-95	188.29	01-Sep-23	189.54
31-Jul-95	188.01	07-Mar-24	190.47
06-Dec-95	188.84	01-Sep-24	189.16

BH-18A

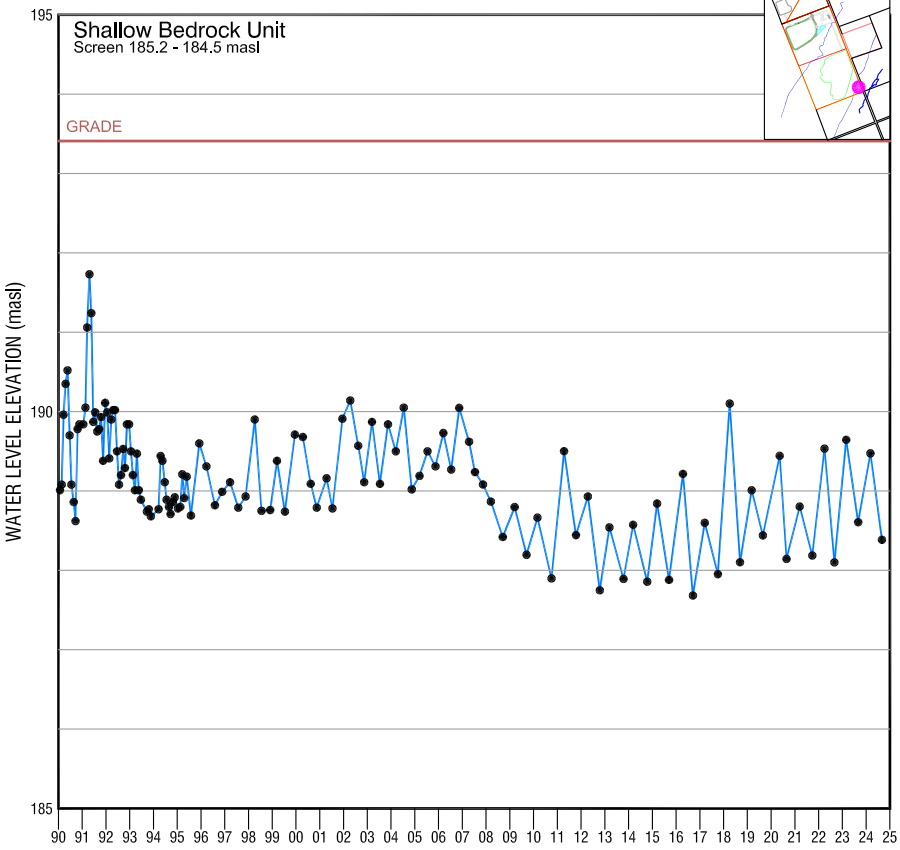


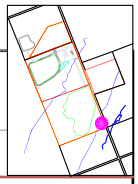


MP Elevation 190.00 masl
Grade 189.3 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jun-94	189.18	15-Mar-05	188.98
21-Jul-94	188.99	15-Jul-05	189.04
26-Aug-94	188.84	15-Nov-05	188.55
20-Sep-94	188.69	15-Mar-06	188.97
25-Oct-94	188.84	15-Jul-06	189.17
24-Nov-94	189.06	15-Nov-06	189.00
16-Dec-94	188.99	15-Apr-07	188.56
12-Jan-95	189.16	15-Jul-07	189.00
17-Feb-95	189.66	15-Dec-07	188.47
20-Mar-95	189.56	15-Apr-08	189.42
18-Apr-95	189.46	15-Sep-08	188.82
26-May-95	189.10	15-Apr-09	190.00
31-Jul-95	188.84	15-Sep-09	189.07
06-Dec-95	189.44	27-Apr-10	188.81
25-Mar-96	189.32	21-Sep-10	188.41
03-Aug-96	189.05	15-Oct-11	189.11
22-Nov-96	189.15	15-Apr-12	189.77
23-Mar-97	189.64	15-Oct-12	187.90
28-Jul-97	188.88	05-Apr-13	190.00
17-Nov-97	189.00	15-Oct-13	188.41
07-Apr-98	189.47	15-Oct-14	188.42
20-Jul-98	188.89	15-Mar-15	188.84
01-Dec-98	189.09	15-Sep-15	188.38
15-Mar-99	189.45	16-Apr-16	189.40
15-Jul-99	188.70	16-Sep-16	187.71
15-Dec-99	189.14	13-Apr-17	189.16
15-Apr-00	189.00	05-Oct-17	188.13
15-Aug-00	188.95	05-Apr-18	190.00
15-Nov-00	189.02	11-Sep-18	187.96
15-Apr-01	189.10	05-Apr-19	190.00
15-Jul-01	188.66	28-Aug-19	189.02
15-Dec-01	188.88	16-Apr-20	190.00
15-Apr-02	189.78	26-Aug-20	188.77
15-Aug-02	189.47	31-Mar-21	190.00
15-Nov-02	188.68	26-Sep-21	189.03
15-Mar-03	189.06	01-Apr-22	190.00
15-Jul-03	188.47	01-Sep-22	188.66
15-Nov-03	188.96	01-Mar-23	190.00
15-Mar-04	189.02	01-Sep-23	189.39
15-Jul-04	189.80	07-Mar-24	190.06
15-Nov-04	188.79	01-Sep-24	189.02

BH-19A

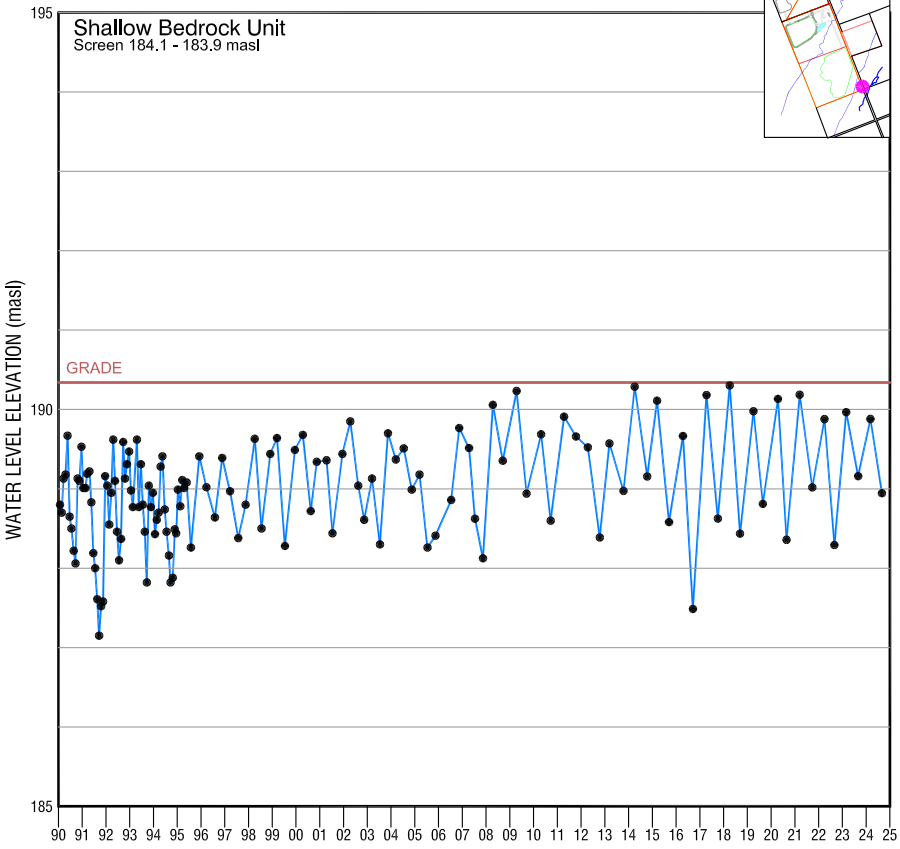


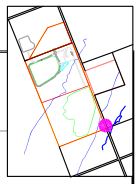


MP Elevation 193.87 masl
Grade 193.4 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	188.89	15-Nov-05	189.31
26-Aug-94	188.80	15-Mar-06	189.73
20-Sep-94	188.71	15-Jul-06	189.27
25-Oct-94	188.86	15-Nov-06	190.05
24-Nov-94	188.92	15-Apr-07	189.62
12-Jan-95	188.78	15-Jul-07	189.24
17-Feb-95	188.80	15-Nov-07	189.08
20-Mar-95	189.21	15-Mar-08	188.87
18-Apr-95	188.91	15-Sep-08	188.42
26-May-95	189.18	16-Mar-09	188.80
31-Jul-95	188.69	15-Sep-09	188.20
06-Dec-95	189.60	02-Mar-10	188.66
25-Mar-96	189.31	04-Oct-10	187.90
03-Aug-96	188.82	15-Apr-11	189.50
22-Nov-96	188.99	15-Oct-11	188.44
23-Mar-97	189.11	15-Apr-12	188.93
28-Jul-97	188.79	15-Oct-12	187.75
17-Nov-97	188.93	12-Mar-13	188.54
07-Apr-98	189.90	15-Oct-13	187.89
20-Jul-98	188.75	12-Mar-14	188.57
01-Dec-98	188.76	15-Oct-14	187.86
15-Mar-99	189.38	15-Mar-15	188.84
15-Jul-99	188.74	15-Sep-15	187.88
15-Dec-99	189.71	16-Apr-16	189.21
15-Apr-00	189.68	16-Sep-16	187.68
15-Aug-00	189.09	17-Mar-17	188.60
15-Nov-00	188.79	05-Oct-17	187.95
15-Apr-01	189.16	05-Apr-18	190.10
15-Jul-01	188.78	11-Sep-18	188.10
15-Dec-01	189.91	08-Mar-19	189.01
15-Apr-02	190.14	28-Aug-19	188.44
15-Aug-02	189.57	12-May-20	189.44
15-Nov-02	189.11	26-Aug-20	188.14
15-Mar-03	189.87	16-Mar-21	188.80
15-Jul-03	189.09	26-Sep-21	188.19
15-Nov-03	189.84	01-Apr-22	189.53
15-Mar-04	189.50	01-Sep-22	188.10
15-Jul-04	190.05	01-Mar-23	189.64
15-Nov-04	189.02	01-Sep-23	188.61
15-Mar-05	189.19	07-Mar-24	189.47
15-Jul-05	189.50	01-Sep-24	188.38

BH-20A

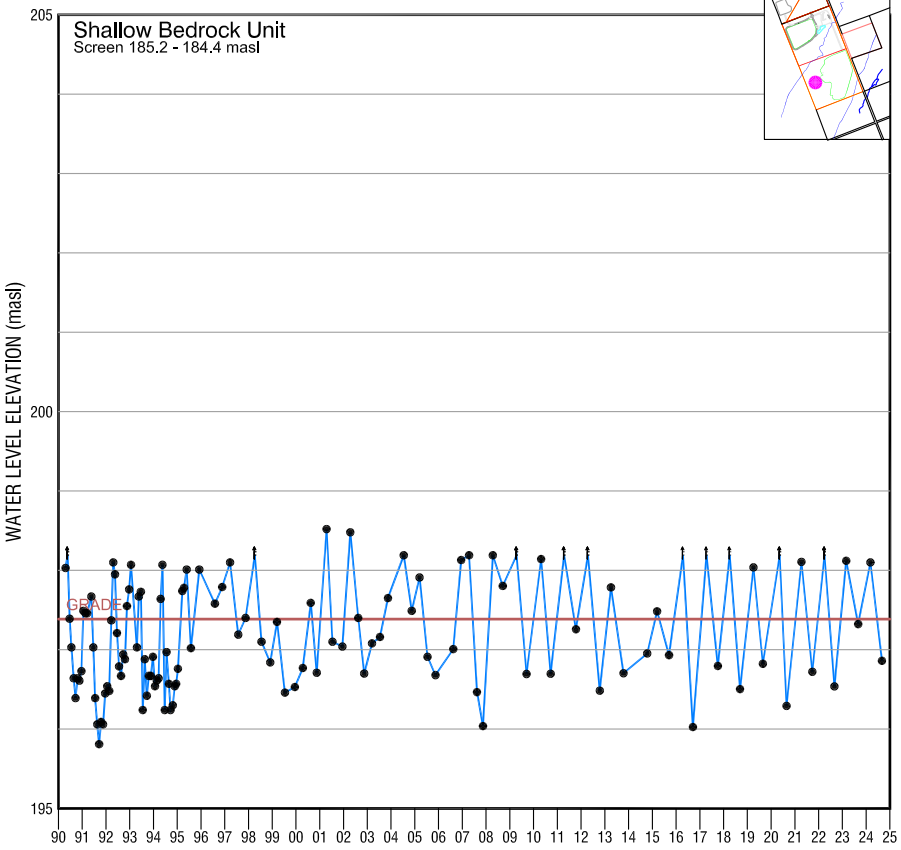


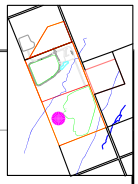


MP Elevation 190.95 masl
Grade 190.3 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	188.46	15-Jul-05	188.26
26-Aug-94	188.16	15-Nov-05	188.41
20-Sep-94	187.82	15-Jul-06	188.86
25-Oct-94	187.88	15-Nov-06	189.77
24-Nov-94	188.49	15-Apr-07	189.51
16-Dec-94	188.44	15-Jul-07	188.62
12-Jan-95	188.99	15-Nov-07	188.13
17-Feb-95	188.78	15-Apr-08	190.06
20-Mar-95	189.11	15-Sep-08	189.35
18-Apr-95	189.01	15-Apr-09	190.23
26-May-95	189.08	15-Sep-09	188.94
31-Jul-95	188.26	27-Apr-10	189.69
06-Dec-95	189.41	21-Sep-10	188.60
25-Mar-96	189.02	15-Apr-11	189.91
03-Aug-96	188.64	15-Oct-11	189.66
22-Nov-96	189.39	15-Apr-12	189.52
23-Mar-97	188.97	15-Oct-12	188.39
28-Jul-97	188.38	12-Mar-13	189.57
17-Nov-97	188.80	15-Oct-13	188.97
07-Apr-98	189.63	05-Apr-14	190.29
20-Jul-98	188.50	15-Oct-14	189.16
01-Dec-98	189.44	15-Mar-15	190.11
15-Mar-99	189.64	15-Sep-15	188.58
15-Jul-99	188.28	16-Apr-16	189.67
15-Dec-99	189.49	16-Sep-16	187.49
15-Apr-00	189.68	13-Apr-17	190.18
15-Aug-00	188.72	05-Oct-17	188.63
15-Nov-00	189.34	05-Apr-18	190.30
15-Apr-01	189.36	11-Sep-18	188.44
15-Jul-01	188.44	05-Apr-19	189.98
15-Dec-01	189.44	28-Aug-19	188.81
15-Apr-02	189.85	16-Apr-20	190.13
15-Aug-02	189.04	26-Aug-20	188.36
15-Nov-02	188.61	16-Mar-21	190.19
15-Mar-03	189.13	26-Sep-21	189.02
15-Jul-03	188.30	01-Apr-22	189.88
15-Nov-03	189.70	01-Sep-22	188.29
15-Mar-04	189.37	01-Mar-23	189.97
15-Jul-04	189.51	01-Sep-23	189.16
15-Nov-04	188.99	07-Mar-24	189.88
15-Mar-05	189.18	01-Sep-24	188.95

BH-41-II

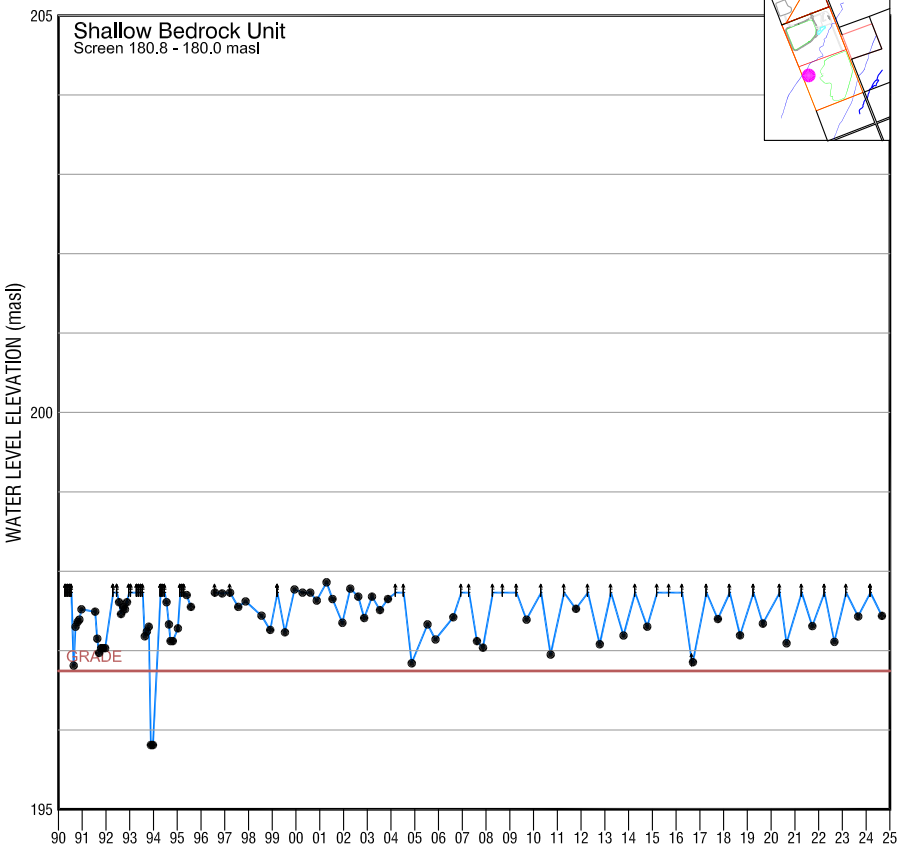


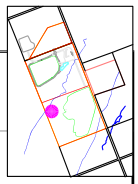


MP Elevation 198.19 masl
Grade 197.4 masl

DATE	ELEVATION	DATE	ELEVATION
21-Mar-94	196.64	15-Mar-05	197.91
21-Apr-94	197.64	15-Jul-05	196.91
19-May-94	198.07	15-Nov-05	196.68
23-Jun-94	196.24	15-Aug-06	197.01
21-Jul-94	196.97	15-Dec-06	198.13
26-Aug-94	196.57	15-Apr-07	198.19
20-Sep-94	196.24	15-Aug-07	196.47
25-Oct-94	196.30	15-Nov-07	196.04
24-Nov-94	196.54	15-Apr-08	198.19
16-Dec-94	196.57	15-Sep-08	197.80
12-Jan-95	196.76	15-Apr-09	FLW
20-Mar-95	197.74	15-Sep-09	196.69
15-Apr-95	197.78	27-Apr-10	198.14
26-May-95	198.01	21-Sep-10	196.70
31-Jul-95	197.02	15-Apr-11	FLW
06-Dec-95	198.01	15-Oct-11	197.26
03-Aug-96	197.58	15-Apr-12	FLW
22-Nov-96	197.79	15-Oct-12	196.48
23-Mar-97	198.10	05-Apr-13	197.79
28-Jul-97	197.19	15-Oct-13	196.70
17-Nov-97	197.40	15-Oct-14	196.95
07-Apr-98	FLW	15-Mar-15	197.48
20-Jul-98	197.10	15-Sep-15	196.93
01-Dec-98	196.84	16-Apr-16	198.19
15-Mar-99	197.35	16-Sep-16	196.03
15-Jul-99	196.46	13-Apr-17	198.19
15-Dec-99	196.53	05-Oct-17	196.79
15-Apr-00	196.77	05-Apr-18	198.19
15-Aug-00	197.59	11-Sep-18	196.50
15-Nov-00	196.71	05-Apr-19	198.04
15-Apr-01	198.52	28-Aug-19	196.82
15-Jul-01	197.10	12-May-20	FLW
15-Dec-01	197.04	26-Aug-20	196.29
15-Apr-02	198.48	12-Apr-21	198.11
15-Aug-02	197.40	26-Sep-21	196.72
15-Nov-02	196.70	01-Apr-22	FLW
15-Mar-03	197.08	01-Sep-22	196.54
15-Jul-03	197.16	01-Mar-23	198.12
15-Nov-03	197.65	01-Sep-23	197.32
15-Jul-04	198.19	07-Mar-24	198.10
15-Nov-04	197.49	01-Sep-24	196.86

BH-44-II

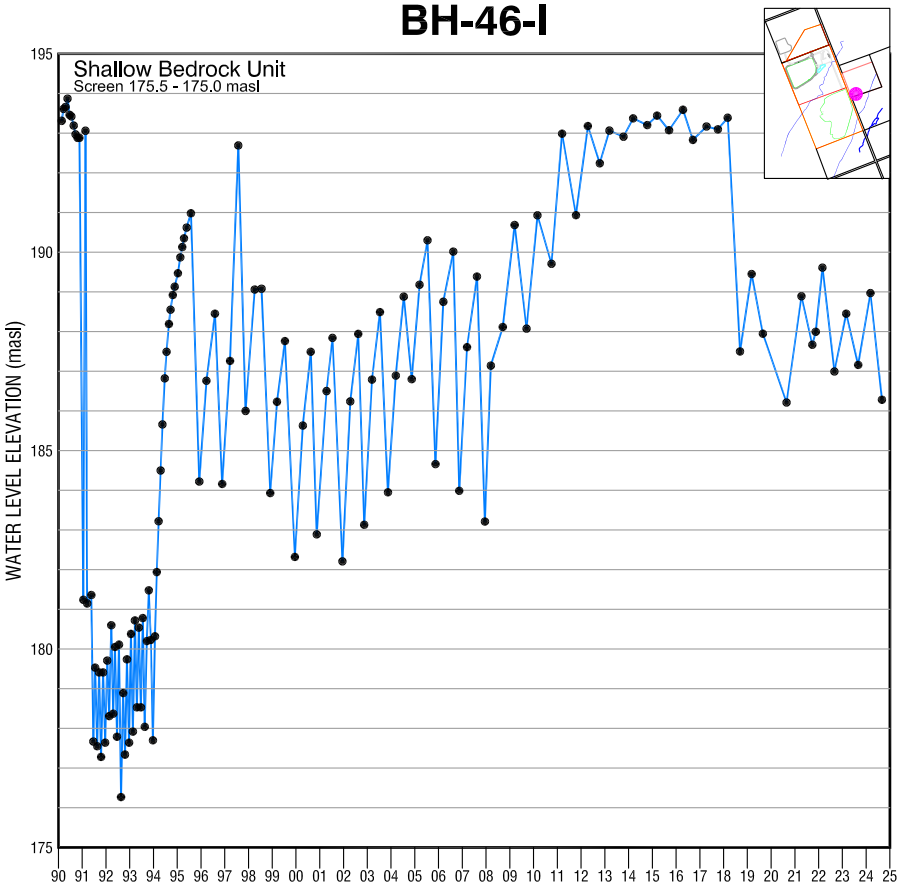




MP Elevation 197.73 masl
Grade 196.7 masl

DATE	ELEVATION	DATE	ELEVATION
22-Nov-93	195.81	15-Nov-05	197.14
23-Dec-93	195.81	15-Aug-06	197.42
21-Apr-94	FLW	15-Dec-06	197.73
19-May-94	FLW	15-Apr-07	197.73
23-Jun-94	FLW	15-Aug-07	197.12
21-Jul-94	197.61	15-Nov-07	197.04
26-Aug-94	197.33	15-Apr-08	197.73
20-Sep-94	197.12	15-Sep-08	197.73
25-Oct-94	197.12	15-Apr-09	197.73
12-Jan-95	197.28	15-Sep-09	197.39
17-Feb-95	FLW	27-Apr-10	197.73
20-Mar-95	FLW	21-Sep-10	196.95
15-Apr-95	FLW	15-Apr-11	197.73
26-May-95	197.70	15-Oct-11	197.53
31-Jul-95	197.55	15-Apr-12	197.73
03-Aug-96	FLW	15-Oct-12	197.08
22-Nov-96	197.72	05-Apr-13	197.73
23-Mar-97	FLW	15-Oct-13	197.19
28-Jul-97	197.55	12-Apr-14	197.73
17-Nov-97	197.62	15-Oct-14	197.30
20-Jul-98	197.44	15-Mar-15	197.73
01-Dec-98	197.26	15-Sep-15	197.73
22-Mar-99	FLW	04-Apr-16	197.73
15-Jul-99	197.23	01-Sep-16	196.85
09-Dec-99	197.77	16-Sep-16	196.85
11-Apr-00	197.73	13-Apr-17	197.73
08-Aug-00	197.73	05-Oct-17	197.40
15-Nov-00	197.63	05-Apr-18	197.73
15-Apr-01	197.86	11-Sep-18	197.19
15-Jul-01	197.65	05-Apr-19	197.73
15-Dec-01	197.35	28-Aug-19	197.34
15-Apr-02	197.78	12-May-20	197.73
15-Aug-02	197.68	26-Aug-20	197.09
15-Nov-02	197.41	16-Apr-21	197.73
15-Mar-03	197.68	26-Sep-21	197.31
15-Jul-03	197.51	01-Apr-22	197.73
15-Nov-03	197.65	01-Sep-22	197.11
15-Mar-04	197.73	01-Mar-23	197.73
15-Jul-04	197.73	01-Sep-23	197.43
15-Nov-04	196.84	07-Mar-24	FLW
15-Jul-05	197.33	01-Sep-24	197.44

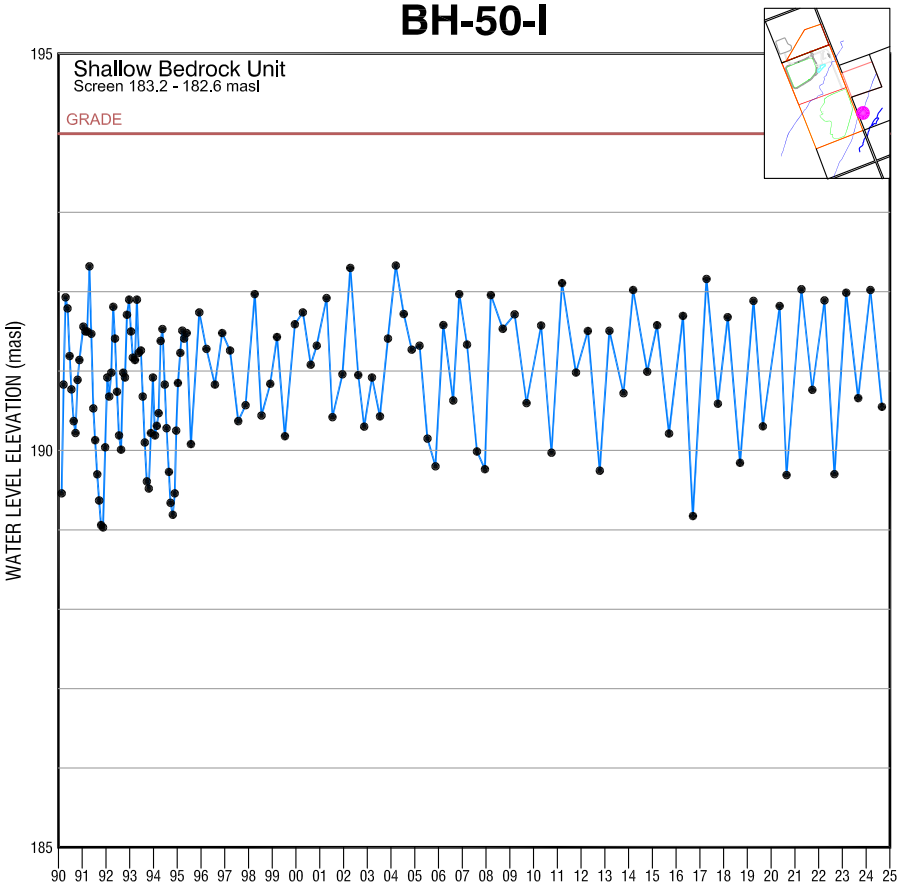
BH-46-I



MP Elevation 194.71 masl
Grade 194.0 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	187.49	15-Nov-05	184.66
26-Aug-94	188.19	15-Mar-06	188.75
20-Sep-94	188.55	15-Aug-06	190.01
25-Oct-94	188.92	15-Nov-06	183.99
24-Nov-94	189.13	15-Mar-07	187.61
12-Jan-95	189.47	15-Aug-07	189.39
17-Feb-95	189.87	15-Dec-07	183.21
20-Mar-95	190.13	15-Mar-08	187.14
15-Apr-95	190.35	15-Sep-08	188.12
26-May-95	190.62	16-Mar-09	190.68
31-Jul-95	190.98	15-Sep-09	188.07
06-Dec-95	184.22	02-Mar-10	190.93
25-Mar-96	186.76	04-Oct-10	189.71
03-Aug-96	188.45	15-Mar-11	192.99
22-Nov-96	184.16	15-Oct-11	190.93
23-Mar-97	187.26	15-Apr-12	193.18
28-Jul-97	192.69	15-Oct-12	192.24
17-Nov-97	186.00	12-Mar-13	193.06
07-Apr-98	189.06	15-Oct-13	192.91
20-Jul-98	189.08	12-Mar-14	193.37
01-Dec-98	183.93	15-Oct-14	193.20
15-Mar-99	186.23	15-Mar-15	193.44
15-Jul-99	187.76	15-Sep-15	193.07
15-Dec-99	182.32	16-Apr-16	193.59
15-Apr-00	185.63	16-Sep-16	192.83
15-Aug-00	187.49	13-Apr-17	193.17
15-Nov-00	182.89	05-Oct-17	193.10
15-Apr-01	186.50	05-Mar-18	193.39
15-Jul-01	187.84	11-Sep-18	187.50
15-Dec-01	182.21	08-Mar-19	189.45
15-Apr-02	186.24	28-Aug-19	187.95
15-Aug-02	187.94	26-Aug-20	186.21
15-Nov-02	183.13	12-Apr-21	188.89
15-Mar-03	186.79	26-Sep-21	187.67
15-Jul-03	188.49	18-Nov-21	187.99
15-Nov-03	183.95	01-Mar-22	189.61
15-Mar-04	186.89	01-Sep-22	186.99
15-Jul-04	188.88	01-Mar-23	188.45
15-Nov-04	186.80	01-Sep-23	187.16
15-Mar-05	189.18	07-Mar-24	188.97
15-Jul-05	190.30	01-Sep-24	186.28

BH-50-I



MP Elevation 194.58 masl
Grade 194.0 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	189.73	15-Nov-05	189.80
20-Sep-94	189.34	15-Mar-06	191.58
25-Oct-94	189.19	15-Aug-06	190.63
24-Nov-94	189.46	15-Nov-06	191.97
16-Dec-94	190.25	15-Mar-07	191.33
12-Jan-95	190.85	15-Aug-07	189.99
17-Feb-95	191.23	15-Dec-07	189.76
20-Mar-95	191.51	15-Mar-08	191.96
18-Apr-95	191.41	15-Sep-08	191.53
26-May-95	191.48	16-Mar-09	191.71
31-Jul-95	190.08	15-Sep-09	190.60
06-Dec-95	191.74	27-Apr-10	191.57
25-Mar-96	191.28	04-Oct-10	189.97
03-Aug-96	190.83	15-Mar-11	192.11
22-Nov-96	191.48	15-Oct-11	190.98
23-Mar-97	191.26	15-Apr-12	191.51
28-Jul-97	190.37	15-Oct-12	189.74
17-Nov-97	190.57	12-Mar-13	191.51
07-Apr-98	191.97	15-Oct-13	190.72
20-Jul-98	190.44	12-Mar-14	192.02
01-Dec-98	190.84	15-Oct-14	190.99
15-Mar-99	191.43	15-Mar-15	191.58
15-Jul-99	190.18	15-Sep-15	190.21
15-Dec-99	191.59	16-Apr-16	191.70
15-Apr-00	191.74	16-Sep-16	189.17
15-Aug-00	191.08	13-Apr-17	192.16
15-Nov-00	191.32	05-Oct-17	190.59
15-Apr-01	191.92	05-Mar-18	191.68
15-Jul-01	190.42	11-Sep-18	189.84
15-Dec-01	190.96	05-Apr-19	191.88
15-Apr-02	192.30	28-Aug-19	190.30
15-Aug-02	190.95	12-May-20	191.82
15-Nov-02	190.30	26-Aug-20	189.69
15-Mar-03	190.92	12-Apr-21	192.03
15-Jul-03	190.43	26-Sep-21	190.76
15-Nov-03	191.41	01-Apr-22	191.89
15-Mar-04	192.33	01-Sep-22	189.70
15-Jul-04	191.72	01-Mar-23	191.99
15-Nov-04	191.27	01-Sep-23	190.66
15-Mar-05	191.32	07-Mar-24	192.02
15-Jul-05	190.15	01-Sep-24	190.55

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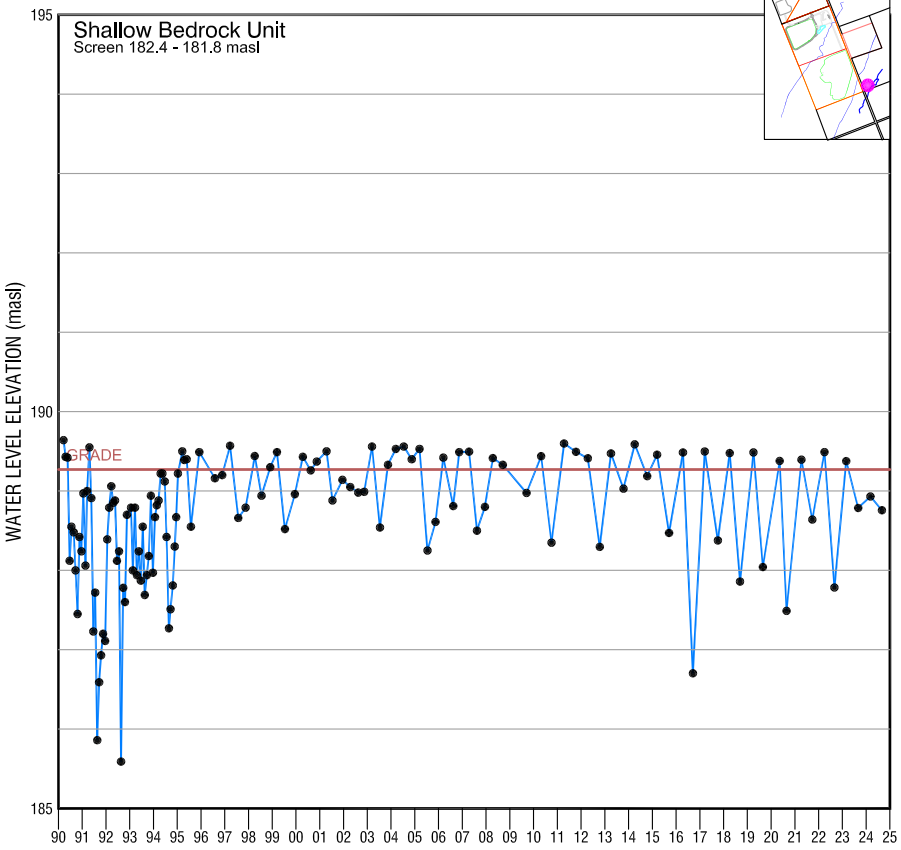
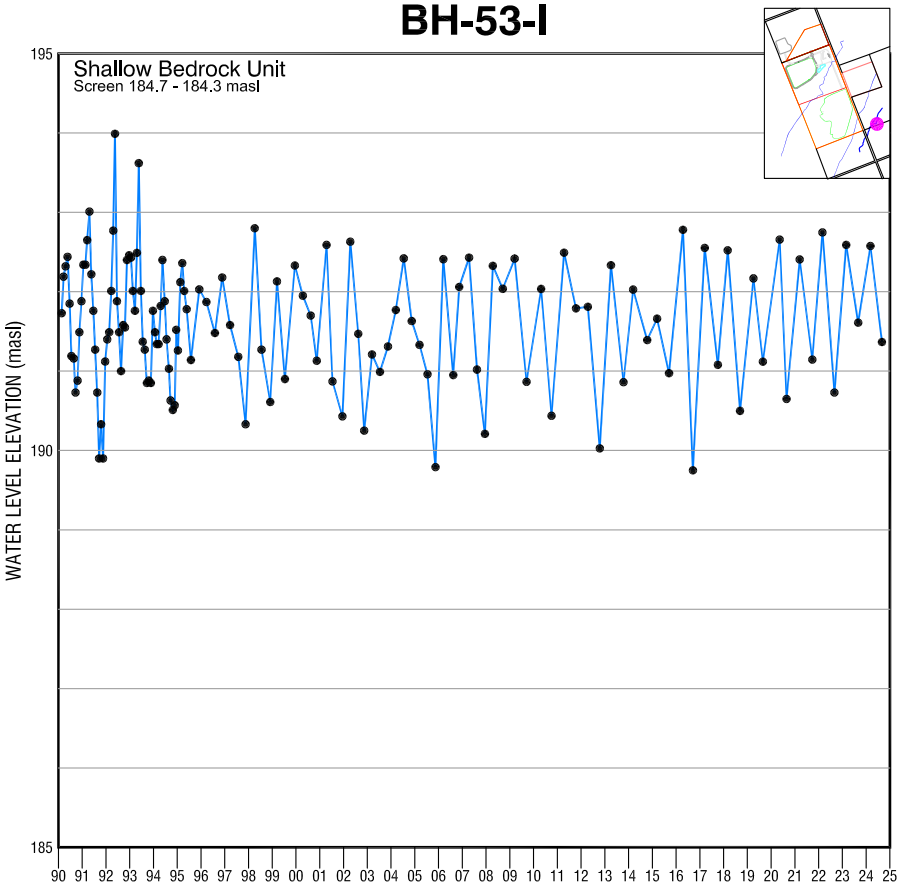


MP Elevation 189.95 masl
Grade 189.3 masl

DATE	ELEVATION	DATE	ELEVATION
19-May-94	189.22	15-Jul-05	188.25
23-Jun-94	189.12	15-Nov-05	188.61
21-Jul-94	188.42	15-Mar-06	189.42
26-Aug-94	187.27	15-Aug-06	188.81
20-Sep-94	187.51	15-Nov-06	189.49
25-Oct-94	187.81	15-Apr-07	189.49
24-Nov-94	188.30	15-Aug-07	188.50
16-Dec-94	188.67	15-Dec-07	188.80
12-Jan-95	189.22	15-Apr-08	189.41
20-Mar-95	189.50	15-Sep-08	189.33
18-Apr-95	189.39	15-Sep-09	188.98
26-May-95	189.40	27-Apr-10	189.44
31-Jul-95	188.55	04-Oct-10	188.35
06-Dec-95	189.49	15-Apr-11	189.60
03-Aug-96	189.16	15-Oct-11	189.49
22-Nov-96	189.20	15-Apr-12	189.41
23-Mar-97	189.57	15-Oct-12	188.30
28-Jul-97	188.66	05-Apr-13	189.47
17-Nov-97	188.79	15-Oct-13	189.03
07-Apr-98	189.44	05-Apr-14	189.59
20-Jul-98	188.94	15-Oct-14	189.19
01-Dec-98	189.30	15-Mar-15	189.46
15-Mar-99	189.49	15-Sep-15	188.47
15-Jul-99	188.52	16-Apr-16	189.49
15-Dec-99	188.96	16-Sep-16	186.70
15-Apr-00	189.43	17-Mar-17	189.50
15-Aug-00	189.26	05-Oct-17	188.38
15-Nov-00	189.37	05-Apr-18	189.48
15-Apr-01	189.50	11-Sep-18	187.86
15-Jul-01	188.88	05-Apr-19	189.49
15-Dec-01	189.14	28-Aug-19	188.04
15-Apr-02	189.05	12-May-20	189.38
15-Aug-02	188.98	26-Aug-20	187.49
15-Nov-02	188.99	12-Apr-21	189.39
15-Mar-03	189.56	26-Sep-21	188.64
15-Jul-03	188.54	01-Apr-22	189.49
15-Nov-03	189.33	01-Sep-22	187.78
15-Mar-04	189.53	01-Mar-23	189.38
15-Jul-04	189.56	01-Sep-23	188.79
15-Nov-04	189.40	07-Mar-24	188.93
15-Mar-05	189.53	01-Sep-24	188.76

BH-53-I



MP Elevation 196.73 masl
Grade 195.9 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	191.03	15-Nov-05	189.79
20-Sep-94	190.63	15-Mar-06	192.41
25-Oct-94	190.51	15-Aug-06	190.95
24-Nov-94	190.57	15-Nov-06	192.06
16-Dec-94	191.52	15-Apr-07	192.43
12-Jan-95	191.26	15-Aug-07	191.02
17-Feb-95	192.12	15-Dec-07	190.21
20-Mar-95	192.36	15-Apr-08	192.33
18-Apr-95	192.01	15-Sep-08	192.04
26-May-95	191.78	16-Mar-09	192.42
31-Jul-95	191.14	15-Sep-09	190.87
06-Dec-95	192.03	27-Apr-10	192.04
25-Mar-96	191.87	04-Oct-10	190.44
03-Aug-96	191.48	15-Apr-11	192.49
22-Nov-96	192.18	15-Oct-11	191.79
23-Mar-97	191.58	15-Apr-12	191.81
28-Jul-97	191.18	15-Oct-12	190.03
17-Nov-97	190.33	05-Apr-13	192.33
07-Apr-98	192.80	15-Oct-13	190.86
20-Jul-98	191.27	12-Mar-14	192.03
01-Dec-98	190.61	15-Oct-14	191.39
15-Mar-99	192.13	15-Mar-15	191.66
15-Jul-99	190.90	15-Sep-15	190.97
15-Dec-99	192.33	16-Apr-16	192.78
15-Apr-00	191.95	16-Sep-16	189.75
15-Aug-00	191.70	17-Mar-17	192.55
15-Nov-00	191.13	05-Oct-17	191.08
15-Apr-01	192.59	05-Mar-18	192.52
15-Jul-01	190.87	11-Sep-18	190.50
15-Dec-01	190.43	05-Apr-19	192.17
15-Apr-02	192.63	28-Aug-19	191.12
15-Aug-02	191.47	12-May-20	192.66
15-Nov-02	190.25	26-Aug-20	190.65
15-Mar-03	191.21	16-Mar-21	192.41
15-Jul-03	190.99	26-Sep-21	191.15
15-Nov-03	191.31	01-Mar-22	192.75
15-Mar-04	191.77	01-Sep-22	190.73
15-Jul-04	192.42	01-Mar-23	192.59
15-Nov-04	191.63	01-Sep-23	191.61
15-Mar-05	191.33	07-Mar-24	192.58
15-Jul-05	190.96	01-Sep-24	191.37

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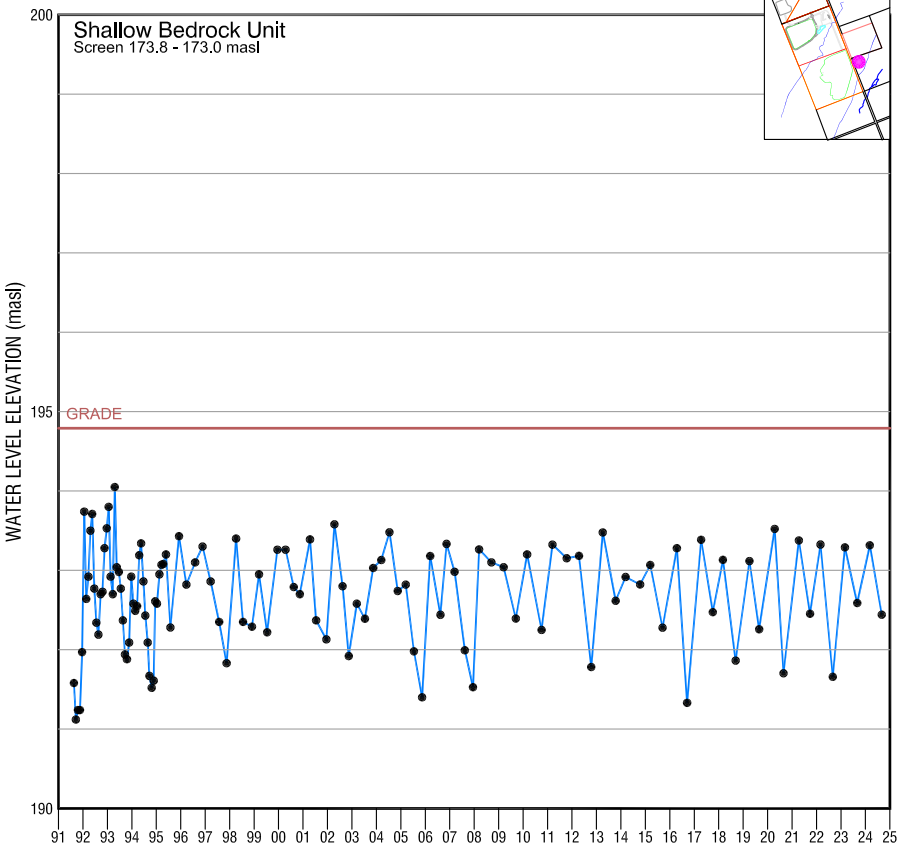

MP Elevation 195.60 masl
Grade 194.8 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	192.09	15-Nov-05	191.40
20-Sep-94	191.67	15-Mar-06	193.18
25-Oct-94	191.52	15-Aug-06	192.44
24-Nov-94	191.61	15-Nov-06	193.33
16-Dec-94	192.61	15-Mar-07	192.98
12-Jan-95	192.58	15-Aug-07	191.99
17-Feb-95	192.95	15-Dec-07	191.53
20-Mar-95	193.07	15-Mar-08	193.26
15-Apr-95	193.08	15-Sep-08	193.10
26-May-95	193.20	16-Mar-09	193.04
31-Jul-95	192.28	15-Sep-09	192.39
06-Dec-95	193.43	02-Mar-10	193.20
25-Mar-96	192.82	04-Oct-10	192.25
03-Aug-96	193.10	15-Mar-11	193.32
22-Nov-96	193.30	15-Oct-11	193.15
23-Mar-97	192.86	15-Apr-12	193.18
28-Jul-97	192.35	15-Oct-12	191.78
17-Nov-97	191.83	05-Apr-13	193.48
07-Apr-98	193.40	15-Oct-13	192.62
20-Jul-98	192.35	12-Mar-14	192.92
01-Dec-98	192.29	15-Oct-14	192.82
15-Mar-99	192.95	15-Mar-15	193.07
15-Jul-99	192.22	15-Sep-15	192.28
15-Dec-99	193.26	16-Apr-16	193.28
15-Apr-00	193.26	16-Sep-16	191.33
15-Aug-00	192.79	13-Apr-17	193.38
15-Nov-00	192.70	05-Oct-17	192.47
15-Apr-01	193.39	05-Mar-18	193.13
15-Jul-01	192.37	11-Sep-18	191.86
15-Dec-01	192.13	05-Apr-19	193.12
15-Apr-02	193.58	28-Aug-19	192.26
15-Aug-02	192.80	16-Apr-20	193.52
15-Nov-02	191.92	26-Aug-20	191.70
15-Mar-03	192.58	12-Apr-21	193.38
15-Jul-03	192.39	26-Sep-21	192.45
15-Nov-03	193.03	01-Mar-22	193.32
15-Mar-04	193.13	01-Sep-22	191.66
15-Jul-04	193.48	01-Mar-23	193.29
15-Nov-04	192.74	01-Sep-23	192.59
15-Mar-05	192.82	07-Mar-24	193.32
15-Jul-05	191.98	01-Sep-24	192.44

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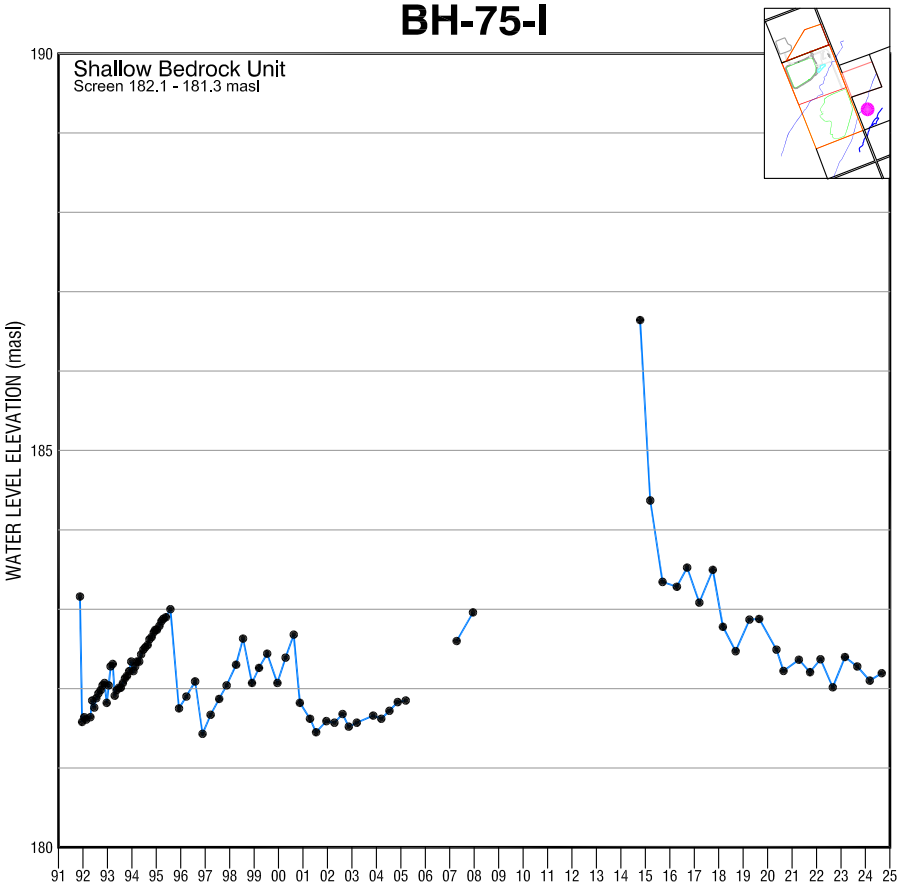

MP Elevation 191.18 masl
Grade 190.4 masl

DATE	ELEVATION	DATE	ELEVATION
22-Dec-92	181.82	15-Mar-99	182.26
20-Jan-93	182.04	15-Jul-99	182.44
18-Feb-93	182.28	15-Dec-99	182.07
22-Mar-93	182.31	15-Apr-00	182.39
21-Apr-93	181.91	15-Aug-00	182.68
20-May-93	181.98	15-Nov-00	181.82
21-Jun-93	182.01	15-Apr-01	181.62
20-Jul-93	182.01	15-Jul-01	181.45
20-Aug-93	182.07	15-Dec-01	181.59
20-Sep-93	182.13	15-Apr-02	181.57
20-Oct-93	182.16	15-Aug-02	181.68
22-Nov-93	182.22	15-Nov-02	181.52
23-Dec-93	182.34	15-Mar-03	181.57
24-Jan-94	182.22	15-Nov-03	181.66
21-Feb-94	182.28	15-Mar-04	181.62
21-Mar-94	182.34	15-Jul-04	181.72
21-Apr-94	182.34	15-Nov-04	181.83
19-May-94	182.43	15-Mar-05	181.85
23-Jun-94	182.49	15-Apr-07	182.60
21-Jul-94	182.52	15-Dec-07	182.96
26-Aug-94	182.55	15-Oct-14	186.64
20-Sep-94	182.62	15-Mar-15	184.37
25-Oct-94	182.65	15-Sep-15	183.34
24-Nov-94	182.71	16-Apr-16	183.28
16-Dec-94	182.74	16-Sep-16	183.52
12-Jan-95	182.74	17-Mar-17	183.08
17-Feb-95	182.79	05-Oct-17	183.50
20-Mar-95	182.85	05-Mar-18	182.78
18-Apr-95	182.88	11-Sep-18	182.47
26-May-95	182.90	05-Apr-19	182.87
31-Jul-95	183.00	28-Aug-19	182.88
06-Dec-95	181.75	12-May-20	182.49
25-Mar-96	181.90	26-Aug-20	182.22
03-Aug-96	182.09	12-Apr-21	182.36
22-Nov-96	181.43	26-Sep-21	182.21
23-Mar-97	181.67	01-Mar-22	182.37
28-Jul-97	181.87	01-Sep-22	182.02
17-Nov-97	182.04	01-Mar-23	182.40
07-Apr-98	182.30	01-Sep-23	182.28
20-Jul-98	182.63	07-Mar-24	182.10
01-Dec-98	182.07	01-Sep-24	182.19

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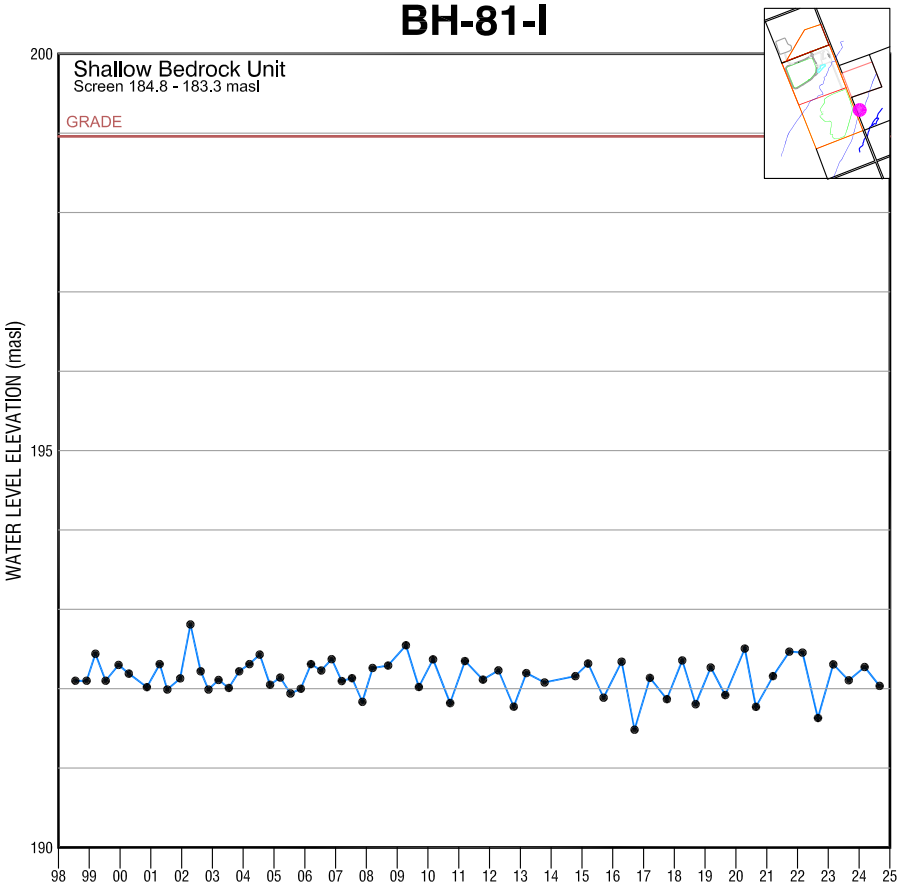

MP Elevation 199.85 masl
Grade 199.0 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jul-98	192.10	15-Mar-15	192.32
01-Dec-98	192.10	15-Sep-15	191.89
15-Mar-99	192.44	16-Apr-16	192.34
15-Jul-99	192.10	16-Sep-16	191.48
15-Dec-99	192.30	17-Mar-17	192.14
15-Apr-00	192.19	05-Oct-17	191.87
15-Nov-00	192.02	05-Apr-18	192.36
15-Apr-01	192.31	11-Sep-18	191.80
15-Jul-01	191.99	08-Mar-19	192.27
15-Dec-01	192.13	28-Aug-19	191.92
15-Apr-02	192.81	16-Apr-20	192.51
15-Aug-02	192.22	26-Aug-20	191.77
15-Nov-02	191.99	16-Mar-21	192.16
15-Mar-03	192.11	26-Sep-21	192.47
15-Jul-03	192.01	01-Mar-22	192.46
15-Nov-03	192.22	01-Sep-22	191.63
15-Mar-04	192.31	01-Mar-23	192.31
15-Jul-04	192.43	01-Sep-23	192.11
15-Nov-04	192.05	07-Mar-24	192.27
15-Mar-05	192.14	01-Sep-24	192.04
15-Jul-05	191.94		
15-Nov-05	192.00		
15-Mar-06	192.31		
15-Jul-06	192.23		
15-Nov-06	192.37		
15-Mar-07	192.10		
15-Jul-07	192.13		
15-Nov-07	191.84		
15-Mar-08	192.26		
15-Sep-08	192.29		
15-Apr-09	192.55		
15-Sep-09	192.02		
02-Mar-10	192.37		
21-Sep-10	191.82		
15-Mar-11	192.35		
15-Oct-11	192.11		
15-Apr-12	192.23		
15-Oct-12	191.77		
12-Mar-13	192.20		
15-Oct-13	192.08		
15-Oct-14	192.16		

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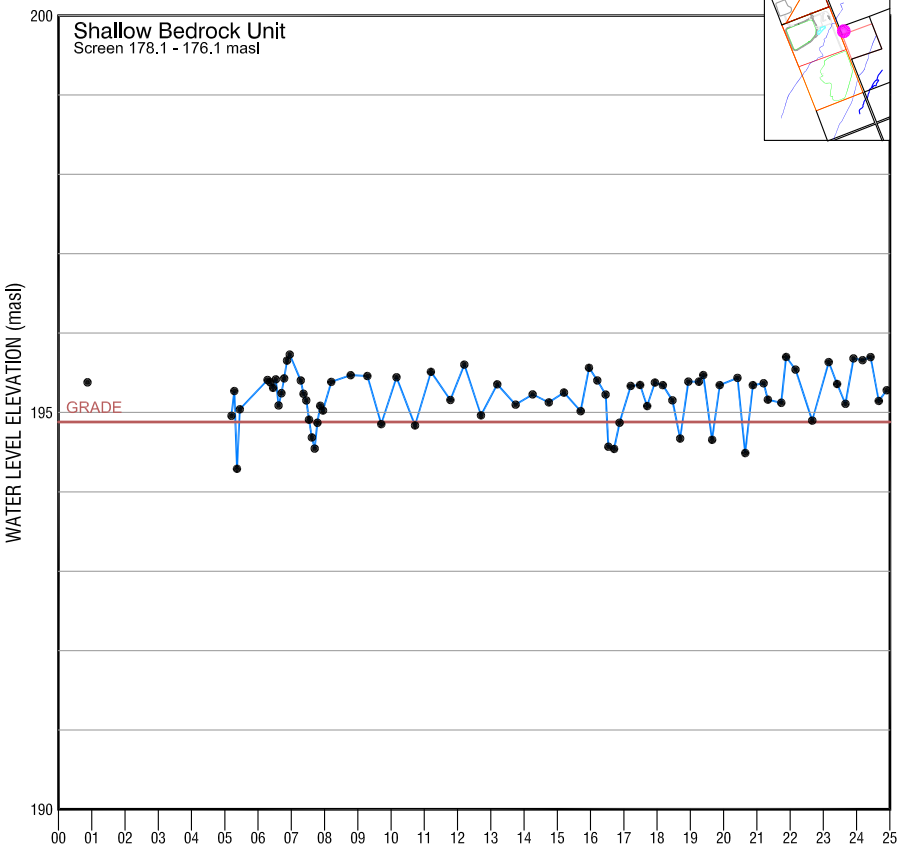

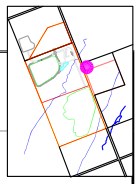

MP Elevation 195.73 masl
Grade 194.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	195.38	15-Jun-16	195.23
15-Mar-05	194.96	15-Jul-16	194.57
15-Apr-05	195.27	16-Sep-16	194.54
15-May-05	194.29	15-Nov-16	194.87
15-Jun-05	195.04	17-Mar-17	195.33
15-Apr-06	195.41	28-Jun-17	195.35
15-May-06	195.38	14-Sep-17	195.08
15-Jun-06	195.31	08-Dec-17	195.38
15-Jul-06	195.42	05-Mar-18	195.34
15-Aug-06	195.09	18-Jun-18	195.15
15-Sep-06	195.24	11-Sep-18	194.67
15-Oct-06	195.43	10-Dec-18	195.39
15-Nov-06	195.65	05-Apr-19	195.39
15-Dec-06	195.73	23-May-19	195.47
15-Apr-07	195.40	28-Aug-19	194.66
15-May-07	195.24	20-Nov-19	195.35
15-Jun-07	195.15	02-Jun-20	195.44
15-Jul-07	194.91	26-Aug-20	194.49
15-Aug-07	194.68	18-Nov-20	195.34
15-Sep-07	194.54	16-Mar-21	195.37
15-Oct-07	194.87	02-May-21	195.16
15-Nov-07	195.08	26-Sep-21	195.12
15-Dec-07	195.02	18-Nov-21	195.70
15-Mar-08	195.38	01-Mar-22	195.54
15-Oct-08	195.47	01-Sep-22	194.90
15-Apr-09	195.46	01-Mar-23	195.63
15-Sep-09	194.85	01-Jun-23	195.36
02-Mar-10	195.44	01-Sep-23	195.11
21-Sep-10	194.84	28-Nov-23	195.68
15-Mar-11	195.51	07-Mar-24	195.66
15-Oct-11	195.16	03-Jun-24	195.70
15-Mar-12	195.60	01-Sep-24	195.15
15-Sep-12	194.96	27-Nov-24	195.28
12-Mar-13	195.35		
30-Sep-13	195.10		
05-Apr-14	195.23		
30-Sep-14	195.13		
15-Mar-15	195.25		
15-Sep-15	195.02		
15-Dec-15	195.56		
15-Mar-16	195.40		

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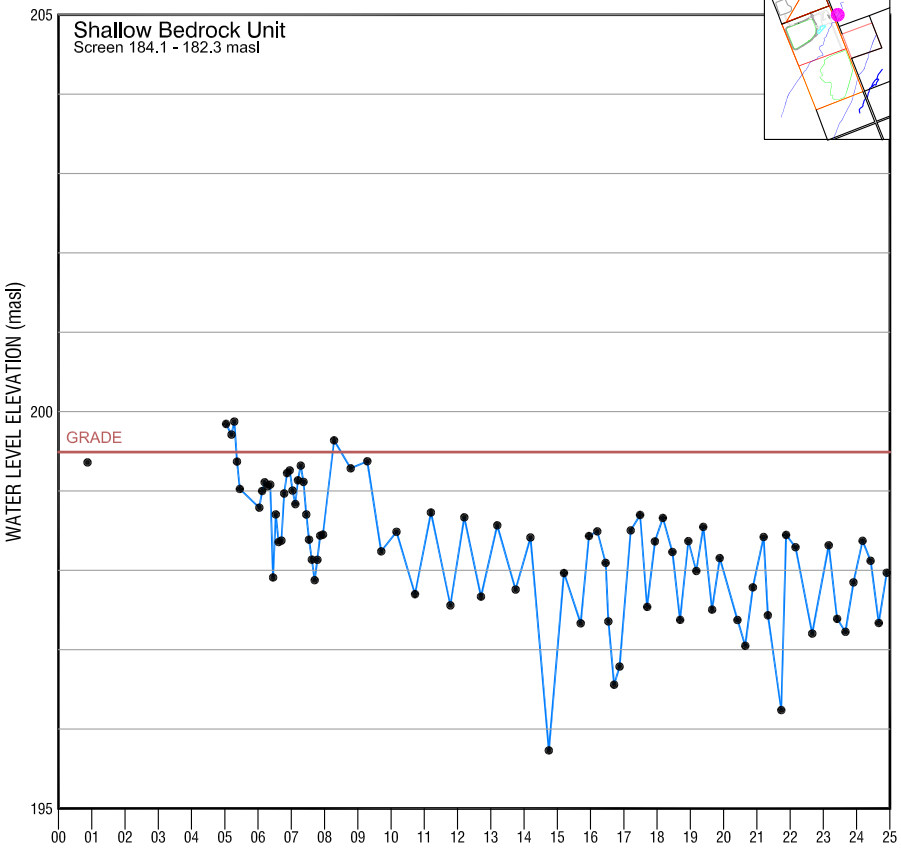

MP Elevation 200.35 masl
Grade 199.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	199.36	30-Sep-13	197.76
15-Jan-05	199.85	12-Mar-14	198.41
15-Mar-05	199.71	30-Sep-14	195.73
15-Apr-05	199.88	15-Mar-15	197.97
15-May-05	199.37	15-Sep-15	197.33
15-Jun-05	199.02	15-Dec-15	198.43
15-Jan-06	198.79	15-Mar-16	198.49
15-Feb-06	199.00	15-Jun-16	198.09
15-Mar-06	199.11	15-Jul-16	197.36
15-Apr-06	199.06	16-Sep-16	196.56
15-May-06	199.08	15-Nov-16	196.79
15-Jun-06	197.91	17-Mar-17	198.50
15-Jul-06	198.71	28-Jun-17	198.70
15-Aug-06	198.36	14-Sep-17	197.54
15-Sep-06	198.38	08-Dec-17	198.37
15-Oct-06	198.97	05-Mar-18	198.66
15-Nov-06	199.23	18-Jun-18	198.23
15-Dec-06	199.26	11-Sep-18	197.38
15-Jan-07	199.01	10-Dec-18	198.37
15-Feb-07	198.84	08-Mar-19	197.99
15-Mar-07	199.13	23-May-19	198.55
15-Apr-07	199.32	28-Aug-19	197.51
15-May-07	199.12	20-Nov-19	198.15
15-Jun-07	198.70	02-Jun-20	197.37
15-Jul-07	198.39	26-Aug-20	197.05
15-Aug-07	198.13	18-Nov-20	197.79
15-Sep-07	197.88	16-Mar-21	198.42
15-Oct-07	198.13	02-May-21	197.43
15-Nov-07	198.44	26-Sep-21	196.24
15-Dec-07	198.45	18-Nov-21	198.45
15-Apr-08	199.64	01-Mar-22	198.29
15-Oct-08	199.29	01-Sep-22	197.20
15-Apr-09	199.38	01-Mar-23	198.32
15-Sep-09	198.24	01-Jun-23	197.39
02-Mar-10	198.49	01-Sep-23	197.23
21-Sep-10	197.70	28-Nov-23	197.85
15-Mar-11	198.73	07-Mar-24	198.37
15-Oct-11	197.56	03-Jun-24	198.12
15-Mar-12	198.67	01-Sep-24	197.34
15-Sep-12	197.67	27-Nov-24	197.97
12-Mar-13	198.57		

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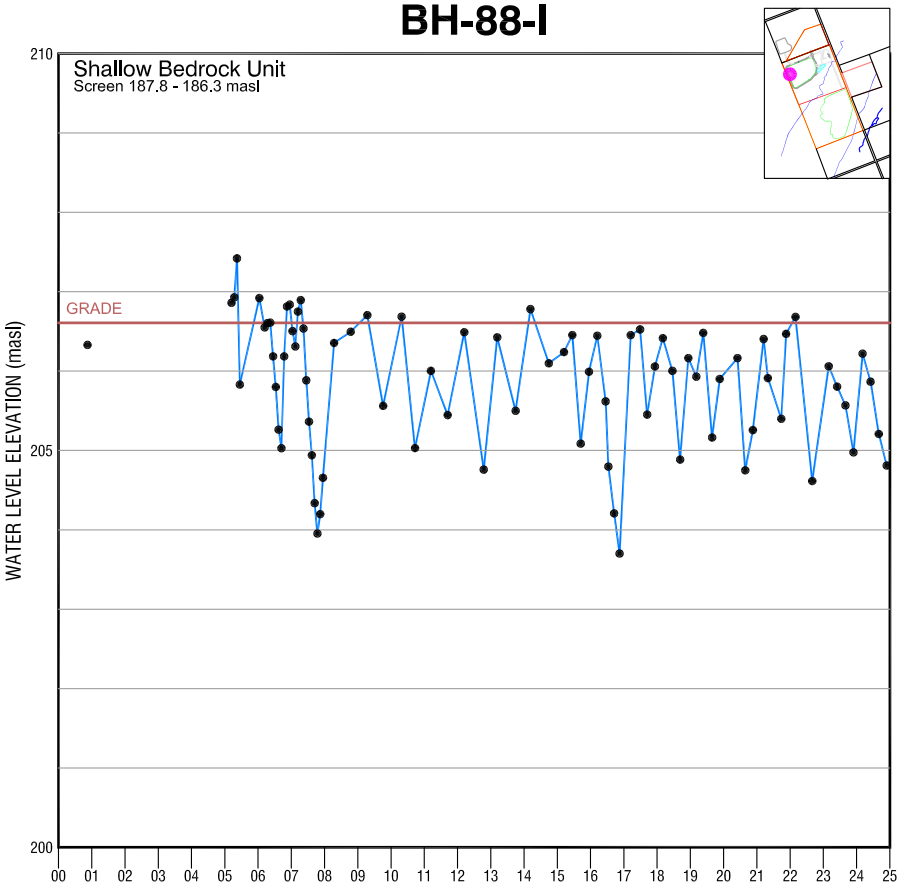

MP Elevation 207.52 masl
Grade 206.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	206.33	30-Sep-14	206.10
15-Mar-05	206.86	15-Mar-15	206.24
15-Apr-05	206.93	15-Jun-15	206.45
15-May-05	207.42	15-Sep-15	205.09
15-Jun-05	205.83	15-Dec-15	205.99
15-Jan-06	206.92	15-Mar-16	206.45
15-Mar-06	206.55	15-Jun-16	205.62
15-Apr-06	206.60	15-Jul-16	204.80
15-May-06	206.61	16-Sep-16	204.21
15-Jun-06	206.19	15-Nov-16	203.70
15-Jul-06	205.80	17-Mar-17	206.45
15-Aug-06	205.26	28-Jun-17	206.52
15-Sep-06	205.03	14-Sep-17	205.45
15-Oct-06	206.18	08-Dec-17	206.06
15-Nov-06	206.81	05-Mar-18	206.41
15-Dec-06	206.84	18-Jun-18	206.00
15-Jan-07	206.50	11-Sep-18	204.88
15-Feb-07	206.31	10-Dec-18	206.16
15-Mar-07	206.75	08-Mar-19	205.93
15-Apr-07	206.89	23-May-19	206.48
15-May-07	206.54	28-Aug-19	205.16
15-Jun-07	205.88	20-Nov-19	205.90
15-Jul-07	205.36	02-Jun-20	206.16
15-Aug-07	204.94	26-Aug-20	204.75
15-Sep-07	204.34	18-Nov-20	205.26
15-Oct-07	203.95	16-Mar-21	206.40
15-Nov-07	204.20	02-May-21	205.91
15-Dec-07	204.66	26-Sep-21	205.40
15-Apr-08	206.35	18-Nov-21	206.47
15-Oct-08	206.50	01-Mar-22	206.68
15-Apr-09	206.71	01-Sep-22	204.62
06-Oct-09	205.56	01-Mar-23	206.06
27-Apr-10	206.69	01-Jun-23	205.80
21-Sep-10	205.03	01-Sep-23	205.57
15-Mar-11	206.00	28-Nov-23	204.98
15-Sep-11	205.45	07-Mar-24	206.22
15-Mar-12	206.49	03-Jun-24	205.87
15-Oct-12	204.76	01-Sep-24	205.21
12-Mar-13	206.43	27-Nov-24	204.81
30-Sep-13	205.50		
12-Mar-14	206.78		

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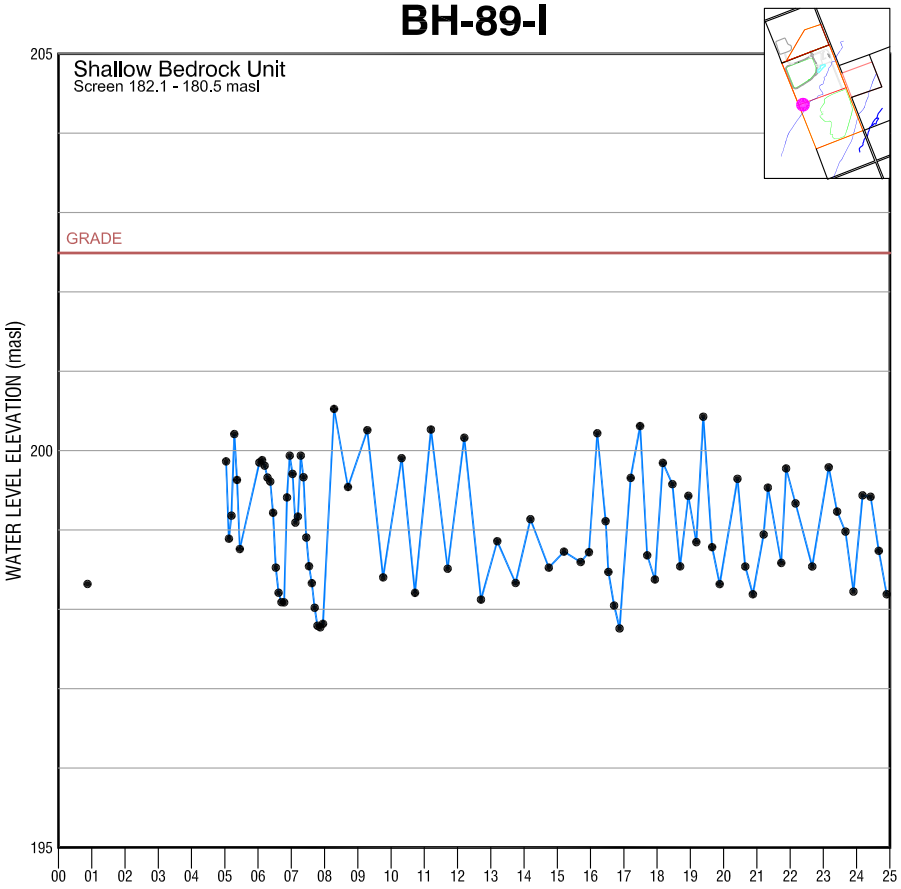

MP Elevation 202.77 masl
Grade 202.5 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	198.32	12-Mar-13	198.86
15-Jan-05	199.87	30-Sep-13	198.33
15-Feb-05	198.89	12-Mar-14	199.14
15-Mar-05	199.18	30-Sep-14	198.52
15-Apr-05	200.21	15-Mar-15	198.73
15-May-05	199.63	15-Sep-15	198.60
15-Jun-05	198.76	15-Dec-15	198.72
15-Jan-06	199.85	15-Mar-16	200.22
15-Feb-06	199.88	15-Jun-16	199.11
15-Mar-06	199.81	15-Jul-16	198.47
15-Apr-06	199.66	16-Sep-16	198.05
15-May-06	199.61	15-Nov-16	197.76
15-Jun-06	199.22	17-Mar-17	199.66
15-Jul-06	198.53	28-Jun-17	200.31
15-Aug-06	198.21	14-Sep-17	198.68
15-Sep-06	198.09	08-Dec-17	198.38
15-Oct-06	198.09	05-Mar-18	199.85
15-Nov-06	199.41	18-Jun-18	199.58
15-Dec-06	199.94	11-Sep-18	198.54
15-Jan-07	199.71	10-Dec-18	199.43
15-Feb-07	199.09	08-Mar-19	198.85
15-Mar-07	199.17	23-May-19	200.43
15-Apr-07	199.94	28-Aug-19	198.78
15-May-07	199.66	20-Nov-19	198.32
15-Jun-07	198.90	02-Jun-20	199.65
15-Jul-07	198.54	26-Aug-20	198.54
15-Aug-07	198.33	18-Nov-20	198.19
15-Sep-07	198.02	16-Mar-21	198.94
15-Oct-07	197.79	02-May-21	199.53
15-Nov-07	197.77	26-Sep-21	198.59
15-Dec-07	197.82	18-Nov-21	199.77
15-Apr-08	200.52	01-Mar-22	199.34
15-Sep-08	199.54	01-Sep-22	198.54
15-Apr-09	200.26	01-Mar-23	199.79
06-Oct-09	198.40	01-Jun-23	199.23
27-Apr-10	199.90	01-Sep-23	198.98
21-Sep-10	198.21	28-Nov-23	198.22
15-Mar-11	200.27	07-Mar-24	199.44
15-Sep-11	198.51	03-Jun-24	199.42
15-Mar-12	200.16	01-Sep-24	198.74
15-Sep-12	198.12	27-Nov-24	198.19

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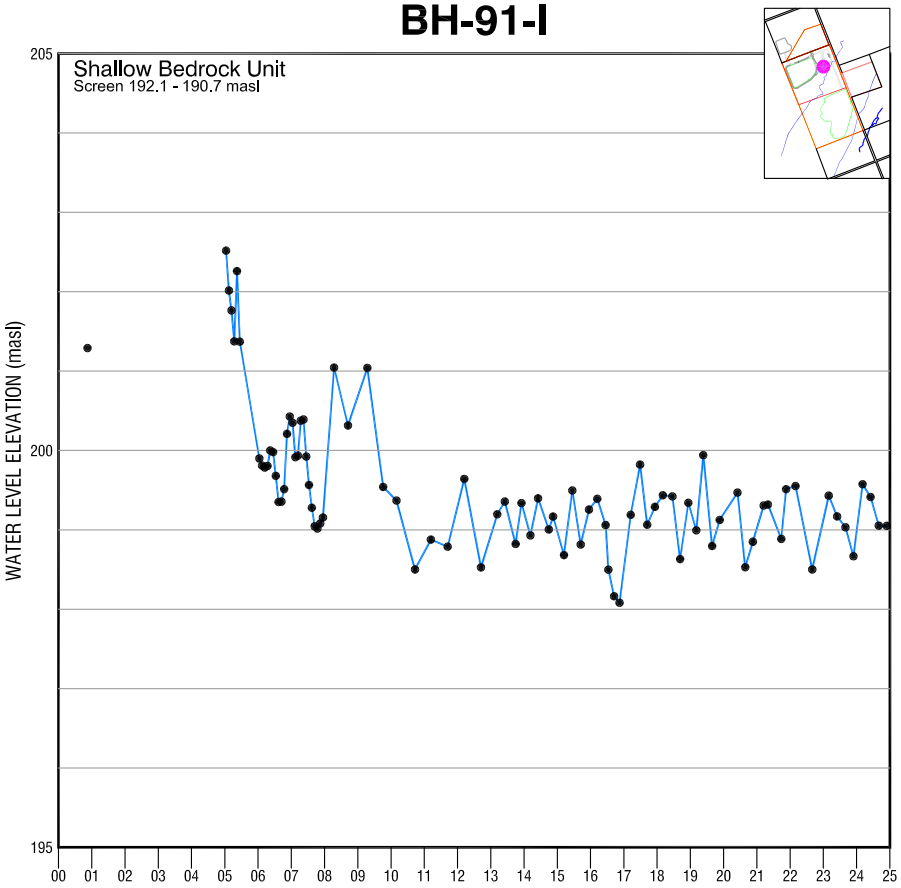

MP Elevation 206.55 masl
Grade 205.7 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	202.26	03-Jun-14	199.40
15-Jun-05	201.37	30-Sep-14	199.01
15-Jan-06	199.90	15-Nov-14	199.17
15-Feb-06	199.81	15-Mar-15	198.68
15-Mar-06	199.79	15-Jun-15	199.50
15-Apr-06	199.80	15-Sep-15	198.82
15-May-06	200.00	15-Dec-15	199.26
15-Jun-06	199.98	15-Mar-16	199.39
15-Jul-06	199.68	15-Jun-16	199.06
15-Aug-06	199.35	15-Jul-16	198.50
15-Sep-06	199.36	16-Sep-16	198.16
15-Oct-06	199.51	15-Nov-16	198.08
15-Nov-06	200.21	17-Mar-17	199.19
15-Dec-06	200.43	28-Jun-17	199.82
15-Jan-07	200.35	14-Sep-17	199.06
15-Feb-07	199.91	08-Dec-17	199.29
15-Mar-07	199.93	05-Mar-18	199.44
15-Apr-07	200.38	18-Jun-18	199.42
15-May-07	200.39	11-Sep-18	198.63
15-Jun-07	199.92	10-Dec-18	199.34
15-Jul-07	199.57	08-Mar-19	198.99
15-Aug-07	199.28	23-May-19	199.94
15-Sep-07	199.04	28-Aug-19	198.80
15-Oct-07	199.02	20-Nov-19	199.13
15-Nov-07	199.08	02-Jun-20	199.47
15-Dec-07	199.15	26-Aug-20	198.53
15-Apr-08	201.04	18-Nov-20	198.85
15-Sep-08	200.32	16-Mar-21	199.31
15-Apr-09	201.04	02-May-21	199.32
06-Oct-09	199.54	26-Sep-21	198.89
02-Mar-10	199.37	18-Nov-21	199.51
21-Sep-10	198.50	01-Mar-22	199.55
15-Mar-11	198.88	01-Sep-22	198.50
15-Sep-11	198.79	01-Mar-23	199.43
15-Mar-12	199.64	01-Jun-23	199.17
15-Sep-12	198.53	01-Sep-23	199.03
12-Mar-13	199.20	28-Nov-23	198.67
03-Jun-13	199.36	07-Mar-24	199.57
30-Sep-13	198.82	03-Jun-24	199.41
03-Dec-13	199.34	01-Sep-24	199.05
12-Mar-14	198.93	27-Nov-24	199.05

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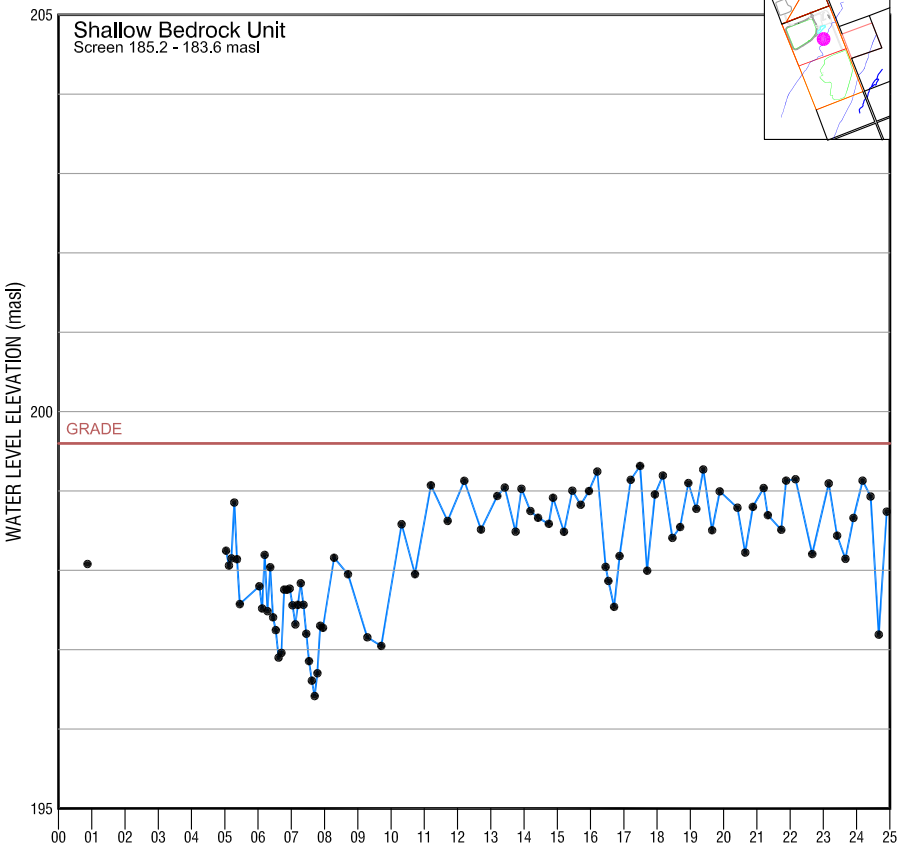

MP Elevation 200.46 masl
Grade 199.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	198.14	03-Jun-14	198.66
15-Jun-05	197.57	30-Sep-14	198.59
15-Jan-06	197.80	15-Nov-14	198.91
15-Feb-06	197.52	15-Mar-15	198.49
15-Mar-06	198.20	15-Jun-15	199.00
15-Apr-06	197.49	15-Sep-15	198.83
15-May-06	198.04	15-Dec-15	199.00
15-Jun-06	197.41	15-Mar-16	199.24
15-Jul-06	197.25	15-Jun-16	198.04
15-Aug-06	196.90	15-Jul-16	197.87
15-Sep-06	196.96	16-Sep-16	197.54
15-Oct-06	197.76	15-Nov-16	198.18
15-Nov-06	197.76	17-Mar-17	199.14
15-Dec-06	197.77	28-Jun-17	199.32
15-Jan-07	197.56	14-Sep-17	197.99
15-Feb-07	197.32	08-Dec-17	198.96
15-Mar-07	197.57	05-Mar-18	199.20
15-Apr-07	197.84	18-Jun-18	198.41
15-May-07	197.57	11-Sep-18	198.54
15-Jun-07	197.20	10-Dec-18	199.10
15-Jul-07	196.86	08-Mar-19	198.77
15-Aug-07	196.61	23-May-19	199.27
15-Sep-07	196.42	28-Aug-19	198.51
15-Oct-07	196.70	20-Nov-19	198.99
15-Nov-07	197.30	02-Jun-20	198.79
15-Dec-07	197.28	26-Aug-20	198.22
15-Apr-08	198.16	18-Nov-20	198.80
15-Sep-08	197.95	16-Mar-21	199.04
15-Apr-09	197.16	02-May-21	198.70
15-Sep-09	197.05	26-Sep-21	198.51
27-Apr-10	198.58	18-Nov-21	199.13
21-Sep-10	197.95	01-Mar-22	199.15
15-Mar-11	199.07	01-Sep-22	198.21
15-Sep-11	198.62	01-Mar-23	199.10
15-Mar-12	199.13	01-Jun-23	198.44
15-Sep-12	198.51	01-Sep-23	198.15
12-Mar-13	198.94	28-Nov-23	198.66
03-Jun-13	199.04	07-Mar-24	199.13
30-Sep-13	198.49	03-Jun-24	198.93
03-Dec-13	199.03	01-Sep-24	197.19
12-Mar-14	198.75	27-Nov-24	198.74

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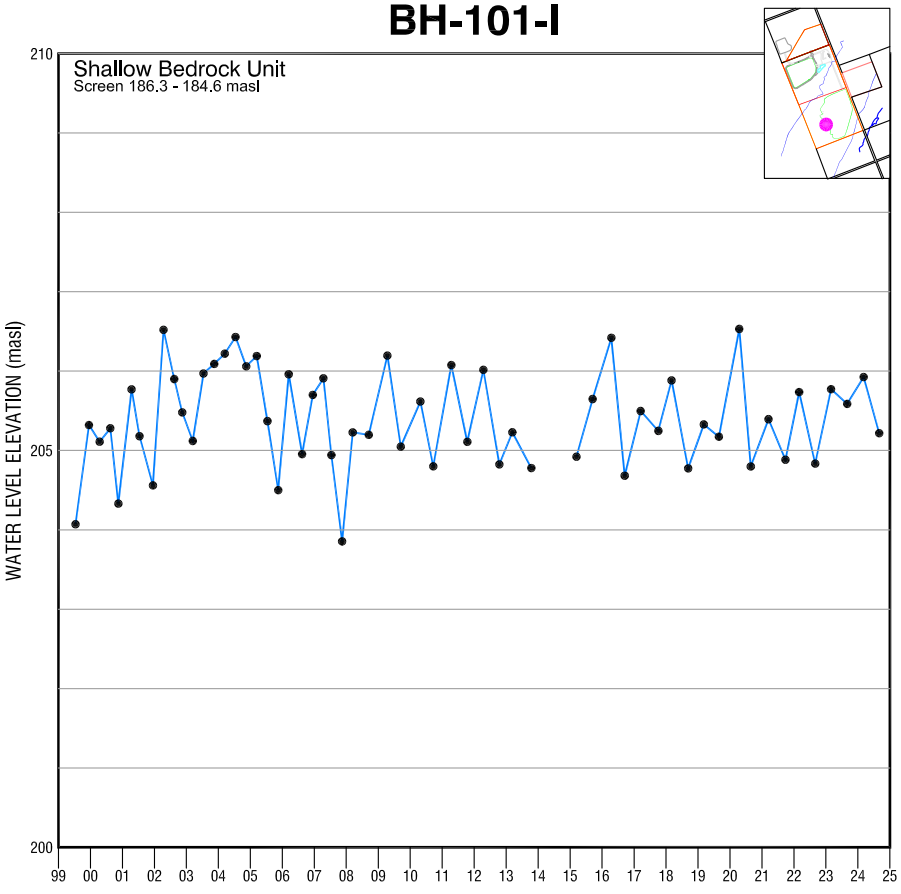

MP Elevation 219.70 masl
Grade 219.2 masl

DATE	ELEVATION	DATE	ELEVATION
15-Jul-99	204.07	16-Sep-16	204.68
15-Dec-99	205.32	17-Mar-17	205.50
15-Apr-00	205.11	05-Oct-17	205.25
15-Aug-00	205.28	05-Mar-18	205.88
15-Nov-00	204.33	11-Sep-18	204.77
15-Apr-01	205.77	08-Mar-19	205.33
15-Jul-01	205.18	28-Aug-19	205.17
15-Dec-01	204.56	16-Apr-20	206.53
15-Apr-02	206.52	26-Aug-20	204.80
15-Aug-02	205.90	16-Mar-21	205.39
15-Nov-02	205.48	26-Sep-21	204.88
15-Mar-03	205.12	01-Mar-22	205.74
15-Jul-03	205.97	01-Sep-22	204.83
15-Nov-03	206.09	01-Mar-23	205.77
15-Mar-04	206.22	01-Sep-23	205.59
15-Jul-04	206.43	07-Mar-24	205.93
15-Nov-04	206.06	01-Sep-24	205.22
15-Mar-05	206.19		
15-Jul-05	205.37		
15-Nov-05	204.50		
15-Mar-06	205.96		
15-Aug-06	204.95		
15-Dec-06	205.70		
15-Apr-07	205.91		
15-Jul-07	204.94		
15-Nov-07	203.85		
15-Mar-08	205.23		
15-Sep-08	205.20		
15-Apr-09	206.20		
15-Sep-09	205.05		
27-Apr-10	205.62		
21-Sep-10	204.80		
15-Apr-11	206.08		
15-Oct-11	205.11		
15-Apr-12	206.02		
15-Oct-12	204.82		
12-Mar-13	205.23		
15-Oct-13	204.78		
15-Mar-15	204.92		
15-Sep-15	205.65		
16-Apr-16	206.42		

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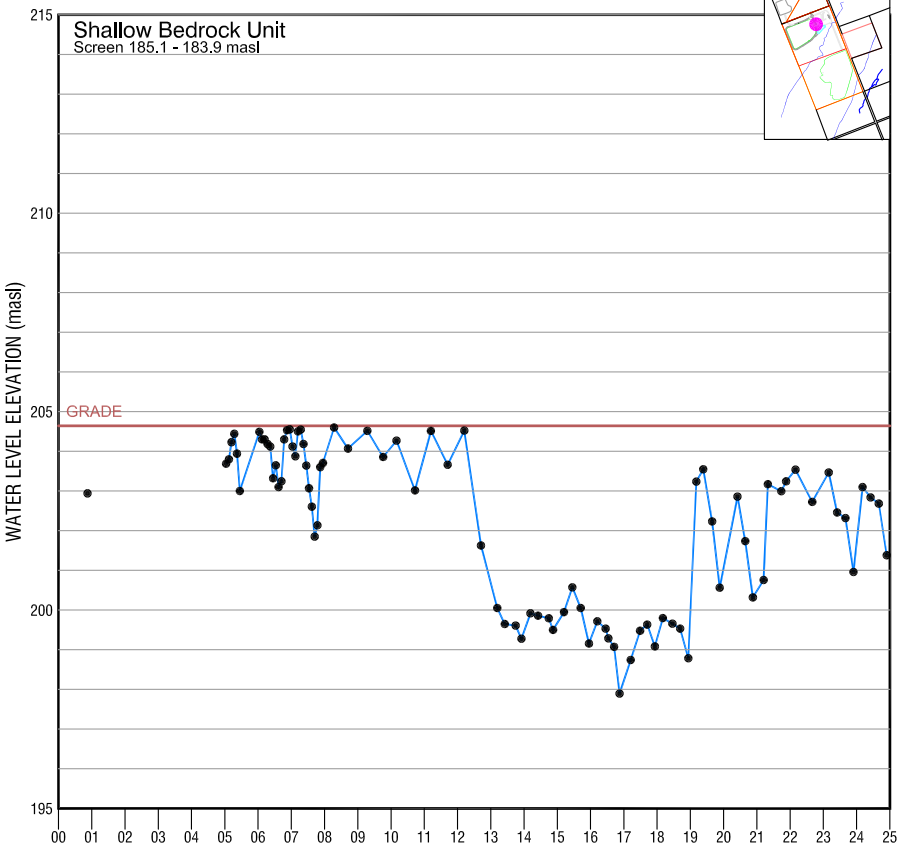

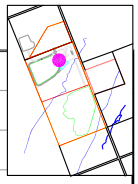

MP Elevation 205.53 masl
Grade 204.6 masl

DATE	ELEVATION	DATE	ELEVATION
15-May-05	203.94	03-Jun-14	199.86
15-Jun-05	203.00	30-Sep-14	199.79
15-Jan-06	204.49	15-Nov-14	199.50
15-Feb-06	204.30	15-Mar-15	199.95
15-Mar-06	204.30	15-Jun-15	200.57
15-Apr-06	204.18	15-Sep-15	200.05
15-May-06	204.12	15-Dec-15	199.15
15-Jun-06	203.32	15-Mar-16	199.72
15-Jul-06	203.65	15-Jun-16	199.53
15-Aug-06	203.10	15-Jul-16	199.29
15-Sep-06	203.24	16-Sep-16	199.07
15-Oct-06	204.30	15-Nov-16	197.90
15-Nov-06	204.53	17-Mar-17	198.74
15-Dec-06	204.55	28-Jun-17	199.48
15-Jan-07	204.12	14-Sep-17	199.63
15-Feb-07	203.88	08-Dec-17	199.08
15-Mar-07	204.50	05-Mar-18	199.80
15-Apr-07	204.55	18-Jun-18	199.66
15-May-07	204.18	11-Sep-18	199.53
15-Jun-07	203.64	10-Dec-18	198.79
15-Jul-07	203.07	08-Mar-19	203.24
15-Aug-07	202.60	23-May-19	203.55
15-Sep-07	201.85	28-Aug-19	202.23
15-Oct-07	202.13	20-Nov-19	200.56
15-Nov-07	203.60	02-Jun-20	202.86
15-Dec-07	203.71	26-Aug-20	201.74
15-Apr-08	204.60	18-Nov-20	200.32
15-Sep-08	204.07	16-Mar-21	200.76
15-Apr-09	204.52	02-May-21	203.17
06-Oct-09	203.86	26-Sep-21	202.99
02-Mar-10	204.27	18-Nov-21	203.24
21-Sep-10	203.02	01-Mar-22	203.54
15-Mar-11	204.51	01-Sep-22	202.72
15-Sep-11	203.66	01-Mar-23	203.47
15-Mar-12	204.52	01-Jun-23	202.46
15-Sep-12	201.63	01-Sep-23	202.32
12-Mar-13	200.05	28-Nov-23	200.96
03-Jun-13	199.65	07-Mar-24	203.10
30-Sep-13	199.61	03-Jun-24	202.84
03-Dec-13	199.28	01-Sep-24	202.68
12-Mar-14	199.92	27-Nov-24	201.38

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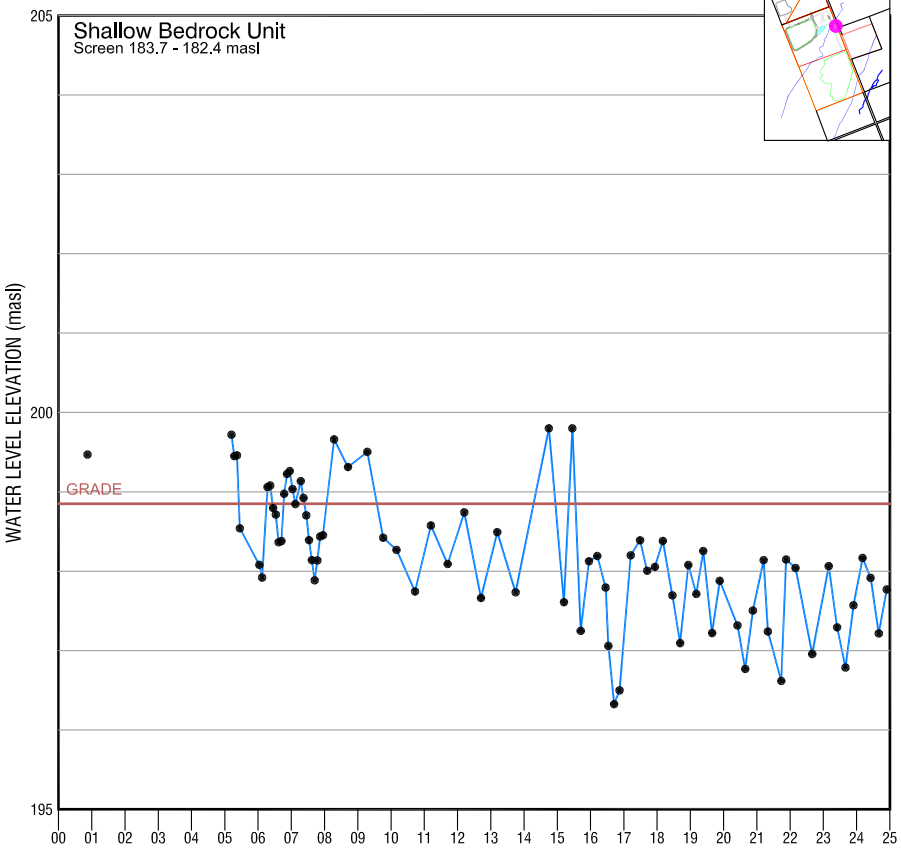

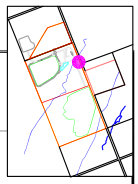

MP Elevation 199.80 masl
Grade 198.9 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	199.47	15-Jun-15	199.80
15-Mar-05	199.72	15-Sep-15	197.25
15-Apr-05	199.45	15-Dec-15	198.13
15-May-05	199.46	15-Mar-16	198.19
15-Jun-05	198.54	15-Jun-16	197.79
15-Jan-06	198.08	15-Jul-16	197.06
15-Feb-06	197.92	16-Sep-16	196.32
15-Apr-06	199.06	15-Nov-16	196.50
15-May-06	199.08	17-Mar-17	198.20
15-Jun-06	198.80	28-Jun-17	198.39
15-Jul-06	198.71	14-Sep-17	198.01
15-Aug-06	198.37	08-Dec-17	198.05
15-Sep-06	198.38	05-Mar-18	198.38
15-Oct-06	198.98	18-Jun-18	197.70
15-Nov-06	199.23	11-Sep-18	197.09
15-Dec-06	199.26	10-Dec-18	198.08
15-Jan-07	199.04	08-Mar-19	197.71
15-Feb-07	198.85	23-May-19	198.25
15-Apr-07	199.13	28-Aug-19	197.22
15-May-07	198.92	20-Nov-19	197.88
15-Jun-07	198.70	02-Jun-20	197.32
15-Jul-07	198.39	26-Aug-20	196.77
15-Aug-07	198.14	18-Nov-20	197.50
15-Sep-07	197.88	16-Mar-21	198.14
15-Oct-07	198.14	02-May-21	197.24
15-Nov-07	198.44	26-Sep-21	196.62
15-Dec-07	198.45	18-Nov-21	198.15
15-Apr-08	199.66	01-Mar-22	198.04
15-Sep-08	199.31	01-Sep-22	196.96
15-Apr-09	199.50	01-Mar-23	198.06
06-Oct-09	198.42	01-Jun-23	197.29
02-Mar-10	198.27	01-Sep-23	196.79
21-Sep-10	197.74	28-Nov-23	197.57
15-Mar-11	198.58	07-Mar-24	198.17
15-Sep-11	198.09	03-Jun-24	197.92
15-Mar-12	198.74	01-Sep-24	197.22
15-Sep-12	197.66	27-Nov-24	197.77
12-Mar-13	198.49		
30-Sep-13	197.73		
30-Sep-14	199.80		
15-Mar-15	197.61		

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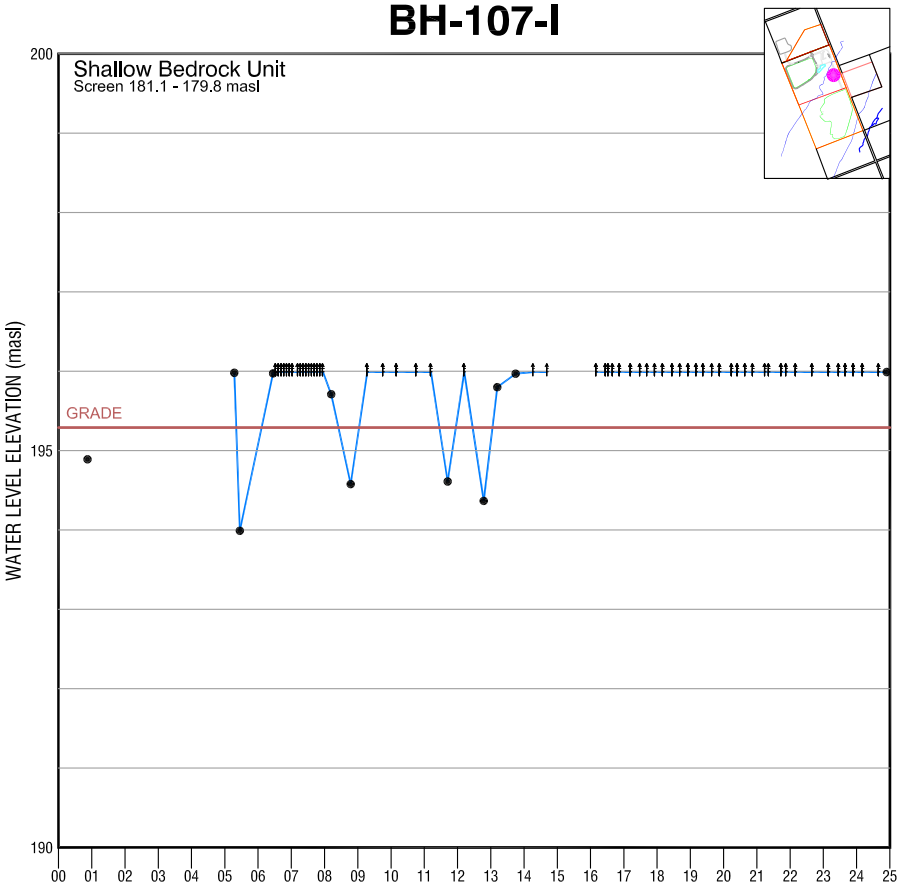

MP Elevation 195.99 masl
Grade 195.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Nov-00	194.89	28-Jun-17	FLW
15-Apr-05	195.98	14-Sep-17	FLW
15-Jun-05	193.99	08-Dec-17	FLW
15-Jun-06	195.97	05-Mar-18	FLW
15-Jul-06	FLW	18-Jun-18	FLW
15-Aug-06	FLW	11-Sep-18	FLW
15-Sep-06	FLW	10-Dec-18	FLW
15-Oct-06	FLW	08-Mar-19	FLW
15-Nov-06	FLW	23-May-19	FLW
15-Dec-06	FLW	28-Aug-19	FLW
15-Jan-07	FLW	20-Nov-19	FLW
15-Mar-07	FLW	31-Mar-20	FLW
15-Apr-07	FLW	02-Jun-20	FLW
15-May-07	FLW	26-Aug-20	FLW
15-Jun-07	FLW	18-Nov-20	FLW
15-Jul-07	FLW	31-Mar-21	FLW
15-Aug-07	FLW	12-May-21	FLW
15-Sep-07	FLW	26-Sep-21	FLW
15-Oct-07	FLW	18-Nov-21	FLW
15-Nov-07	FLW	03-Mar-22	FLW
15-Dec-07	FLW	01-Sep-22	FLW
15-Mar-08	195.71	01-Mar-23	FLW
15-Oct-08	194.58	19-Jun-23	FLW
15-Apr-09	FLW	01-Sep-23	FLW
06-Oct-09	FLW	28-Nov-23	FLW
02-Mar-10	FLW	07-Mar-24	FLW
04-Oct-10	FLW	01-Sep-24	FLW
15-Mar-11	FLW	27-Nov-24	195.99
15-Sep-11	194.61		
15-Mar-12	FLW		
15-Oct-12	194.37		
12-Mar-13	195.80		
30-Sep-13	195.97		
12-Apr-14	195.99		
12-Sep-14	195.99		
04-Mar-16	FLW		
15-Jun-16	FLW		
15-Jul-16	FLW		
01-Sep-16	FLW		
15-Nov-16	FLW		
17-Mar-17	FLW		

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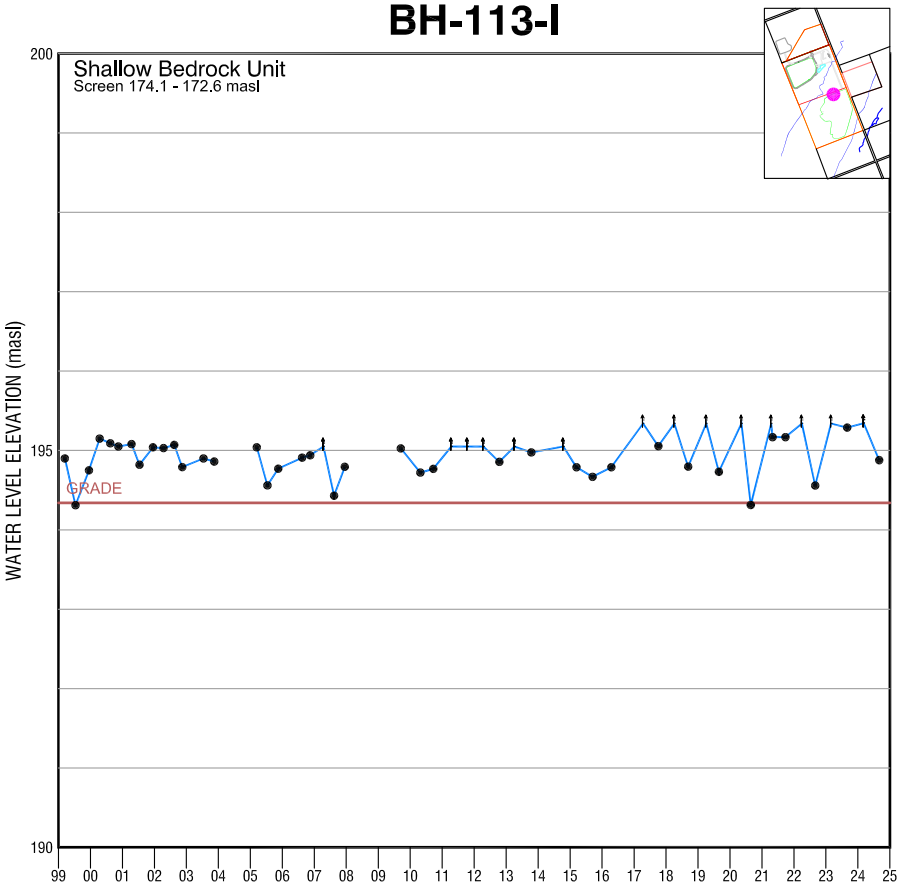

MP Elevation 195.34 masl
Grade 194.3 masl

DATE	ELEVATION	DATE	ELEVATION
15-Mar-99	194.90	12-May-20	195.34
15-Jul-99	194.31	26-Aug-20	194.31
15-Dec-99	194.75	16-Apr-21	195.34
15-Apr-00	195.15	02-May-21	195.17
15-Aug-00	195.09	26-Sep-21	195.17
15-Nov-00	195.05	01-Apr-22	195.34
15-Apr-01	195.08	01-Sep-22	194.56
15-Jul-01	194.82	01-Mar-23	195.34
15-Dec-01	195.04	01-Sep-23	195.29
15-Apr-02	195.03	07-Mar-24	FLW
15-Aug-02	195.07	01-Sep-24	194.88
15-Nov-02	194.79		
15-Jul-03	194.90		
15-Nov-03	194.86		
15-Mar-05	195.04		
15-Jul-05	194.56		
15-Nov-05	194.77		
15-Aug-06	194.91		
15-Nov-06	194.94		
15-Apr-07	FLW		
15-Aug-07	194.43		
15-Dec-07	194.79		
15-Sep-09	195.03		
27-Apr-10	194.72		
21-Sep-10	194.77		
15-Apr-11	FLW		
15-Oct-11	FLW		
15-Apr-12	FLW		
15-Oct-12	194.86		
05-Apr-13	FLW		
15-Oct-13	194.98		
15-Oct-14	FLW		
15-Mar-15	194.79		
15-Sep-15	194.67		
16-Apr-16	194.79		
13-Apr-17	195.34		
05-Oct-17	195.05		
05-Apr-18	195.34		
11-Sep-18	194.80		
05-Apr-19	195.34		
28-Aug-19	194.73		

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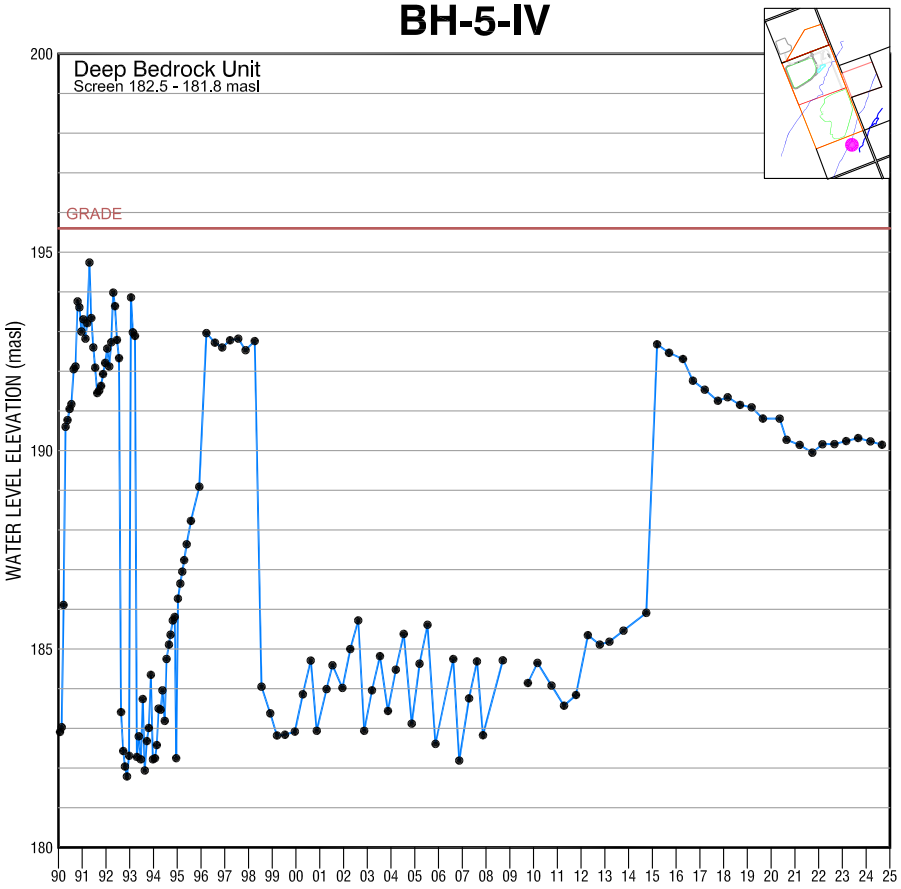

MP Elevation 196.30 masl
Grade 195.6 masl

DATE	ELEVATION	DATE	ELEVATION
21-Apr-94	183.47	15-Jul-04	185.38
19-May-94	183.96	15-Nov-04	183.12
23-Jun-94	183.19	15-Mar-05	184.63
21-Jul-94	184.75	15-Jul-05	185.61
26-Aug-94	185.11	15-Nov-05	182.61
20-Sep-94	185.36	15-Aug-06	184.75
25-Oct-94	185.72	15-Nov-06	182.19
24-Nov-94	185.81	15-Apr-07	183.76
16-Dec-94	182.25	15-Aug-07	184.69
12-Jan-95	186.27	15-Nov-07	182.83
17-Feb-95	186.65	15-Sep-08	184.71
20-Mar-95	186.95	06-Oct-09	184.15
18-Apr-95	187.24	02-Mar-10	184.65
26-May-95	187.64	04-Oct-10	184.08
31-Jul-95	188.23	15-Apr-11	183.57
06-Dec-95	189.09	15-Oct-11	183.84
25-Mar-96	192.96	15-Apr-12	185.35
03-Aug-96	192.72	15-Oct-12	185.11
22-Nov-96	192.60	12-Mar-13	185.18
23-Mar-97	192.78	15-Oct-13	185.46
28-Jul-97	192.82	30-Sep-14	185.91
17-Nov-97	192.53	15-Mar-15	192.68
07-Apr-98	192.76	15-Sep-15	192.46
20-Jul-98	184.05	16-Apr-16	192.31
01-Dec-98	183.38	16-Sep-16	191.76
15-Mar-99	182.82	17-Mar-17	191.53
15-Jul-99	182.84	05-Oct-17	191.26
15-Dec-99	182.92	05-Mar-18	191.34
15-Apr-00	183.86	11-Sep-18	191.15
15-Aug-00	184.71	08-Mar-19	191.09
15-Nov-00	182.94	28-Aug-19	190.81
15-Apr-01	183.99	12-May-20	190.81
15-Jul-01	184.59	26-Aug-20	190.27
15-Dec-01	184.02	16-Mar-21	190.14
15-Apr-02	185.00	26-Sep-21	189.95
15-Aug-02	185.72	01-Mar-22	190.16
15-Nov-02	182.94	01-Sep-22	190.16
15-Mar-03	183.96	01-Mar-23	190.24
15-Jul-03	184.82	01-Sep-23	190.32
15-Nov-03	183.44	07-Mar-24	190.23
15-Mar-04	184.48	01-Sep-24	190.15

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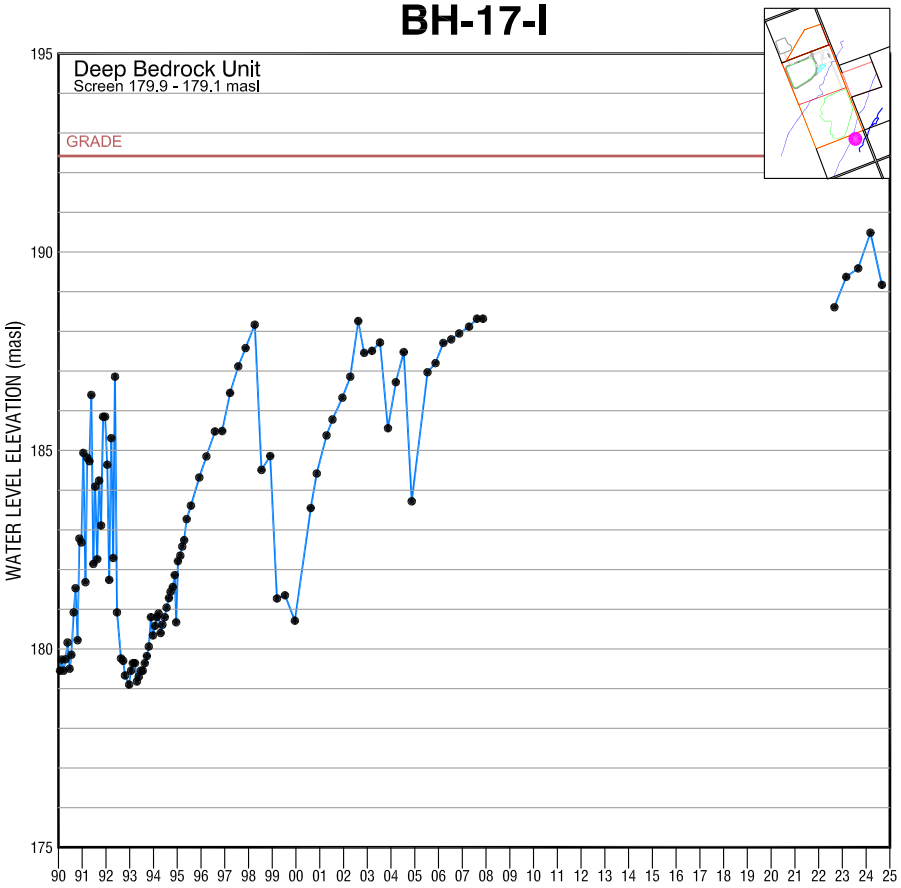

MP Elevation 193.17 masl
Grade 192.4 masl

DATE	ELEVATION	DATE	ELEVATION
18-Nov-91	185.85	31-Jul-95	183.61
20-Dec-91	185.85	06-Dec-95	184.32
21-Jan-92	184.64	25-Mar-96	184.85
20-Feb-92	181.74	03-Aug-96	185.48
23-Mar-92	185.31	22-Nov-96	185.49
22-Apr-92	182.29	23-Mar-97	186.45
19-May-92	186.86	28-Jul-97	187.12
19-Jun-92	180.92	17-Nov-97	187.58
20-Aug-92	179.76	07-Apr-98	188.17
22-Sep-92	179.70	20-Jul-98	184.51
20-Oct-92	179.33	01-Dec-98	184.86
22-Dec-92	DRY	15-Mar-99	181.27
20-Jan-93	179.45	15-Jul-99	181.35
18-Feb-93	179.64	15-Dec-99	180.71
22-Mar-93	179.64	15-Aug-00	183.55
21-Apr-93	179.18	15-Nov-00	184.42
20-May-93	179.30	15-Apr-01	185.38
21-Jun-93	179.45	15-Jul-01	185.78
20-Jul-93	179.45	15-Dec-01	186.33
20-Aug-93	179.64	15-Apr-02	186.86
21-Sep-93	179.82	15-Aug-02	188.26
21-Oct-93	180.06	15-Nov-02	187.46
22-Nov-93	180.80	15-Mar-03	187.51
23-Dec-93	180.34	15-Jul-03	187.72
24-Jan-94	180.58	15-Nov-03	185.56
21-Feb-94	180.80	15-Mar-04	186.72
21-Mar-94	180.89	15-Jul-04	187.48
21-Apr-94	180.40	15-Nov-04	183.72
19-May-94	180.61	15-Jul-05	186.97
23-Jun-94	180.80	15-Nov-05	187.20
21-Jul-94	181.04	15-Mar-06	187.71
26-Aug-94	181.28	15-Jul-06	187.80
20-Sep-94	181.44	15-Nov-06	187.95
25-Oct-94	181.56	15-Apr-07	188.12
24-Nov-94	181.86	15-Aug-07	188.32
16-Dec-94	180.67	15-Nov-07	188.32
12-Jan-95	182.21	01-Sep-22	188.61
17-Feb-95	182.35	01-Mar-23	189.38
20-Mar-95	182.58	01-Sep-23	189.59
18-Apr-95	182.74	07-Mar-24	190.49
26-May-95	183.27	01-Sep-24	189.17

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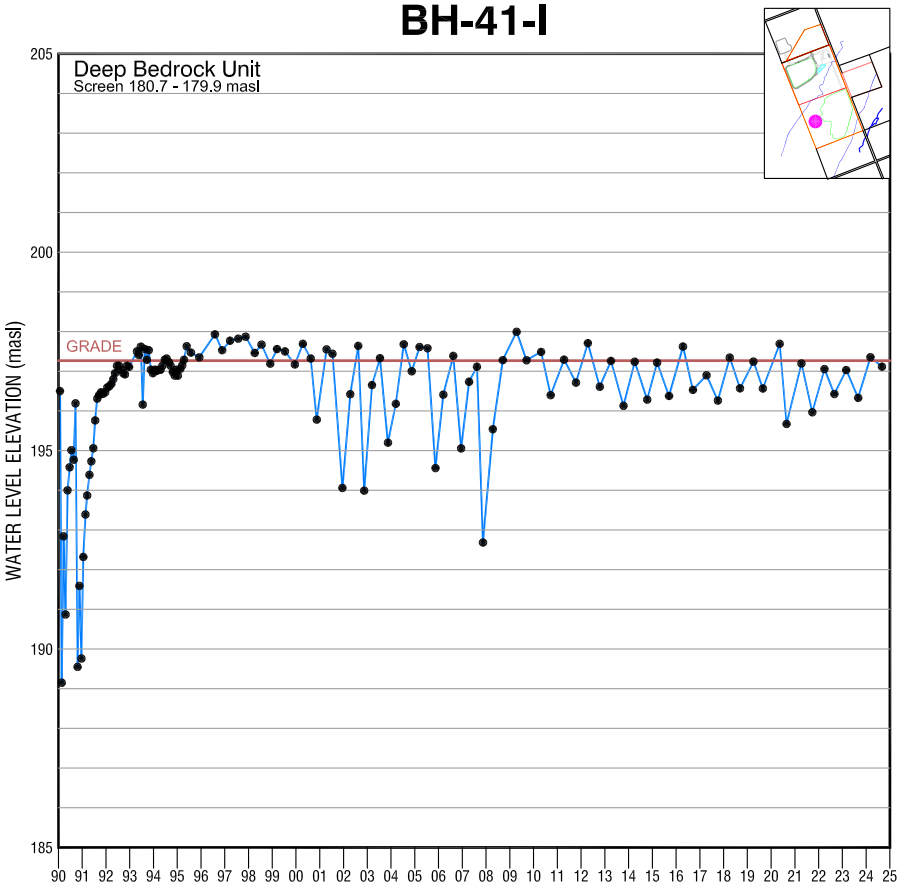

MP Elevation 198.19 masl
Grade 197.3 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	197.32	15-Nov-05	194.56
26-Aug-94	197.23	15-Mar-06	196.41
20-Sep-94	197.14	15-Aug-06	197.39
25-Oct-94	196.98	15-Dec-06	195.06
24-Nov-94	196.89	15-Apr-07	196.73
16-Dec-94	197.04	15-Aug-07	197.11
12-Jan-95	196.89	15-Nov-07	192.68
17-Feb-95	197.06	15-Apr-08	195.54
20-Mar-95	197.15	15-Sep-08	197.28
15-Apr-95	197.29	15-Apr-09	197.99
26-May-95	197.63	15-Sep-09	197.28
31-Jul-95	197.47	27-Apr-10	197.49
06-Dec-95	197.35	21-Sep-10	196.40
03-Aug-96	197.93	15-Apr-11	197.29
22-Nov-96	197.53	15-Oct-11	196.71
23-Mar-97	197.77	15-Apr-12	197.71
28-Jul-97	197.82	15-Oct-12	196.61
17-Nov-97	197.87	05-Apr-13	197.26
07-Apr-98	197.46	15-Oct-13	196.13
20-Jul-98	197.67	05-Apr-14	197.24
01-Dec-98	197.19	15-Oct-14	196.29
15-Mar-99	197.56	15-Mar-15	197.22
15-Jul-99	197.50	15-Sep-15	196.38
15-Dec-99	197.17	16-Apr-16	197.62
15-Apr-00	197.69	16-Sep-16	196.53
15-Aug-00	197.32	13-Apr-17	196.90
15-Nov-00	195.78	05-Oct-17	196.26
15-Apr-01	197.55	05-Apr-18	197.35
15-Jul-01	197.44	11-Sep-18	196.57
15-Dec-01	194.06	05-Apr-19	197.24
15-Apr-02	196.42	28-Aug-19	196.57
15-Aug-02	197.64	12-May-20	197.69
15-Nov-02	193.99	26-Aug-20	195.67
15-Mar-03	196.65	12-Apr-21	197.20
15-Jul-03	197.33	26-Sep-21	195.97
15-Nov-03	195.20	01-Apr-22	197.05
15-Mar-04	196.18	01-Sep-22	196.43
15-Jul-04	197.68	01-Mar-23	197.03
15-Nov-04	197.00	01-Sep-23	196.33
15-Mar-05	197.61	07-Mar-24	197.35
15-Jul-05	197.58	01-Sep-24	197.12

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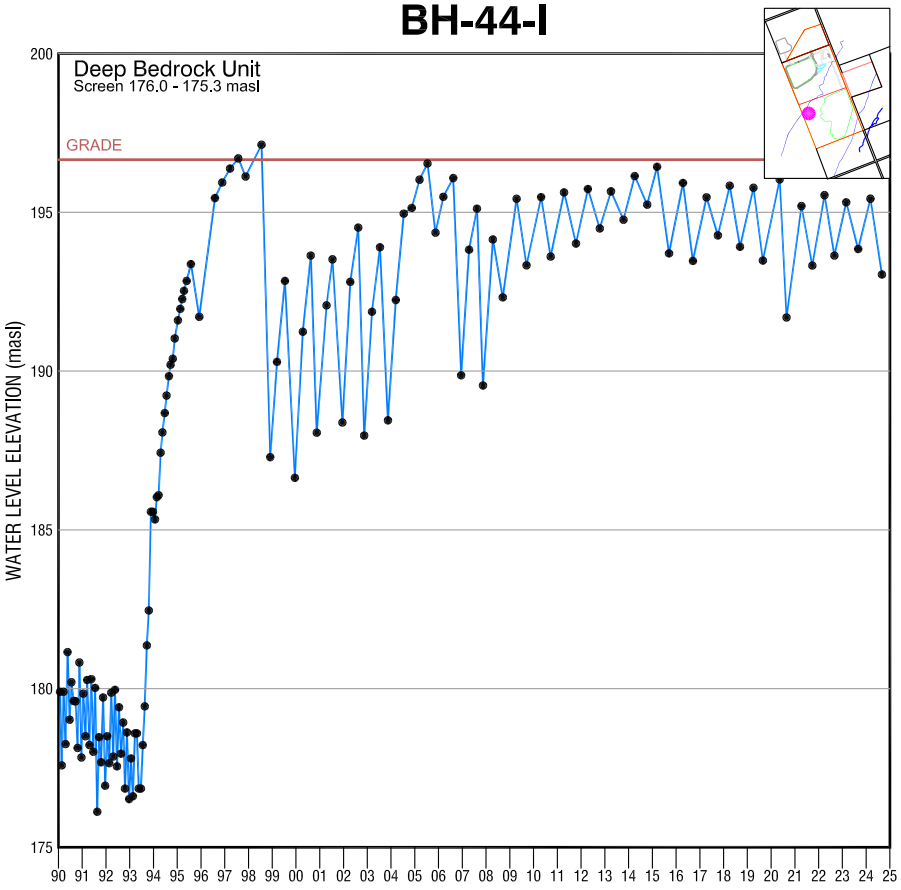

MP Elevation 197.64 masl
Grade 196.7 masl

DATE	ELEVATION	DATE	ELEVATION
19-May-94	188.07	15-Nov-05	194.36
23-Jun-94	188.68	15-Mar-06	195.49
21-Jul-94	189.23	15-Aug-06	196.08
26-Aug-94	189.84	15-Dec-06	189.87
20-Sep-94	190.20	15-Apr-07	193.82
25-Oct-94	190.39	15-Aug-07	195.12
24-Nov-94	191.03	15-Nov-07	189.55
12-Jan-95	191.60	15-Apr-08	194.15
17-Feb-95	191.96	15-Sep-08	192.32
20-Mar-95	192.27	15-Apr-09	195.43
15-Apr-95	192.53	15-Sep-09	193.33
26-May-95	192.84	27-Apr-10	195.48
31-Jul-95	193.37	21-Sep-10	193.61
06-Dec-95	191.71	15-Apr-11	195.63
03-Aug-96	195.45	15-Oct-11	194.02
22-Nov-96	195.94	15-Apr-12	195.74
23-Mar-97	196.38	15-Oct-12	194.49
28-Jul-97	196.70	05-Apr-13	195.66
17-Nov-97	196.13	15-Oct-13	194.77
20-Jul-98	197.13	05-Apr-14	196.14
01-Dec-98	187.29	15-Oct-14	195.24
15-Mar-99	190.29	15-Mar-15	196.43
15-Jul-99	192.84	15-Sep-15	193.71
15-Dec-99	186.64	16-Apr-16	195.93
15-Apr-00	191.24	16-Sep-16	193.47
15-Aug-00	193.64	13-Apr-17	195.48
15-Nov-00	188.06	05-Oct-17	194.28
15-Apr-01	192.07	05-Apr-18	195.84
15-Jul-01	193.52	11-Sep-18	193.92
15-Dec-01	188.38	05-Apr-19	195.78
15-Apr-02	192.81	28-Aug-19	193.48
15-Aug-02	194.52	12-May-20	196.04
15-Nov-02	187.97	26-Aug-20	191.69
15-Mar-03	191.87	12-Apr-21	195.20
15-Jul-03	193.90	26-Sep-21	193.32
15-Nov-03	188.45	01-Apr-22	195.54
15-Mar-04	192.24	01-Sep-22	193.64
15-Jul-04	194.96	01-Mar-23	195.32
15-Nov-04	195.14	01-Sep-23	193.85
15-Mar-05	196.03	07-Mar-24	195.43
15-Jul-05	196.54	01-Sep-24	193.04

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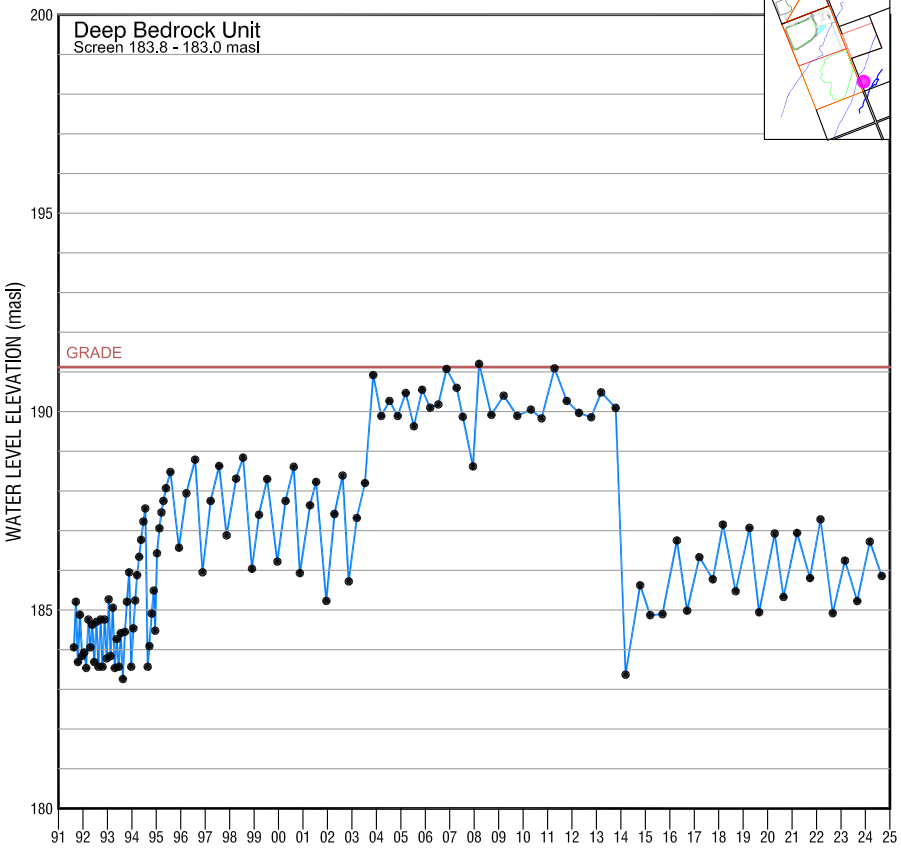

MP Elevation 191.95 masl
Grade 191.1 masl

DATE	ELEVATION	DATE	ELEVATION
26-Aug-94	183.57	15-Nov-05	190.55
20-Sep-94	184.09	15-Mar-06	190.10
25-Oct-94	184.91	15-Jul-06	190.18
24-Nov-94	185.49	15-Nov-06	191.07
16-Dec-94	184.48	15-Apr-07	190.60
12-Jan-95	186.43	15-Jul-07	189.87
17-Feb-95	187.06	15-Dec-07	188.62
20-Mar-95	187.46	15-Mar-08	191.20
18-Apr-95	187.75	15-Sep-08	189.92
26-May-95	188.07	16-Mar-09	190.40
31-Jul-95	188.48	06-Oct-09	189.89
06-Dec-95	186.57	27-Apr-10	190.05
25-Mar-96	187.94	04-Oct-10	189.83
03-Aug-96	188.79	15-Apr-11	191.09
22-Nov-96	185.95	15-Oct-11	190.27
23-Mar-97	187.75	15-Apr-12	189.97
28-Jul-97	188.63	15-Oct-12	189.86
17-Nov-97	186.88	12-Mar-13	190.48
07-Apr-98	188.31	15-Oct-13	190.09
20-Jul-98	188.84	12-Mar-14	183.37
01-Dec-98	186.04	15-Oct-14	185.62
15-Mar-99	187.40	15-Mar-15	184.87
15-Jul-99	188.30	15-Sep-15	184.90
15-Dec-99	186.22	16-Apr-16	186.75
15-Apr-00	187.75	16-Sep-16	184.98
15-Aug-00	188.61	17-Mar-17	186.33
15-Nov-00	185.93	05-Oct-17	185.77
15-Apr-01	187.64	05-Mar-18	187.15
15-Jul-01	188.23	11-Sep-18	185.47
15-Dec-01	185.23	05-Apr-19	187.07
15-Apr-02	187.42	28-Aug-19	184.94
15-Aug-02	188.39	16-Apr-20	186.93
15-Nov-02	185.72	26-Aug-20	185.33
15-Mar-03	187.32	16-Mar-21	186.94
15-Jul-03	188.20	26-Sep-21	185.81
15-Nov-03	190.92	01-Mar-22	187.29
15-Mar-04	189.89	01-Sep-22	184.92
15-Jul-04	190.27	01-Mar-23	186.25
15-Nov-04	189.89	01-Sep-23	185.23
15-Mar-05	190.47	07-Mar-24	186.73
15-Jul-05	189.63	01-Sep-24	185.86

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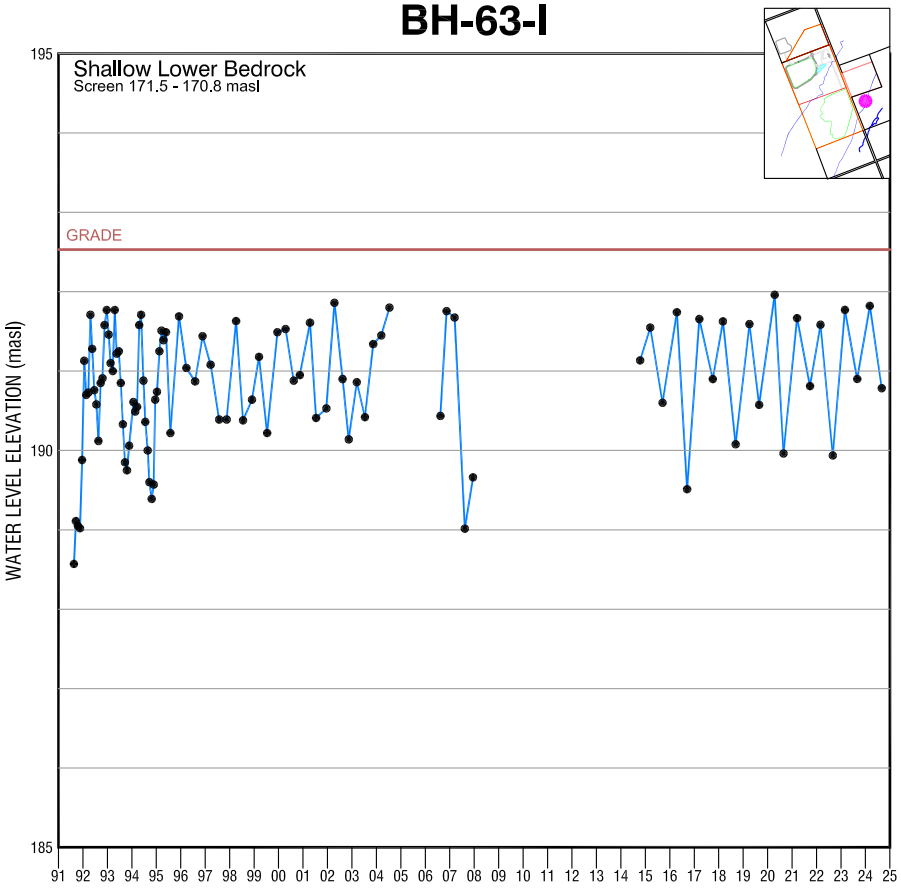

MP Elevation 193.29 masl
Grade 192.5 masl

DATE	ELEVATION	DATE	ELEVATION
20-Jan-93	191.46	15-Dec-99	191.49
18-Feb-93	191.10	15-Apr-00	191.53
22-Mar-93	191.00	15-Aug-00	190.88
21-Apr-93	191.77	15-Nov-00	190.95
20-May-93	191.22	15-Apr-01	191.61
21-Jun-93	191.25	15-Jul-01	190.41
20-Jul-93	190.85	15-Dec-01	190.53
20-Aug-93	190.33	15-Apr-02	191.86
20-Sep-93	189.85	15-Aug-02	190.90
20-Oct-93	189.75	15-Nov-02	190.14
22-Nov-93	190.06	15-Mar-03	190.86
24-Jan-94	190.61	15-Jul-03	190.42
21-Feb-94	190.49	15-Nov-03	191.34
21-Mar-94	190.55	15-Mar-04	191.45
21-Apr-94	191.58	15-Jul-04	191.80
19-May-94	191.71	15-Aug-06	190.43
23-Jun-94	190.88	15-Nov-06	191.76
21-Jul-94	190.36	15-Mar-07	191.68
26-Aug-94	190.00	15-Aug-07	189.01
20-Sep-94	189.60	15-Dec-07	189.66
25-Oct-94	189.39	15-Oct-14	191.13
24-Nov-94	189.57	15-Mar-15	191.55
16-Dec-94	190.64	15-Sep-15	190.60
12-Jan-95	190.74	16-Apr-16	191.74
17-Feb-95	191.25	16-Sep-16	189.51
20-Mar-95	191.51	17-Mar-17	191.66
18-Apr-95	191.39	05-Oct-17	190.90
26-May-95	191.49	05-Mar-18	191.63
31-Jul-95	190.22	11-Sep-18	190.08
06-Dec-95	191.69	05-Apr-19	191.59
25-Mar-96	191.04	28-Aug-19	190.57
03-Aug-96	190.87	16-Apr-20	191.96
22-Nov-96	191.44	26-Aug-20	189.96
23-Mar-97	191.08	16-Mar-21	191.67
28-Jul-97	190.39	26-Sep-21	190.81
17-Nov-97	190.39	01-Mar-22	191.58
07-Apr-98	191.63	01-Sep-22	189.94
20-Jul-98	190.38	01-Mar-23	191.77
01-Dec-98	190.64	01-Sep-23	190.90
15-Mar-99	191.18	07-Mar-24	191.82
15-Jul-99	190.22	01-Sep-24	190.79

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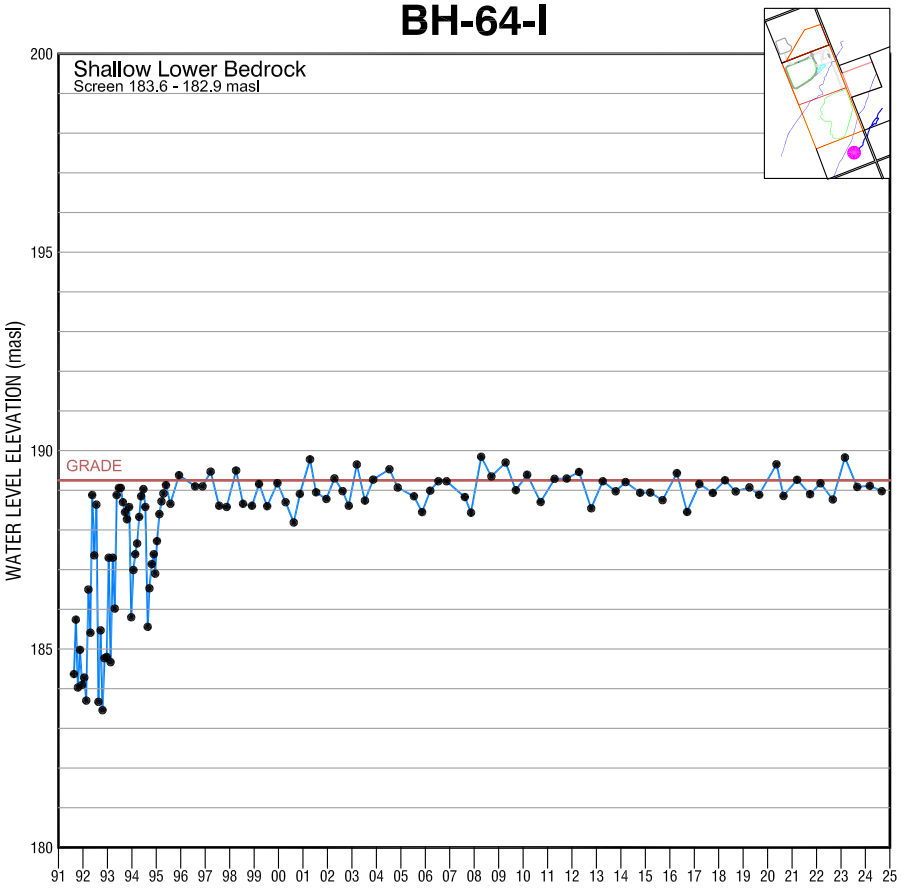

MP Elevation 190.10 masl
Grade 189.3 masl

DATE	ELEVATION	DATE	ELEVATION
21-Apr-94	188.33	15-Jul-05	188.85
19-May-94	188.85	15-Nov-05	188.45
23-Jun-94	189.03	15-Mar-06	188.99
21-Jul-94	188.58	15-Jul-06	189.23
26-Aug-94	185.56	15-Nov-06	189.23
20-Sep-94	186.53	15-Aug-07	188.83
25-Oct-94	187.14	15-Nov-07	188.44
24-Nov-94	187.39	15-Apr-08	189.85
16-Dec-94	186.90	15-Sep-08	189.35
12-Jan-95	187.72	15-Apr-09	189.70
17-Feb-95	188.40	15-Sep-09	189.00
20-Mar-95	188.72	02-Mar-10	189.39
18-Apr-95	188.92	21-Sep-10	188.70
26-May-95	189.13	15-Apr-11	189.29
31-Jul-95	188.66	15-Oct-11	189.30
06-Dec-95	189.38	15-Apr-12	189.46
03-Aug-96	189.10	15-Oct-12	188.55
22-Nov-96	189.10	05-Apr-13	189.23
23-Mar-97	189.47	15-Oct-13	188.98
28-Jul-97	188.61	12-Mar-14	189.21
17-Nov-97	188.58	15-Oct-14	188.94
07-Apr-98	189.50	15-Mar-15	188.94
20-Jul-98	188.66	15-Sep-15	188.75
01-Dec-98	188.61	16-Apr-16	189.43
15-Mar-99	189.16	16-Sep-16	188.46
15-Jul-99	188.60	17-Mar-17	189.16
15-Dec-99	189.18	05-Oct-17	188.93
15-Apr-00	188.70	05-Apr-18	189.25
15-Aug-00	188.19	11-Sep-18	188.97
15-Nov-00	188.91	05-Apr-19	189.07
15-Apr-01	189.78	28-Aug-19	188.88
15-Jul-01	188.95	12-May-20	189.66
15-Dec-01	188.78	26-Aug-20	188.86
15-Apr-02	189.30	16-Mar-21	189.27
15-Aug-02	188.98	26-Sep-21	188.90
15-Nov-02	188.61	01-Mar-22	189.18
15-Mar-03	189.65	01-Sep-22	188.77
15-Jul-03	188.74	01-Mar-23	189.83
15-Nov-03	189.27	01-Sep-23	189.09
15-Jul-04	189.53	07-Mar-24	189.11
15-Nov-04	189.07	01-Sep-24	188.98

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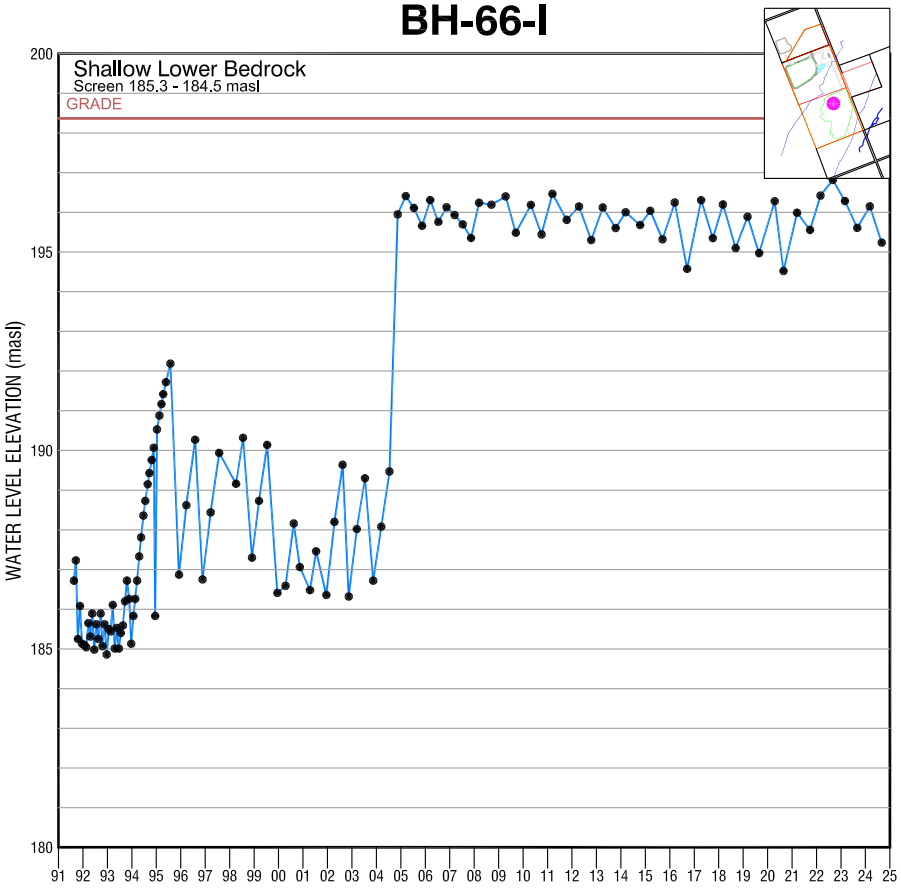

MP Elevation 199.06 masl
Grade 198.4 masl

DATE	ELEVATION	DATE	ELEVATION
21-Jul-94	188.73	15-Nov-05	195.66
26-Aug-94	189.15	15-Mar-06	196.31
20-Sep-94	189.43	15-Jul-06	195.76
25-Oct-94	189.76	15-Nov-06	196.13
24-Nov-94	190.07	15-Mar-07	195.93
16-Dec-94	185.83	15-Jul-07	195.70
12-Jan-95	190.53	15-Nov-07	195.35
17-Feb-95	190.88	15-Mar-08	196.24
20-Mar-95	191.17	15-Sep-08	196.19
15-Apr-95	191.42	15-Apr-09	196.40
26-May-95	191.72	15-Sep-09	195.49
31-Jul-95	192.19	27-Apr-10	196.19
06-Dec-95	186.87	04-Oct-10	195.45
25-Mar-96	188.62	15-Mar-11	196.47
03-Aug-96	190.27	15-Oct-11	195.81
22-Nov-96	186.75	15-Apr-12	196.15
23-Mar-97	188.44	15-Oct-12	195.30
28-Jul-97	189.94	05-Apr-13	196.12
07-Apr-98	189.16	15-Oct-13	195.61
20-Jul-98	190.32	12-Mar-14	196.00
01-Dec-98	187.30	15-Oct-14	195.68
15-Mar-99	188.73	15-Mar-15	196.04
15-Jul-99	190.14	15-Sep-15	195.32
15-Dec-99	186.41	15-Mar-16	196.25
15-Apr-00	186.59	16-Sep-16	194.58
15-Aug-00	188.16	13-Apr-17	196.31
15-Nov-00	187.06	05-Oct-17	195.35
15-Apr-01	186.48	05-Mar-18	196.20
15-Jul-01	187.46	11-Sep-18	195.10
15-Dec-01	186.36	08-Mar-19	195.89
15-Apr-02	188.20	28-Aug-19	194.97
15-Aug-02	189.64	16-Apr-20	196.28
15-Nov-02	186.32	26-Aug-20	194.52
15-Mar-03	188.02	16-Mar-21	195.99
15-Jul-03	189.30	26-Sep-21	195.56
15-Nov-03	186.72	01-Mar-22	196.42
15-Mar-04	188.08	01-Sep-22	196.82
15-Jul-04	189.47	01-Mar-23	196.29
15-Nov-04	195.95	01-Sep-23	195.61
15-Mar-05	196.41	07-Mar-24	196.15
15-Jul-05	196.11	01-Sep-24	195.24

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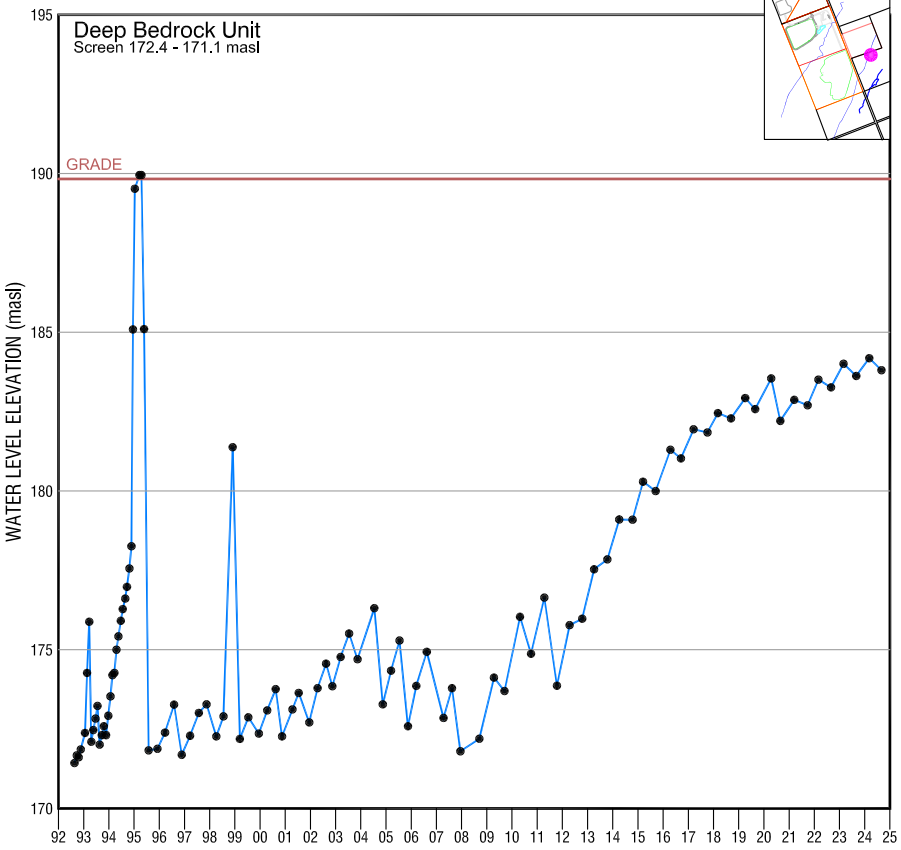
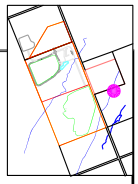
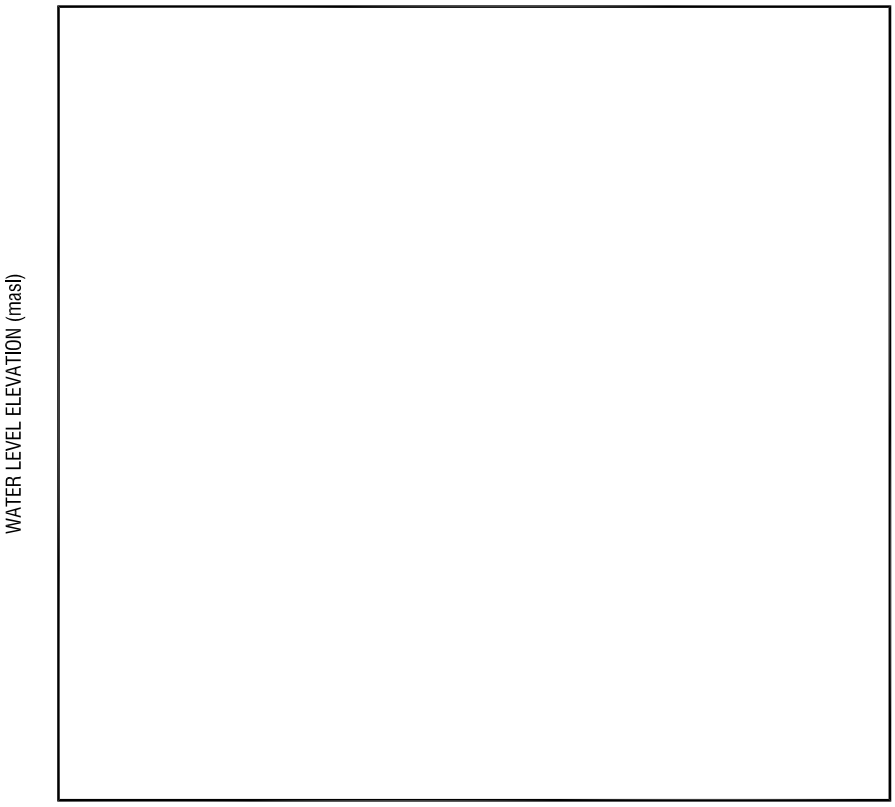


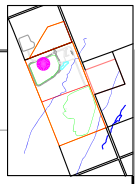


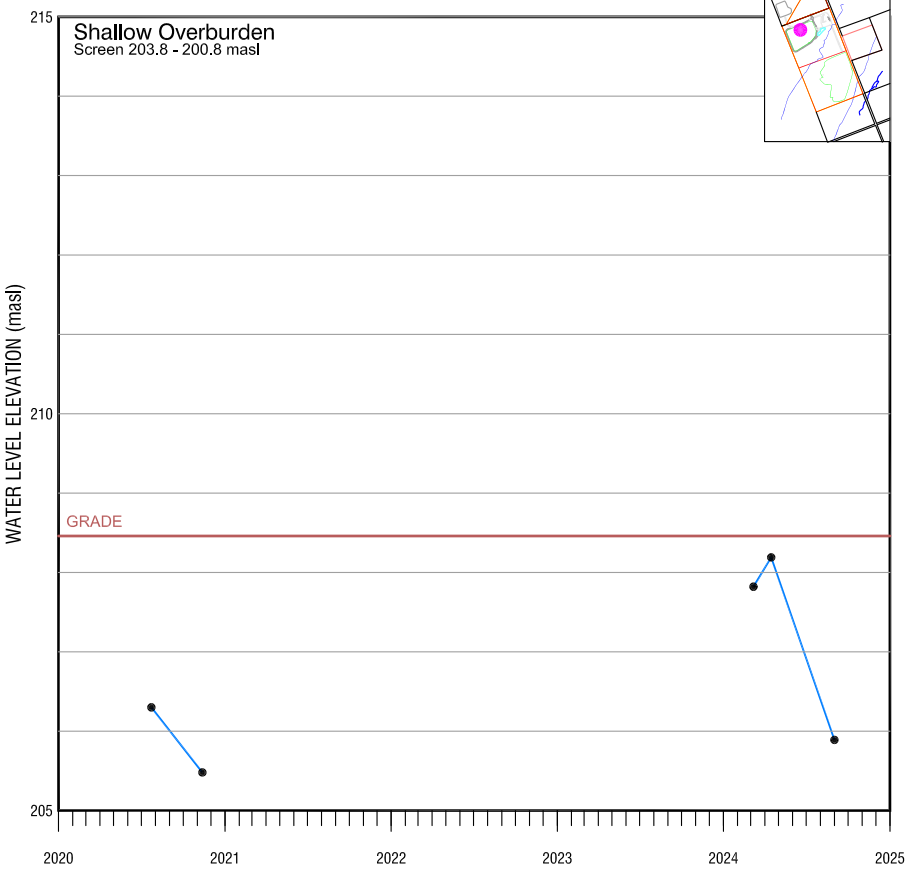
MP Elevation 190.49 masl
Grade 189.8 masl

DATE	ELEVATION	DATE	ELEVATION
21-Apr-94	175.00	15-Mar-05	174.34
19-May-94	175.42	15-Jul-05	175.29
23-Jun-94	175.91	15-Nov-05	172.59
21-Jul-94	176.28	15-Mar-06	173.86
26-Aug-94	176.61	15-Aug-06	174.93
20-Sep-94	176.98	15-Apr-07	172.85
25-Oct-94	177.56	15-Aug-07	173.79
24-Nov-94	178.26	15-Dec-07	171.80
16-Dec-94	185.09	15-Sep-08	172.20
12-Jan-95	189.52	15-Apr-09	174.12
20-Mar-95	189.95	15-Sep-09	173.70
18-Apr-95	189.95	27-Apr-10	176.04
26-May-95	185.10	04-Oct-10	174.87
31-Jul-95	171.83	15-Apr-11	176.64
06-Dec-95	171.88	15-Oct-11	173.87
25-Mar-96	172.39	15-Apr-12	175.77
03-Aug-96	173.27	15-Oct-12	175.98
22-Nov-96	171.69	05-Apr-13	177.53
23-Mar-97	172.29	15-Oct-13	177.85
28-Jul-97	173.01	05-Apr-14	179.10
17-Nov-97	173.28	15-Oct-14	179.09
07-Apr-98	172.27	15-Mar-15	180.29
20-Jul-98	172.90	15-Sep-15	180.00
01-Dec-98	181.38	16-Apr-16	181.30
15-Mar-99	172.19	16-Sep-16	181.03
15-Jul-99	172.87	17-Mar-17	181.94
15-Dec-99	172.36	05-Oct-17	181.84
15-Apr-00	173.09	05-Mar-18	182.45
15-Aug-00	173.76	11-Sep-18	182.29
15-Nov-00	172.27	05-Apr-19	182.93
15-Apr-01	173.12	28-Aug-19	182.58
15-Jul-01	173.64	16-Apr-20	183.55
15-Dec-01	172.71	26-Aug-20	182.21
15-Apr-02	173.79	16-Mar-21	182.87
15-Aug-02	174.56	26-Sep-21	182.70
15-Nov-02	173.85	01-Mar-22	183.51
15-Mar-03	174.77	01-Sep-22	183.26
15-Jul-03	175.51	01-Mar-23	184.01
15-Nov-03	174.70	01-Sep-23	183.62
15-Jul-04	176.31	07-Mar-24	184.18
15-Nov-04	173.28	01-Sep-24	183.80



MW20-01

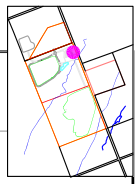


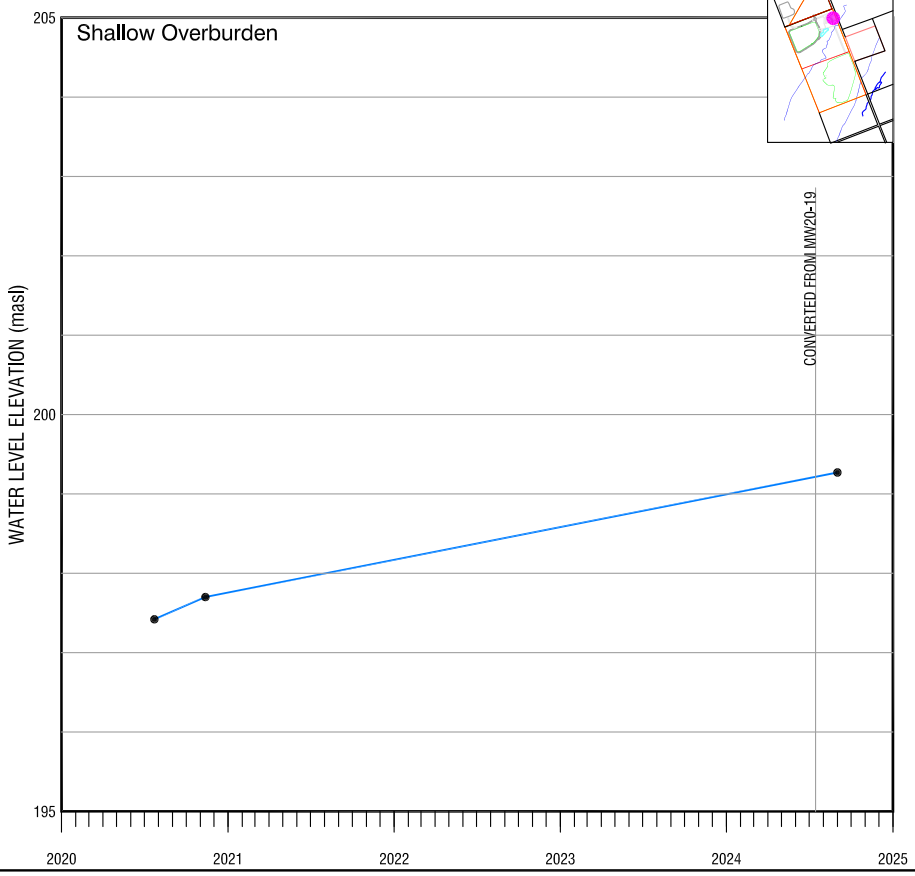


MP Elevation 209.03 masl
Grade 208.5 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jul-20	206.30		
12-Nov-20	205.48		
07-Mar-24	207.82		
15-Apr-24	208.19		
01-Sep-24	205.89		

MW20-19R

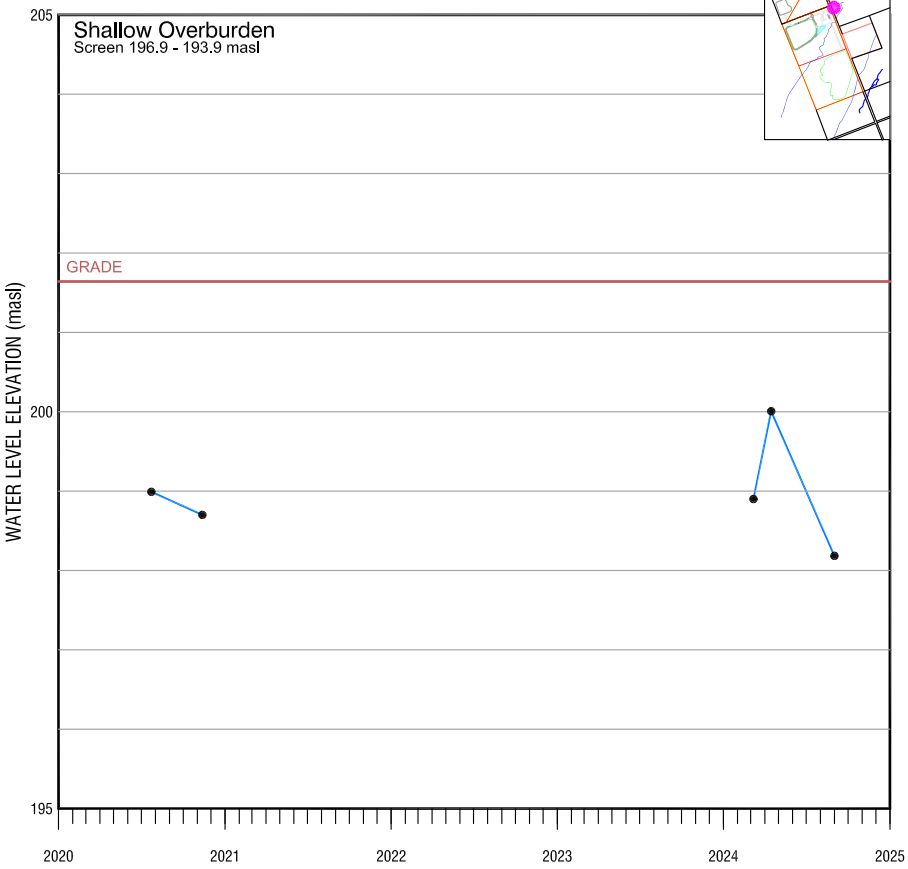


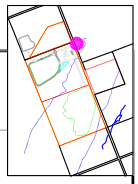


MP Elevation 206.40 masl
Grade 205.5 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jul-20	197.42		
12-Nov-20	197.70		
01-Sep-24	199.27		

MW20-22

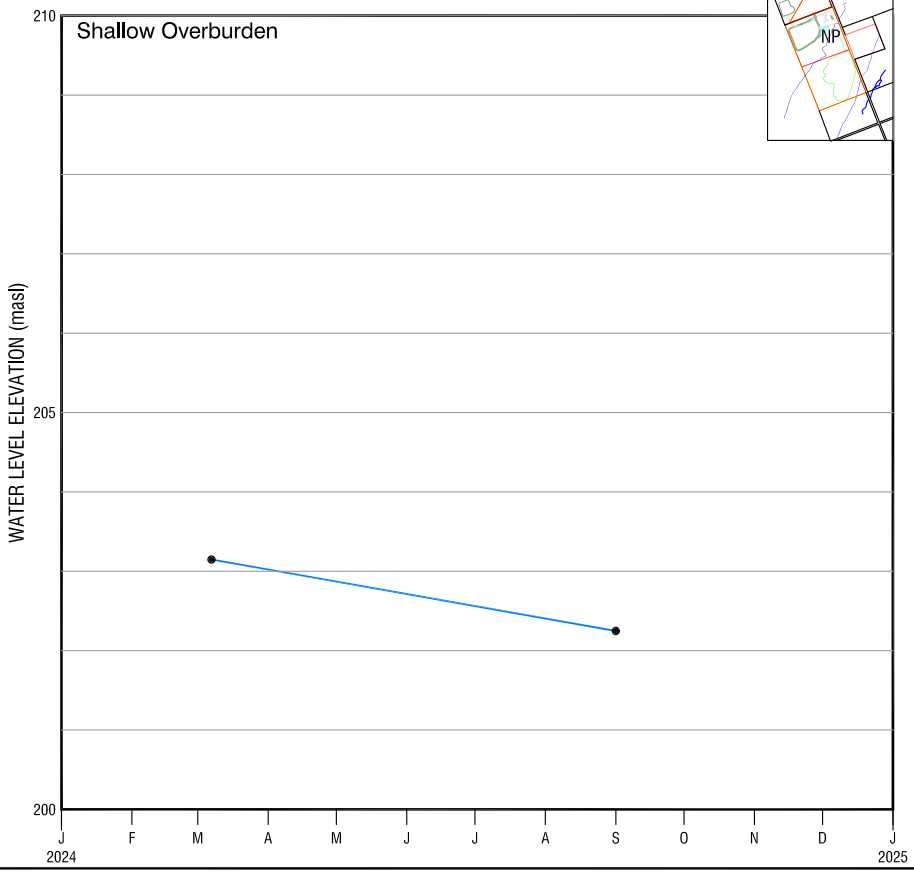


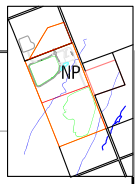


MP Elevation 201.63 masl
Grade 201.6 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jul-20	198.99		
12-Nov-20	198.70		
07-Mar-24	198.90		
15-Apr-24	200.01		
01-Sep-24	198.18		

MW20-28

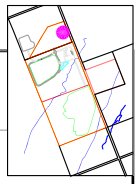


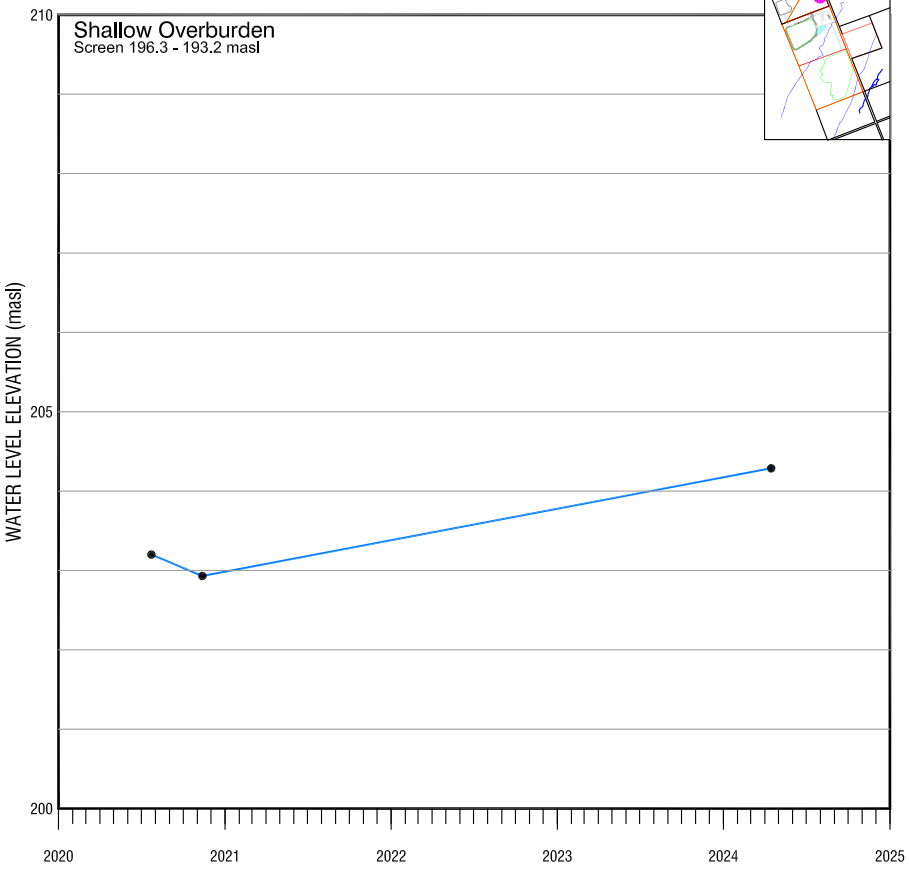


MP Elevation 211.02 masl

DATE	ELEVATION	DATE	ELEVATION
07-Mar-24	203.15		
01-Sep-24	202.25		

MW20-28A

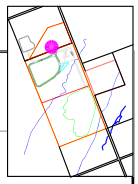


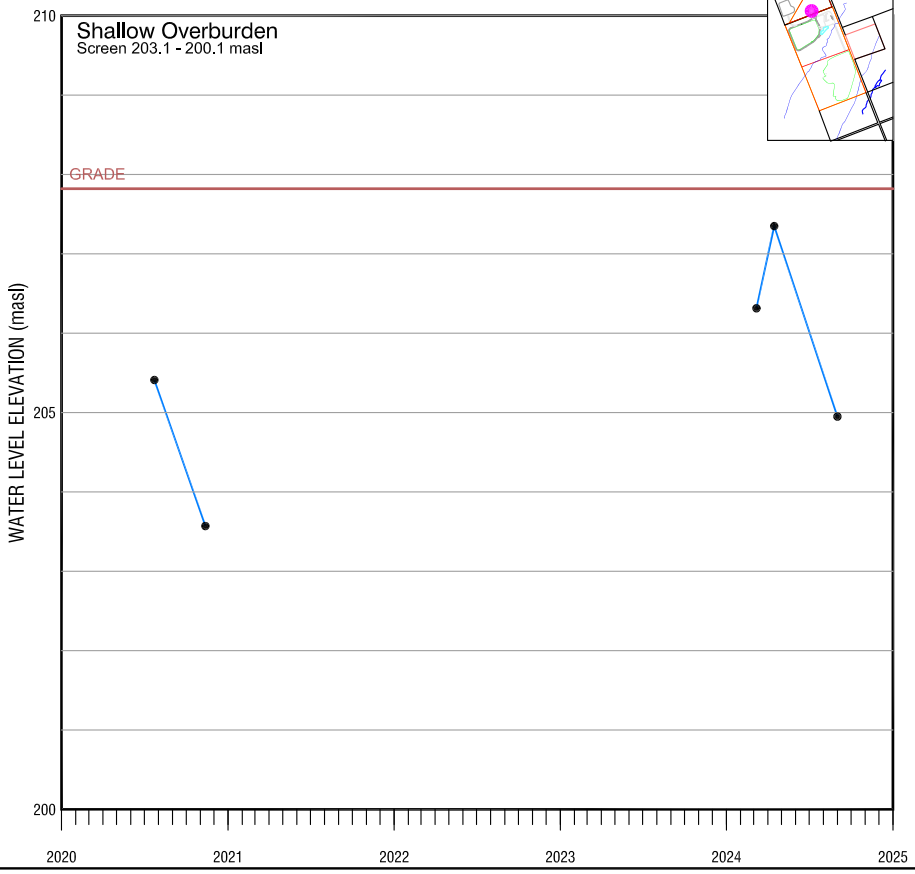


MP Elevation 212.13 masl
Grade 211.2 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jul-20	203.20		
12-Nov-20	202.93		
15-Apr-24	204.29		

MW20-30





MP Elevation 207.84 masl
Grade 207.8 masl

DATE	ELEVATION	DATE	ELEVATION
23-Jul-20	205.41		
12-Nov-20	203.57		
07-Mar-24	206.31		
15-Apr-24	207.35		
01-Sep-24	204.95		

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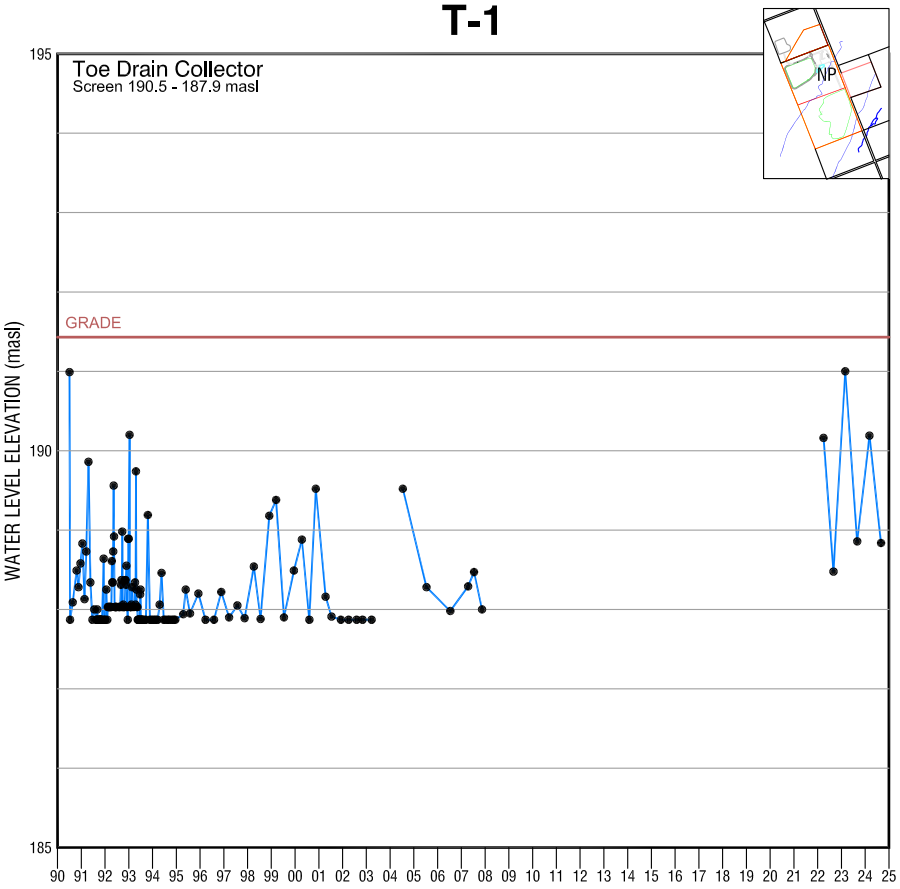

MP Elevation 192.24 masl
Grade 191.4 masl

DATE	ELEVATION	DATE	ELEVATION
30-Dec-92	188.89	25-Oct-94	DRY
13-Jan-93	190.20	24-Nov-94	DRY
20-Jan-93	188.03	16-Dec-94	DRY
28-Jan-93	188.03	18-Apr-95	187.94
30-Jan-93	188.03	26-May-95	188.25
03-Feb-93	188.03	31-Jul-95	187.95
10-Feb-93	188.06	06-Dec-95	188.20
18-Feb-93	188.28	25-Mar-96	DRY
24-Feb-93	188.03	03-Aug-96	DRY
22-Mar-93	188.03	22-Nov-96	188.22
07-Apr-93	188.34	23-Mar-97	187.90
14-Apr-93	188.06	28-Jul-97	188.05
21-Apr-93	189.74	17-Nov-97	187.89
28-Apr-93	188.25	07-Apr-98	188.54
05-May-93	188.03	20-Jul-98	187.88
12-May-93	188.03	01-Dec-98	189.18
19-May-93	DRY	15-Mar-99	189.38
26-May-93	DRY	15-Jul-99	187.90
02-Jun-93	DRY	15-Dec-99	188.49
09-Jun-93	DRY	15-Apr-00	188.88
16-Jun-93	DRY	08-Aug-00	DRY
23-Jun-93	188.19	15-Nov-00	189.52
30-Jun-93	188.25	15-Apr-01	188.16
07-Jul-93	DRY	15-Jul-01	187.91
14-Jul-93	DRY	06-Dec-01	DRY
21-Jul-93	DRY	04-Apr-02	DRY
28-Jul-93	DRY	06-Aug-02	DRY
20-Aug-93	DRY	04-Nov-02	DRY
21-Sep-93	DRY	24-Mar-03	DRY
21-Oct-93	189.19	15-Jul-04	189.52
22-Nov-93	DRY	15-Jul-05	188.28
23-Dec-93	DRY	15-Jul-06	187.98
24-Jan-94	DRY	15-Apr-07	188.29
21-Feb-94	DRY	15-Jul-07	188.47
21-Mar-94	DRY	15-Nov-07	188.00
21-Apr-94	188.06	01-Apr-22	190.16
19-May-94	188.46	01-Sep-22	188.48
23-Jun-94	DRY	01-Mar-23	191.00
21-Jul-94	DRY	01-Sep-23	188.86
26-Aug-94	DRY	07-Mar-24	190.19
20-Sep-94	DRY	01-Sep-24	188.84

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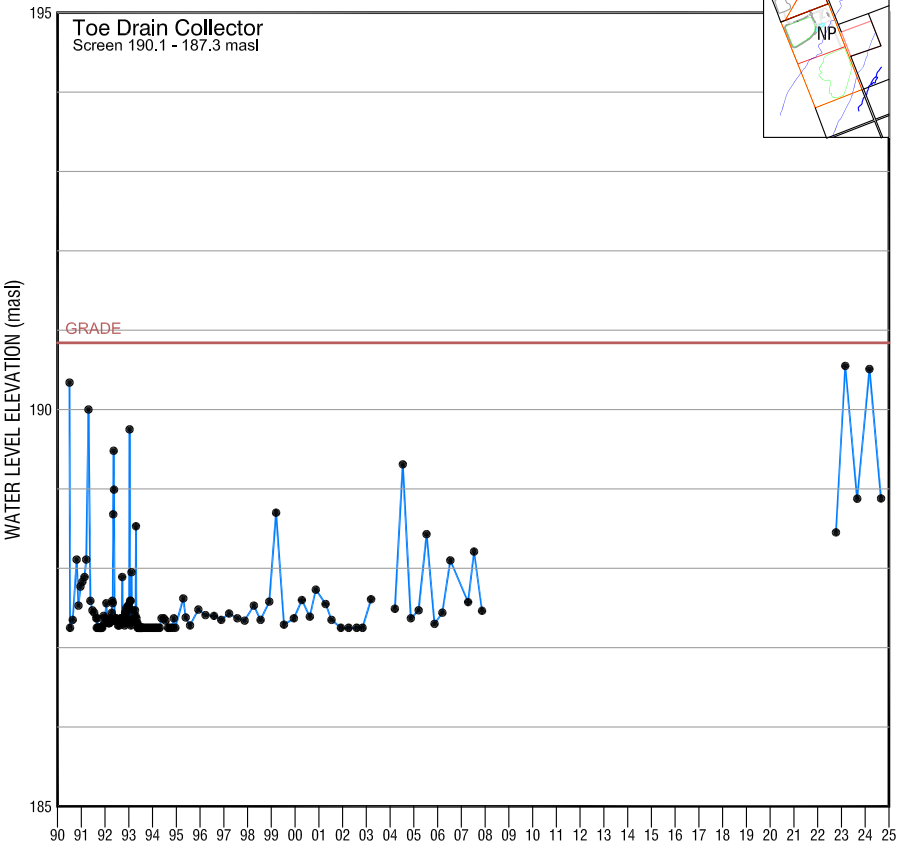

MP Elevation 191.55 masl
Grade 190.8 masl

DATE	ELEVATION	DATE	ELEVATION
30-Jan-93	187.59	26-May-95	187.38
03-Feb-93	187.28	31-Jul-95	187.28
10-Feb-93	187.95	06-Dec-95	187.48
18-Feb-93	187.47	25-Mar-96	187.41
24-Feb-93	187.34	03-Aug-96	187.40
22-Mar-93	187.34	22-Nov-96	187.35
07-Apr-93	187.47	23-Mar-97	187.43
14-Apr-93	187.40	28-Jul-97	187.37
21-Apr-93	188.53	17-Nov-97	187.34
28-Apr-93	187.37	07-Apr-98	187.53
05-May-93	187.31	20-Jul-98	187.35
12-May-93	187.31	01-Dec-98	187.58
19-May-93	DRY	15-Mar-99	188.70
26-May-93	DRY	15-Jul-99	187.29
02-Jun-93	DRY	15-Dec-99	187.37
09-Jun-93	DRY	15-Apr-00	187.60
16-Jun-93	DRY	15-Aug-00	187.39
23-Jun-93	DRY	15-Nov-00	187.73
30-Jun-93	DRY	15-Apr-01	187.55
07-Jul-93	DRY	15-Jul-01	187.35
14-Jul-93	DRY	06-Dec-01	DRY
21-Jul-93	DRY	04-Apr-02	DRY
28-Jul-93	DRY	06-Aug-02	DRY
20-Aug-93	DRY	04-Nov-02	DRY
21-Sep-93	DRY	15-Mar-03	187.61
21-Oct-93	DRY	15-Mar-04	187.49
22-Nov-93	DRY	15-Jul-04	189.31
23-Dec-93	DRY	15-Nov-04	187.37
24-Jan-94	DRY	15-Mar-05	187.47
21-Feb-94	DRY	15-Jul-05	188.43
21-Mar-94	DRY	15-Nov-05	187.30
21-Apr-94	DRY	15-Mar-06	187.44
19-May-94	187.37	15-Jul-06	188.10
23-Jun-94	187.37	15-Apr-07	187.57
21-Jul-94	187.34	15-Jul-07	188.21
26-Aug-94	DRY	15-Nov-07	187.46
20-Sep-94	DRY	09-Oct-22	188.45
25-Oct-94	DRY	01-Mar-23	190.55
24-Nov-94	187.37	01-Sep-23	188.88
16-Dec-94	DRY	07-Mar-24	190.51
18-Apr-95	187.62	01-Sep-24	188.88

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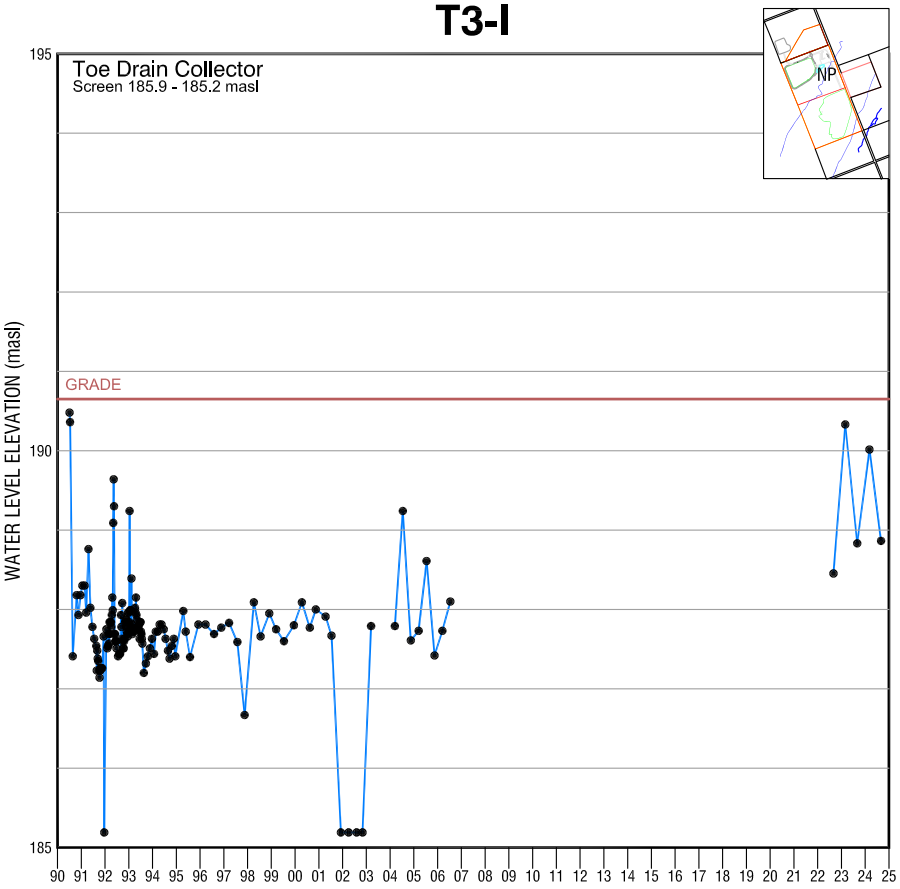

MP Elevation 191.59 masl
Grade 190.6 masl

DATE	ELEVATION	DATE	ELEVATION
13-Jan-93	189.24	24-Nov-94	187.63
20-Jan-93	187.99	16-Dec-94	187.41
28-Jan-93	187.78	18-Apr-95	187.98
30-Jan-93	187.99	26-May-95	187.72
03-Feb-93	187.75	31-Jul-95	187.40
10-Feb-93	188.39	06-Dec-95	187.81
18-Feb-93	187.81	25-Mar-96	187.81
24-Feb-93	187.69	03-Aug-96	187.69
22-Mar-93	187.72	22-Nov-96	187.77
07-Apr-93	188.02	23-Mar-97	187.83
14-Apr-93	187.96	28-Jul-97	187.59
21-Apr-93	188.15	17-Nov-97	186.67
28-Apr-93	187.93	07-Apr-98	188.09
05-May-93	187.87	20-Jul-98	187.66
12-May-93	187.78	01-Dec-98	187.95
19-May-93	187.78	15-Mar-99	187.75
26-May-93	187.75	15-Jul-99	187.60
02-Jun-93	187.75	15-Dec-99	187.80
09-Jun-93	187.81	15-Apr-00	188.09
16-Jun-93	187.63	15-Aug-00	187.77
23-Jun-93	187.84	15-Nov-00	188.00
30-Jun-93	187.84	15-Apr-01	187.91
07-Jul-93	187.72	15-Jul-01	187.67
14-Jul-93	187.69	06-Dec-01	DRY
21-Jul-93	187.63	04-Apr-02	DRY
28-Jul-93	187.57	06-Aug-02	DRY
20-Aug-93	187.20	04-Nov-02	DRY
21-Sep-93	187.32	15-Mar-03	187.79
21-Oct-93	187.41	15-Mar-04	187.79
22-Nov-93	187.51	15-Jul-04	189.24
23-Dec-93	187.63	15-Nov-04	187.61
24-Jan-94	187.44	15-Mar-05	187.73
21-Feb-94	187.72	15-Jul-05	188.61
21-Mar-94	187.72	15-Nov-05	187.42
21-Apr-94	187.81	15-Mar-06	187.73
19-May-94	187.81	15-Jul-06	188.10
23-Jun-94	187.75	01-Sep-22	188.45
21-Jul-94	187.63	01-Mar-23	190.33
26-Aug-94	187.48	01-Sep-23	188.83
20-Sep-94	187.38	07-Mar-24	190.01
25-Oct-94	187.54	01-Sep-24	188.86

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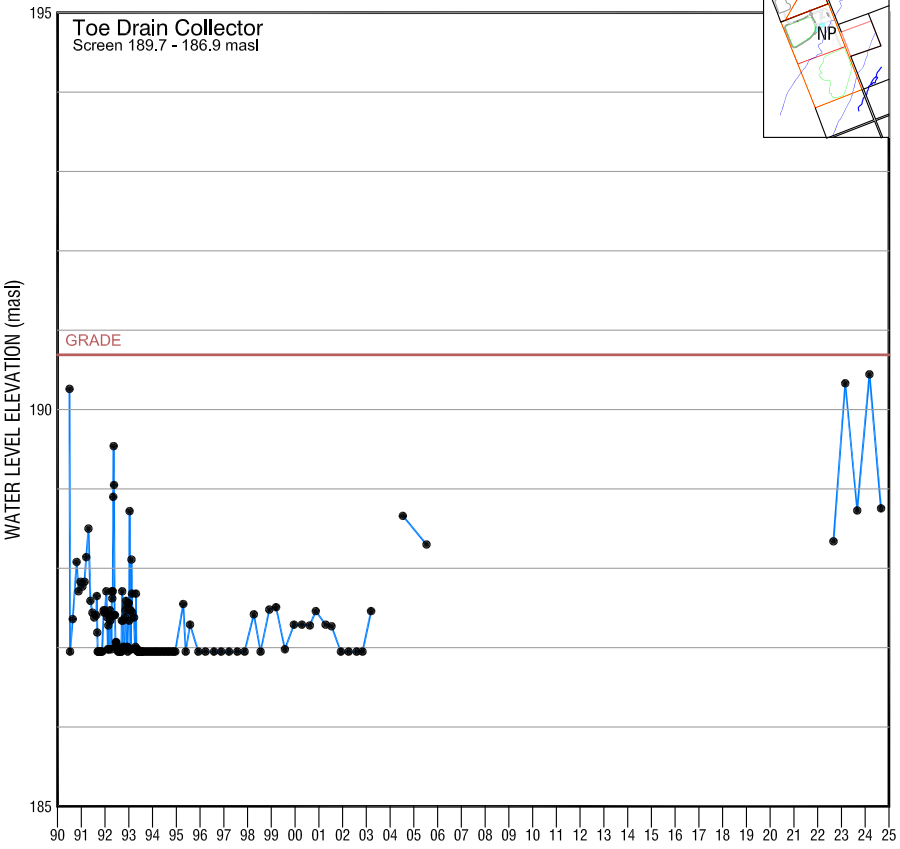

MP Elevation 191.49 masl
Grade 190.7 masl

DATE	ELEVATION	DATE	ELEVATION
02-Dec-92	187.01	19-May-94	DRY
09-Dec-92	187.01	23-Jun-94	DRY
16-Dec-92	DRY	21-Jul-94	DRY
22-Dec-92	187.56	26-Aug-94	DRY
30-Dec-92	187.56	20-Sep-94	DRY
06-Jan-93	187.34	25-Oct-94	DRY
13-Jan-93	188.72	24-Nov-94	DRY
20-Jan-93	187.47	16-Dec-94	DRY
28-Jan-93	186.98	18-Apr-95	187.55
30-Jan-93	187.47	26-May-95	DRY
03-Feb-93	186.98	31-Jul-95	187.29
10-Feb-93	188.11	06-Dec-95	DRY
18-Feb-93	187.68	25-Mar-96	DRY
24-Feb-93	187.44	03-Aug-96	DRY
22-Mar-93	187.38	22-Nov-96	DRY
07-Apr-93	186.98	23-Mar-97	DRY
14-Apr-93	187.01	28-Jul-97	DRY
21-Apr-93	187.68	17-Nov-97	DRY
28-Apr-93	186.98	07-Apr-98	187.42
05-May-93	186.98	20-Jul-98	DRY
12-May-93	186.98	01-Dec-98	187.48
19-May-93	DRY	15-Mar-99	187.51
26-May-93	DRY	29-Jul-99	186.98
02-Jun-93	DRY	15-Dec-99	187.29
09-Jun-93	DRY	15-Apr-00	187.29
16-Jun-93	DRY	15-Aug-00	187.28
23-Jun-93	DRY	15-Nov-00	187.46
30-Jun-93	DRY	15-Apr-01	187.29
07-Jul-93	DRY	15-Jul-01	187.27
14-Jul-93	DRY	06-Dec-01	DRY
21-Jul-93	DRY	04-Apr-02	DRY
28-Jul-93	DRY	06-Aug-02	DRY
20-Aug-93	DRY	04-Nov-02	DRY
21-Sep-93	DRY	15-Mar-03	187.46
21-Oct-93	DRY	15-Jul-04	188.66
22-Nov-93	DRY	15-Jul-05	188.30
23-Dec-93	DRY	01-Sep-22	188.34
24-Jan-94	DRY	01-Mar-23	190.33
21-Feb-94	DRY	01-Sep-23	188.73
21-Mar-94	DRY	07-Mar-24	190.44
21-Apr-94	DRY	01-Sep-24	188.76

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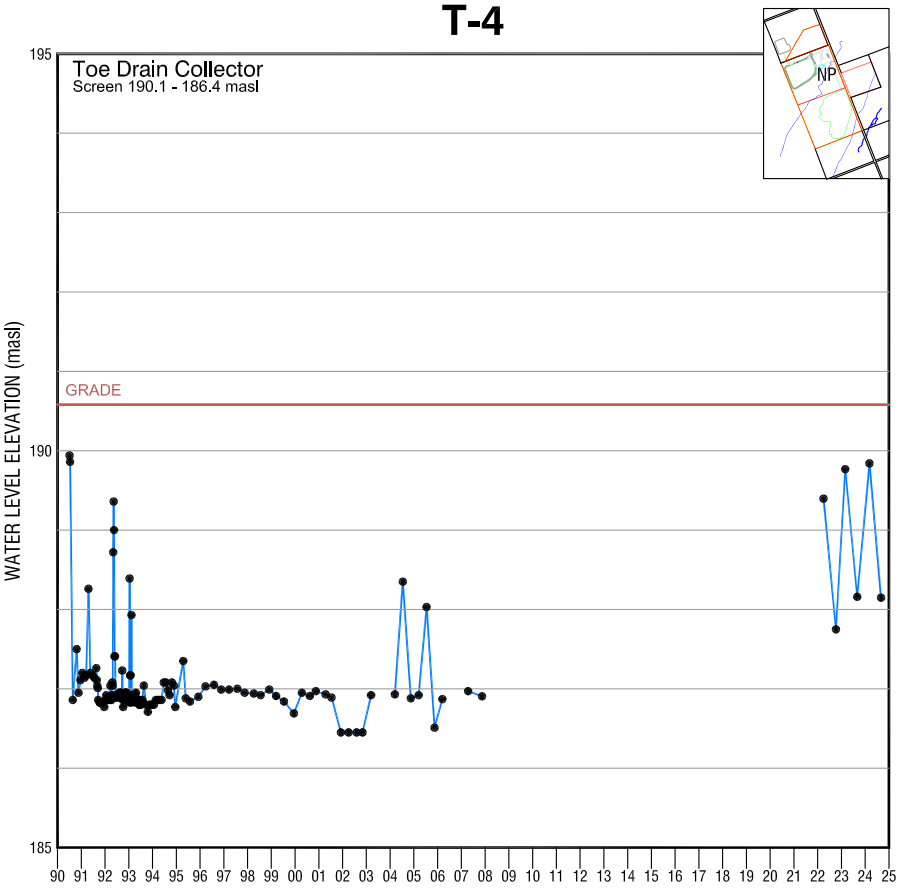

MP Elevation 191.19 masl
Grade 190.6 masl

DATE	ELEVATION	DATE	ELEVATION
28-Jan-93	186.83	18-Apr-95	187.35
30-Jan-93	187.17	26-May-95	186.88
03-Feb-93	186.83	31-Jul-95	186.84
10-Feb-93	187.93	06-Dec-95	186.90
18-Feb-93	186.92	25-Mar-96	187.03
24-Feb-93	186.86	03-Aug-96	187.05
22-Mar-93	186.83	22-Nov-96	186.99
07-Apr-93	186.92	23-Mar-97	186.99
14-Apr-93	186.89	28-Jul-97	187.00
21-Apr-93	186.95	17-Nov-97	186.95
28-Apr-93	186.83	07-Apr-98	186.94
05-May-93	186.86	20-Jul-98	186.92
12-May-93	186.83	01-Dec-98	186.99
19-May-93	186.86	15-Mar-99	186.91
26-May-93	186.83	15-Jul-99	186.84
02-Jun-93	186.83	15-Dec-99	186.69
09-Jun-93	186.80	15-Apr-00	186.95
16-Jun-93	186.80	15-Aug-00	186.91
23-Jun-93	186.86	15-Nov-00	186.97
30-Jun-93	186.83	15-Apr-01	186.93
07-Jul-93	186.80	15-Jul-01	186.89
14-Jul-93	186.83	06-Dec-01	DRY
21-Jul-93	186.83	04-Apr-02	DRY
28-Jul-93	186.86	06-Aug-02	DRY
20-Aug-93	187.04	04-Nov-02	DRY
21-Sep-93	186.80	15-Mar-03	186.92
21-Oct-93	186.71	15-Mar-04	186.93
22-Nov-93	186.80	15-Jul-04	188.35
23-Dec-93	186.80	15-Nov-04	186.88
24-Jan-94	186.80	15-Mar-05	186.92
21-Feb-94	186.86	15-Jul-05	188.03
21-Mar-94	186.86	15-Nov-05	186.51
21-Apr-94	186.86	15-Mar-06	186.87
19-May-94	186.86	15-Apr-07	186.97
23-Jun-94	187.08	15-Nov-07	186.90
21-Jul-94	187.08	01-Apr-22	189.40
26-Aug-94	186.98	09-Oct-22	187.75
20-Sep-94	186.92	01-Mar-23	189.77
25-Oct-94	187.08	01-Sep-23	188.16
24-Nov-94	187.04	07-Mar-24	189.84
16-Dec-94	186.77	01-Sep-24	188.15

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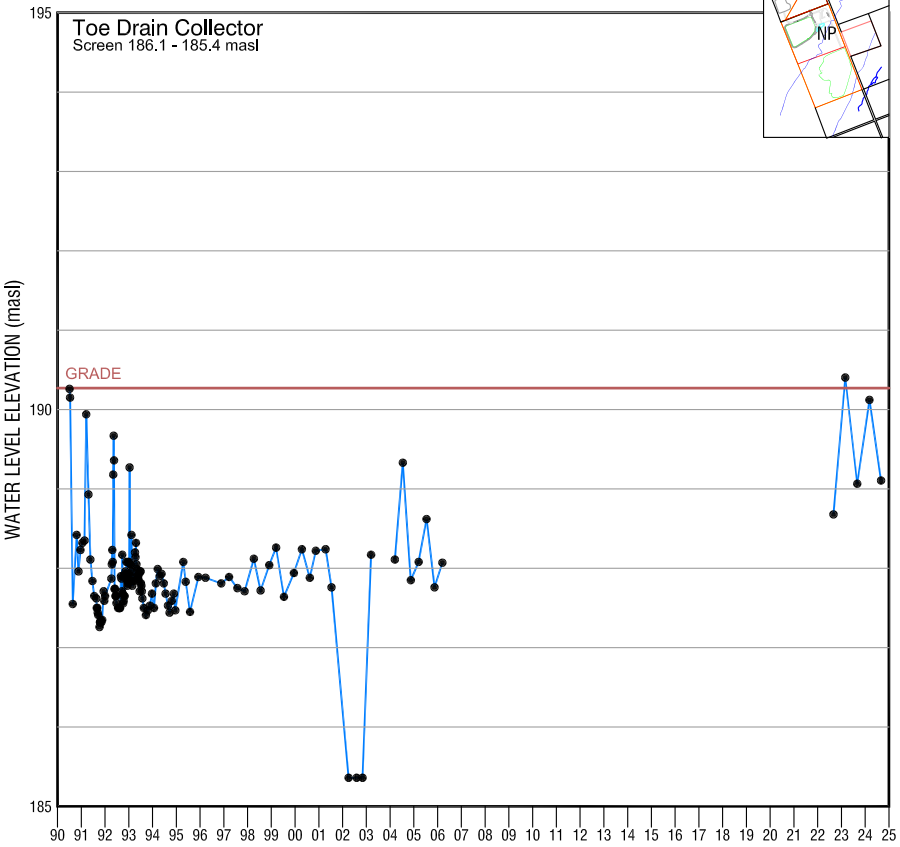
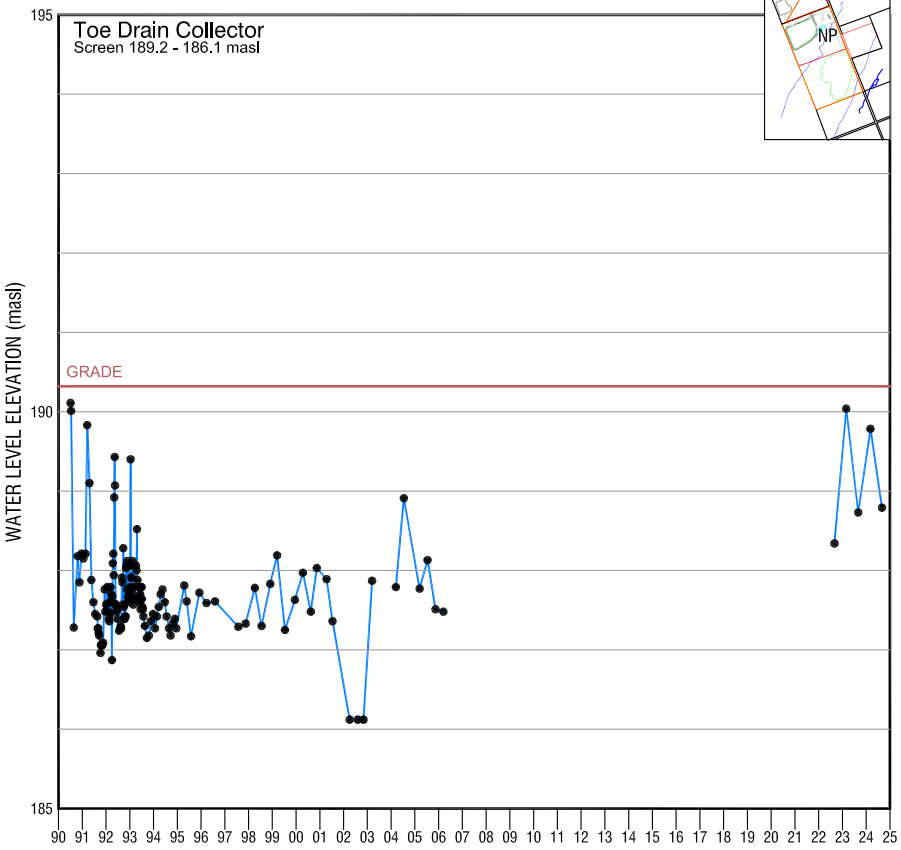


MP Elevation 191.25 masl
Grade 190.3 masl

DATE	ELEVATION	DATE	ELEVATION
22-Dec-92	188.08	26-Aug-94	187.53
30-Dec-92	188.08	20-Sep-94	187.44
06-Jan-93	187.93	25-Oct-94	187.59
13-Jan-93	189.27	24-Nov-94	187.68
20-Jan-93	188.05	16-Dec-94	187.47
28-Jan-93	187.90	18-Apr-95	188.08
30-Jan-93	188.05	26-May-95	187.83
03-Feb-93	187.84	31-Jul-95	187.45
10-Feb-93	188.42	06-Dec-95	187.89
18-Feb-93	187.96	25-Mar-96	187.88
24-Feb-93	187.78	22-Nov-96	187.81
22-Mar-93	187.84	23-Mar-97	187.89
07-Apr-93	188.20	28-Jul-97	187.75
14-Apr-93	188.14	17-Nov-97	187.71
21-Apr-93	188.32	07-Apr-98	188.12
28-Apr-93	188.05	20-Jul-98	187.72
05-May-93	187.99	01-Dec-98	188.04
12-May-93	187.90	15-Mar-99	188.26
19-May-93	187.87	15-Jul-99	187.64
26-May-93	187.87	15-Dec-99	187.94
02-Jun-93	187.84	15-Apr-00	188.24
09-Jun-93	187.93	15-Aug-00	187.88
16-Jun-93	187.71	15-Nov-00	188.22
23-Jun-93	187.96	15-Apr-01	188.24
30-Jun-93	187.96	15-Jul-01	187.76
07-Jul-93	187.81	04-Apr-02	DRY
14-Jul-93	187.78	06-Aug-02	DRY
21-Jul-93	187.71	04-Nov-02	DRY
28-Jul-93	187.62	15-Mar-03	188.17
20-Aug-93	187.50	15-Mar-04	188.11
21-Sep-93	187.41	15-Jul-04	189.33
21-Oct-93	187.47	15-Nov-04	187.85
22-Nov-93	187.53	15-Mar-05	188.08
23-Dec-93	187.68	15-Jul-05	188.62
24-Jan-94	187.50	15-Nov-05	187.76
21-Feb-94	187.81	15-Mar-06	188.07
21-Mar-94	187.99	01-Sep-22	188.68
21-Apr-94	187.90	01-Mar-23	190.40
19-May-94	187.93	01-Sep-23	189.07
23-Jun-94	187.81	07-Mar-24	190.12
21-Jul-94	187.68	01-Sep-24	189.11

T5-II



MP Elevation 191.25 masl
Grade 190.3 masl

DATE	ELEVATION	DATE	ELEVATION
09-Dec-92	187.60	23-Jun-94	187.60
16-Dec-92	187.64	21-Jul-94	187.42
22-Dec-92	188.06	26-Aug-94	187.27
30-Dec-92	188.06	20-Sep-94	187.18
06-Jan-93	187.79	25-Oct-94	187.33
13-Jan-93	189.40	24-Nov-94	187.39
20-Jan-93	187.91	16-Dec-94	187.27
28-Jan-93	187.73	18-Apr-95	187.81
30-Jan-93	187.91	26-May-95	187.61
03-Feb-93	187.64	31-Jul-95	187.17
10-Feb-93	188.12	06-Dec-95	187.72
18-Feb-93	187.79	25-Mar-96	187.59
24-Feb-93	187.57	03-Aug-96	187.61
22-Mar-93	187.64	28-Jul-97	187.29
07-Apr-93	188.06	17-Nov-97	187.33
14-Apr-93	188.00	07-Apr-98	187.78
21-Apr-93	188.52	20-Jul-98	187.30
28-Apr-93	187.88	01-Dec-98	187.83
05-May-93	187.79	15-Mar-99	188.19
12-May-93	187.67	15-Jul-99	187.25
19-May-93	187.64	15-Dec-99	187.63
26-May-93	187.64	15-Apr-00	187.97
02-Jun-93	187.60	15-Aug-00	187.48
09-Jun-93	187.70	15-Nov-00	188.03
16-Jun-93	187.51	15-Apr-01	187.89
23-Jun-93	187.79	15-Jul-01	187.36
30-Jun-93	187.79	04-Apr-02	DRY
07-Jul-93	187.64	06-Aug-02	DRY
14-Jul-93	187.54	04-Nov-02	DRY
21-Jul-93	187.51	15-Mar-03	187.87
28-Jul-93	187.42	15-Mar-04	187.79
20-Aug-93	187.30	15-Jul-04	188.91
21-Sep-93	187.15	15-Mar-05	187.77
21-Oct-93	187.18	15-Jul-05	188.13
22-Nov-93	187.36	15-Nov-05	187.51
23-Dec-93	187.45	15-Mar-06	187.48
24-Jan-94	187.27	01-Sep-22	188.34
21-Feb-94	187.42	01-Mar-23	190.04
21-Mar-94	187.54	01-Sep-23	188.73
21-Apr-94	187.70	07-Mar-24	189.78
19-May-94	187.76	01-Sep-24	188.79

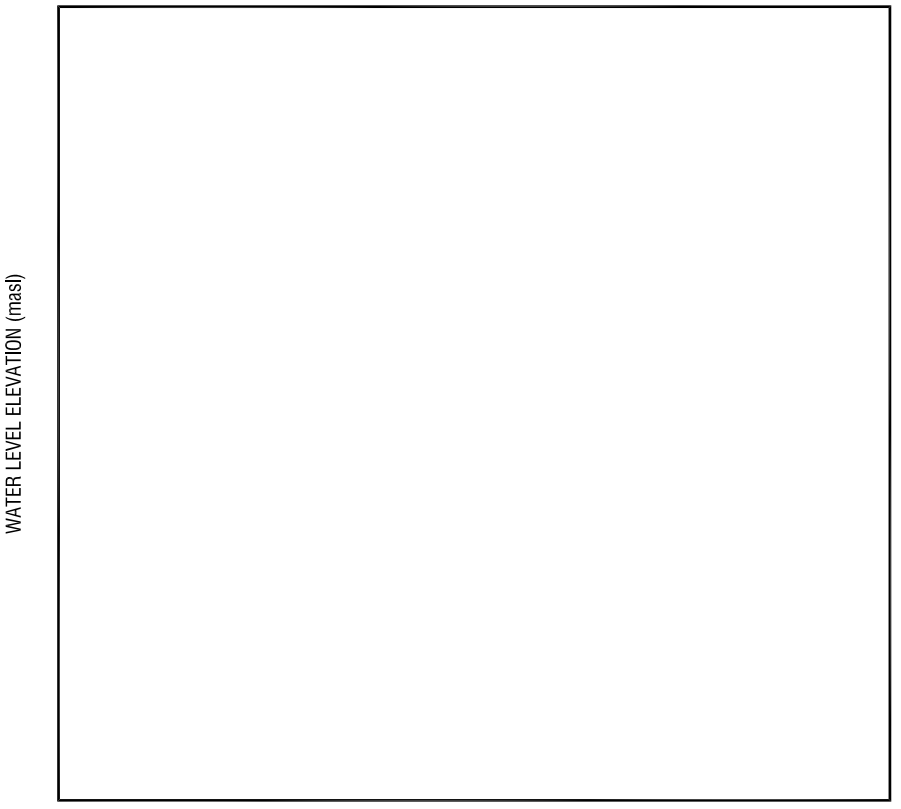


Figure E.1
Water Level Hydrograph: SOUTHEAST - BH92 vs Cell 2 Liner

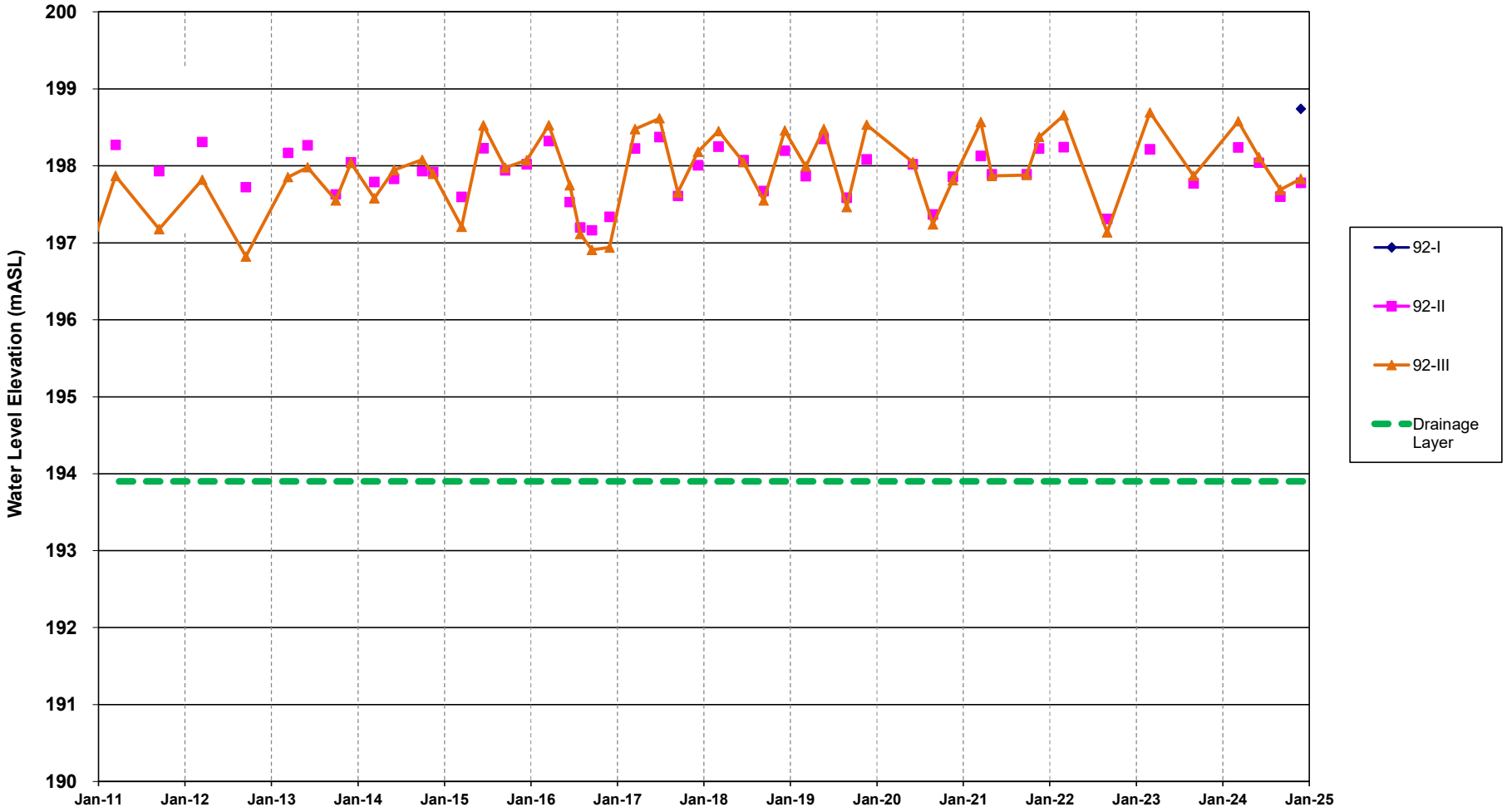


Figure E.2
Water Level Hydrograph: NORTH - BH108 vs Cell 2 Liner

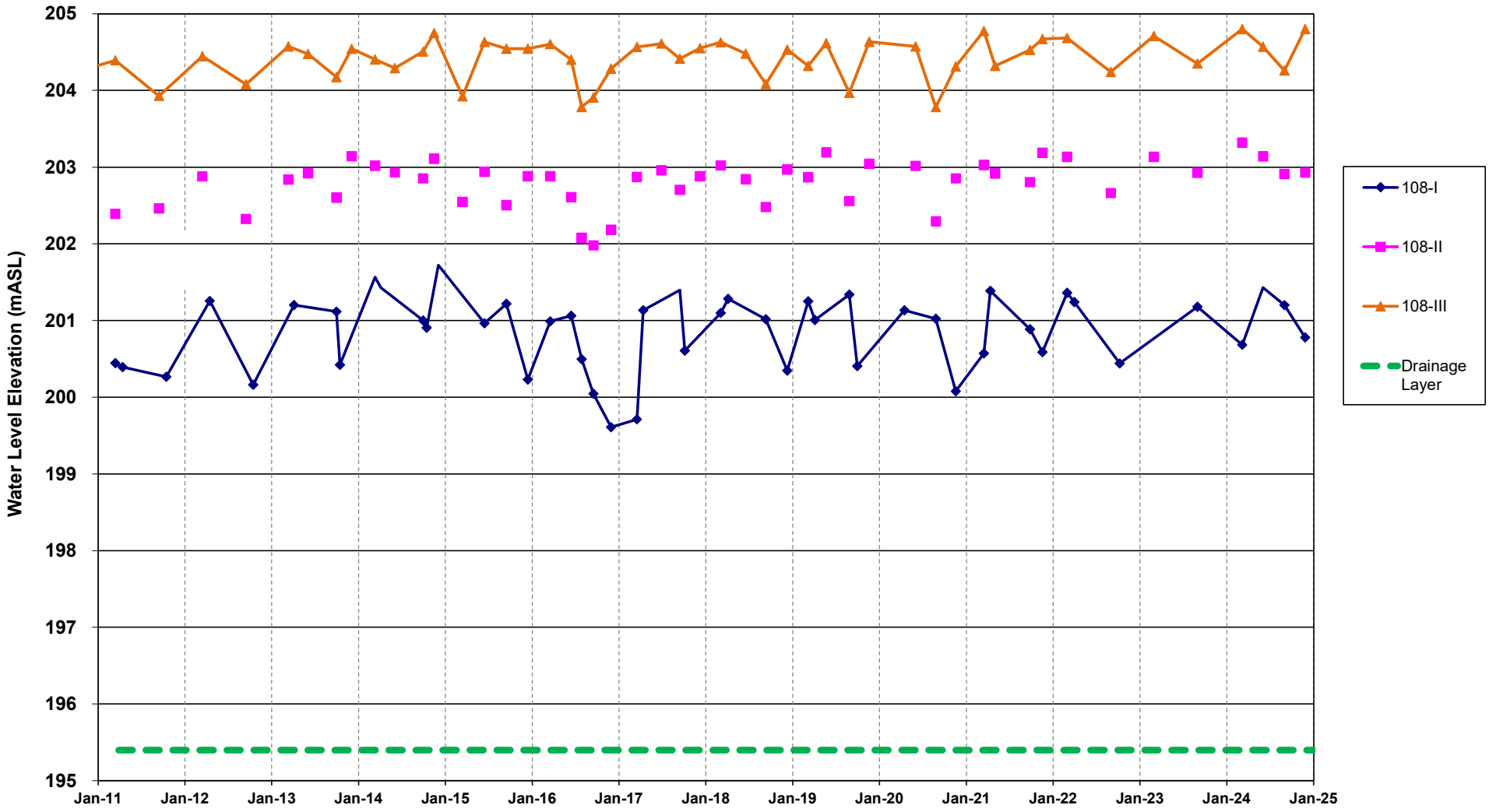


Figure E.3
Water Level Hydrograph: SOUTH - BH109 vs Cell 2 Liner

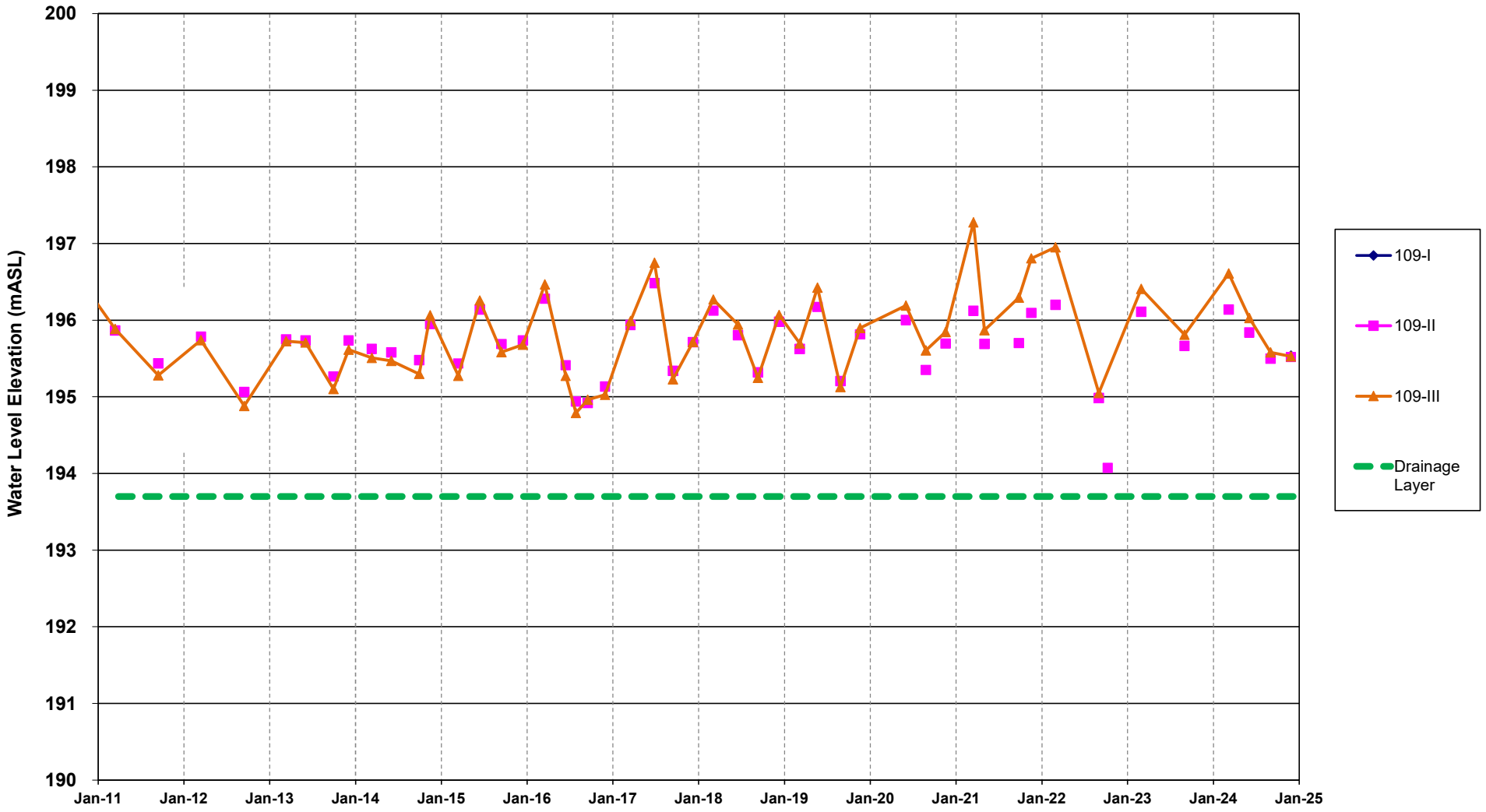


Figure E.4
Water Level Hydrograph: EAST - BH110 vs Cell 2 Liner

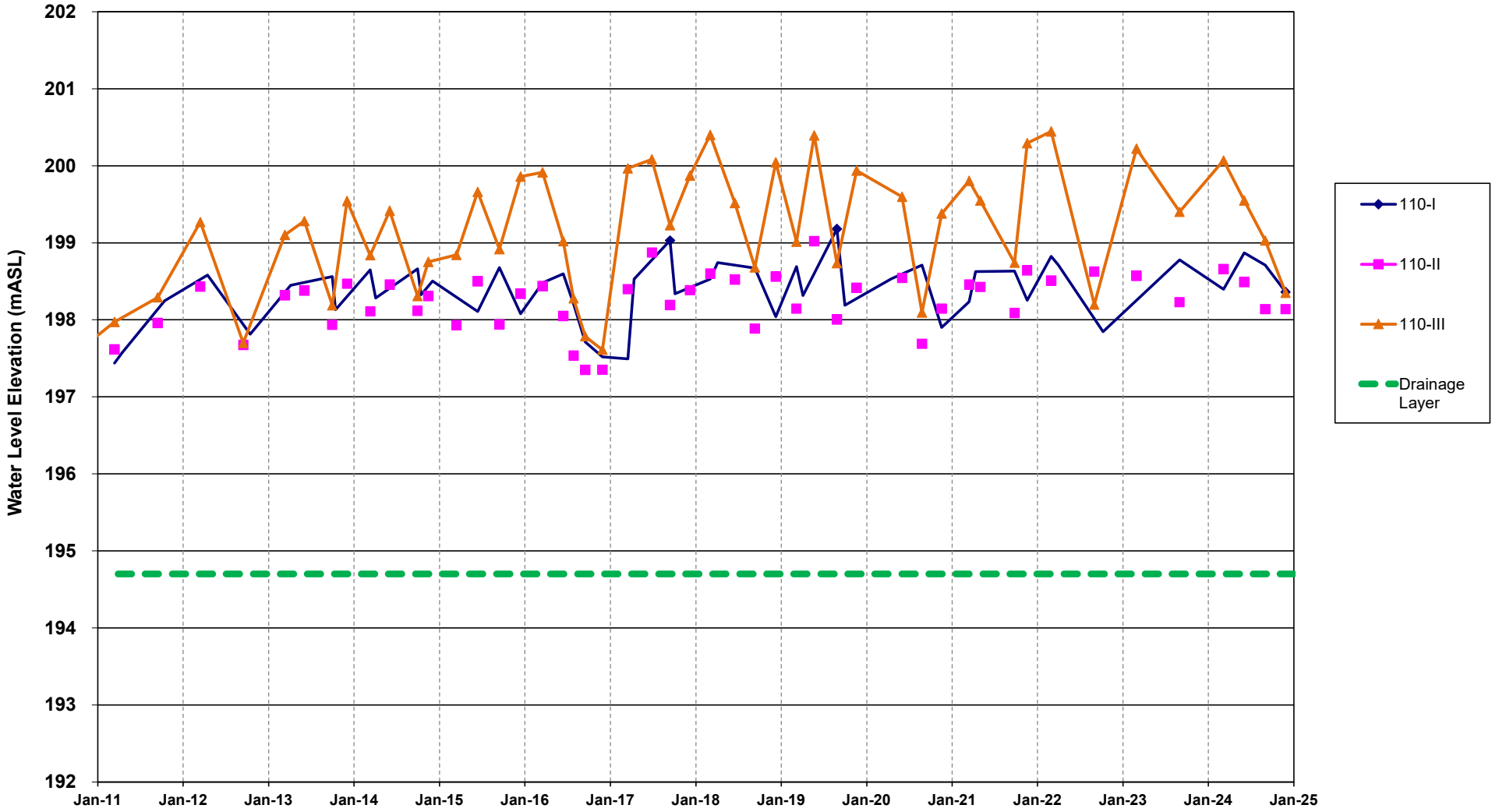


Figure E.5
Water Level Hydrograph: SOUTH - BH111 vs Cell 3 Liner

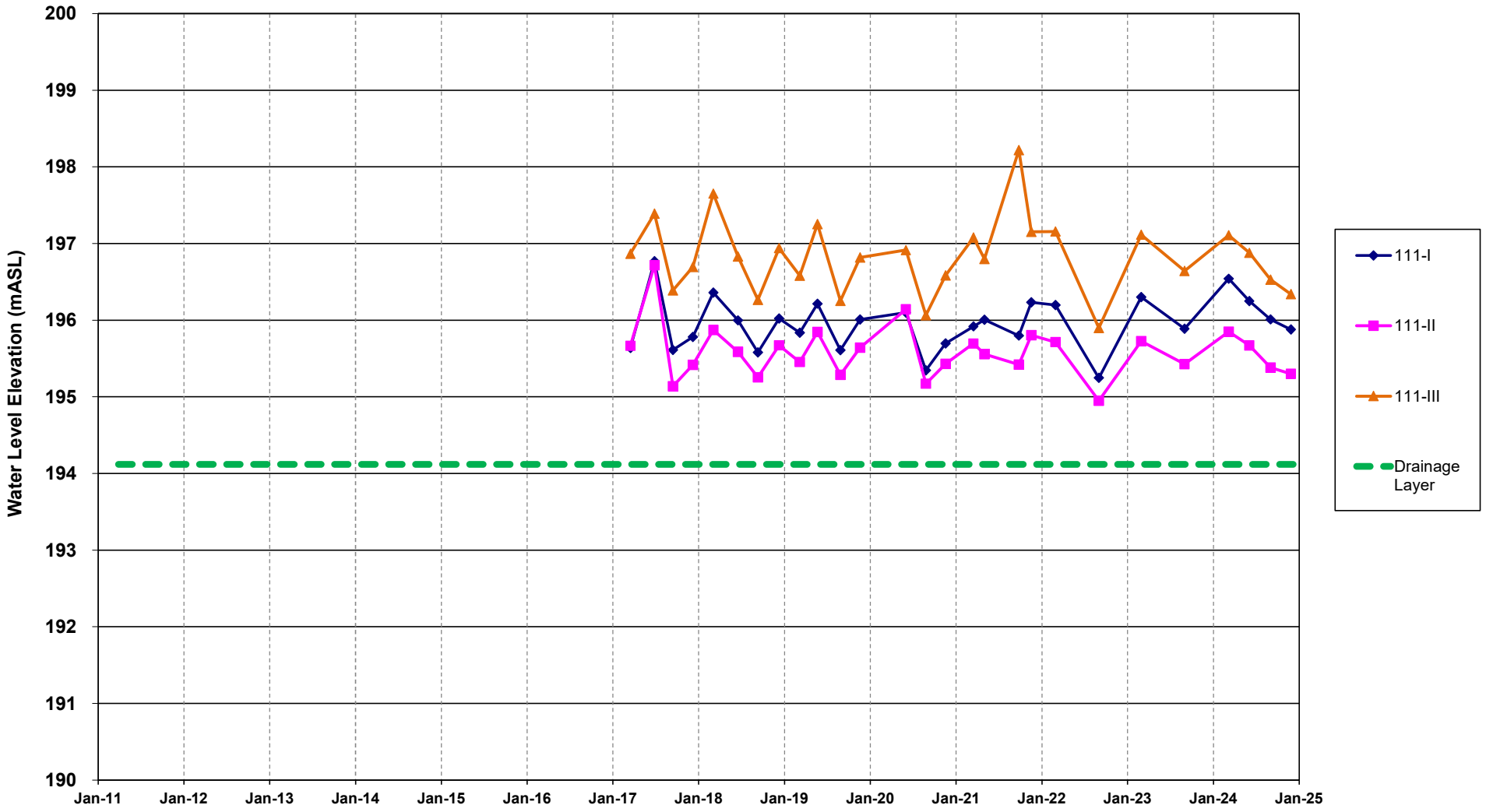
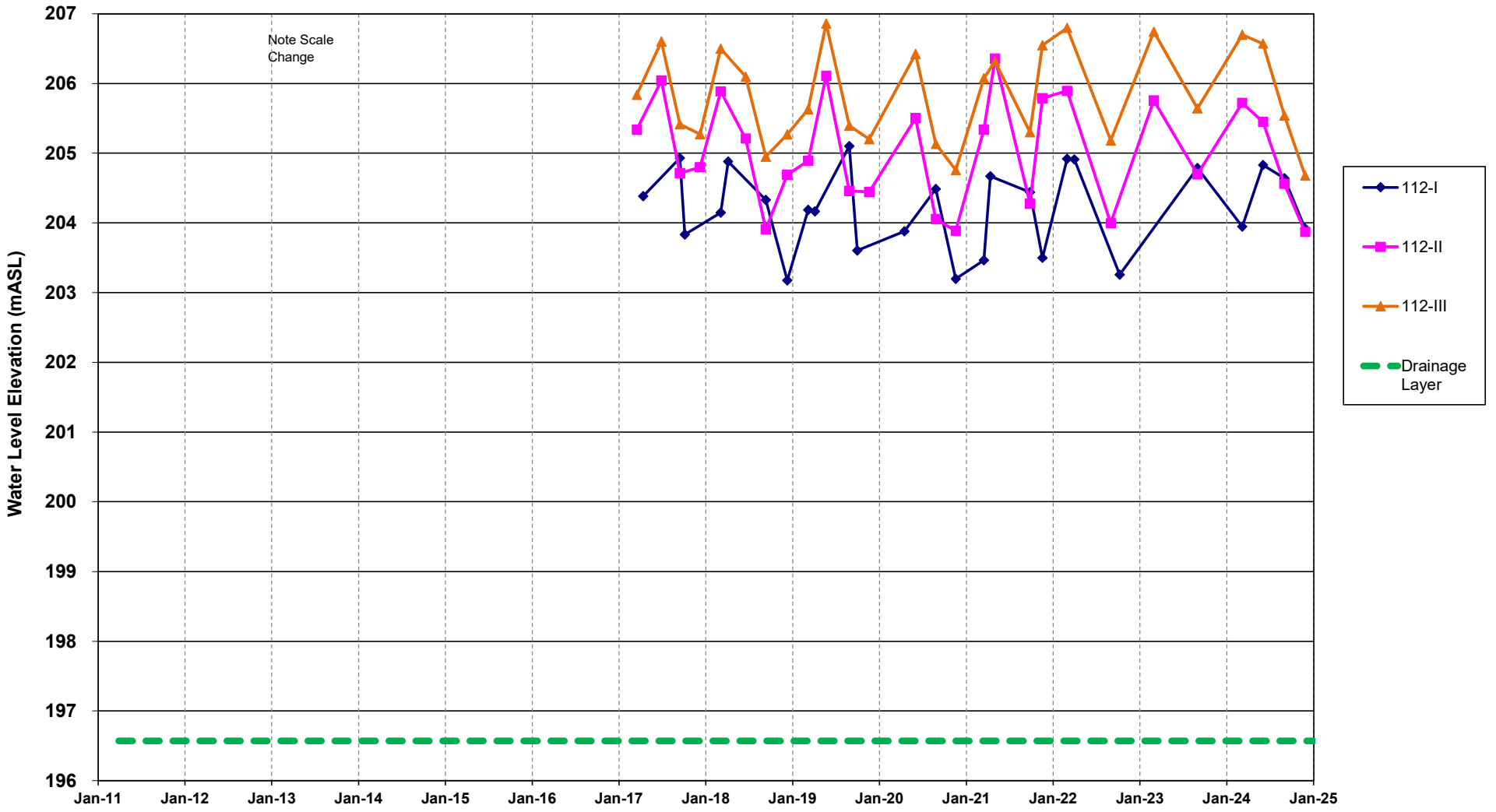


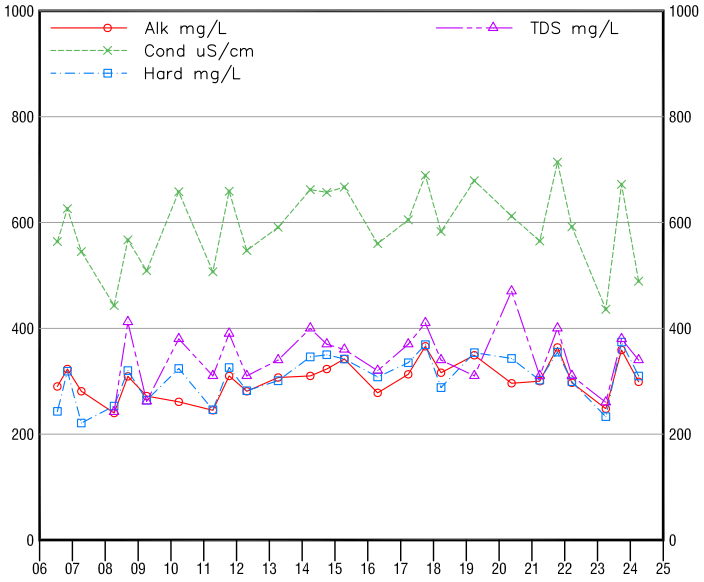
Figure E.6
Water Level Hydrograph: NORTH - BH112 vs Cell 3 Liner

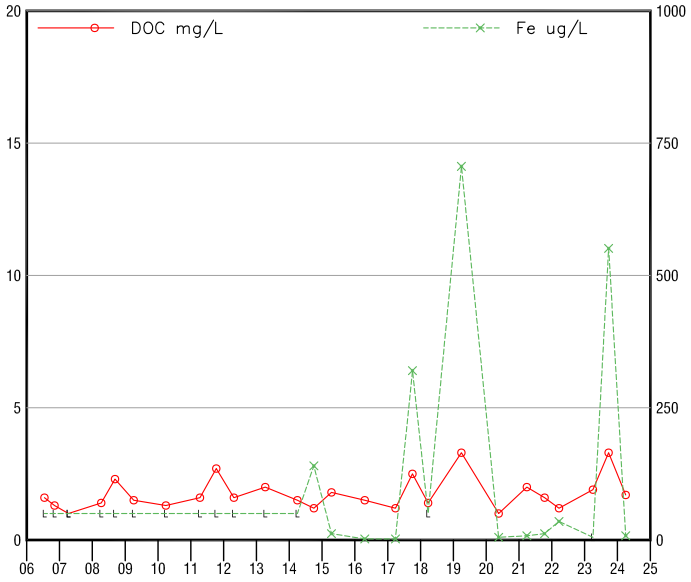


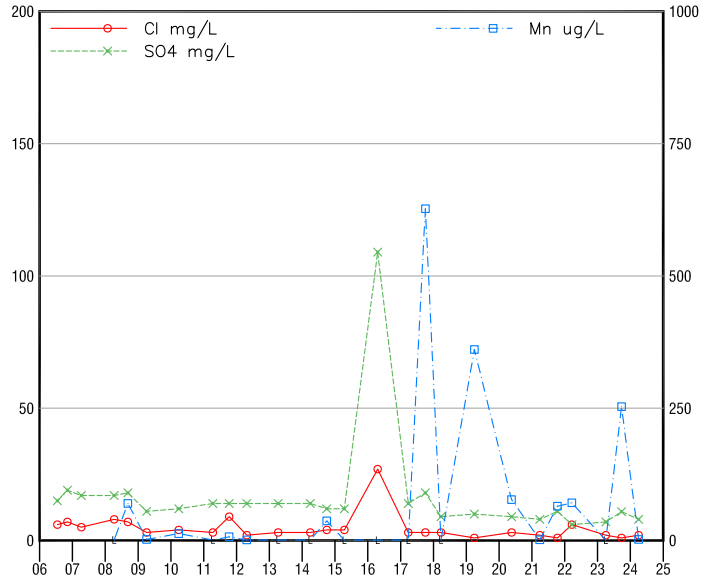
APPENDIX F

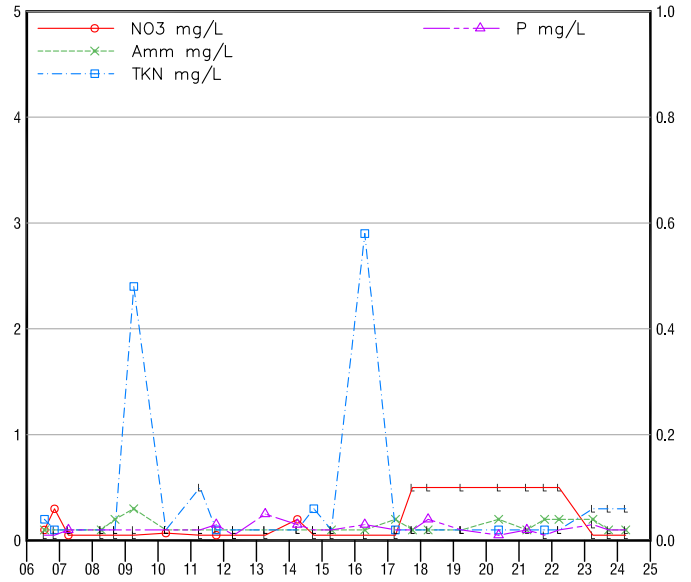
Groundwater Quality Data

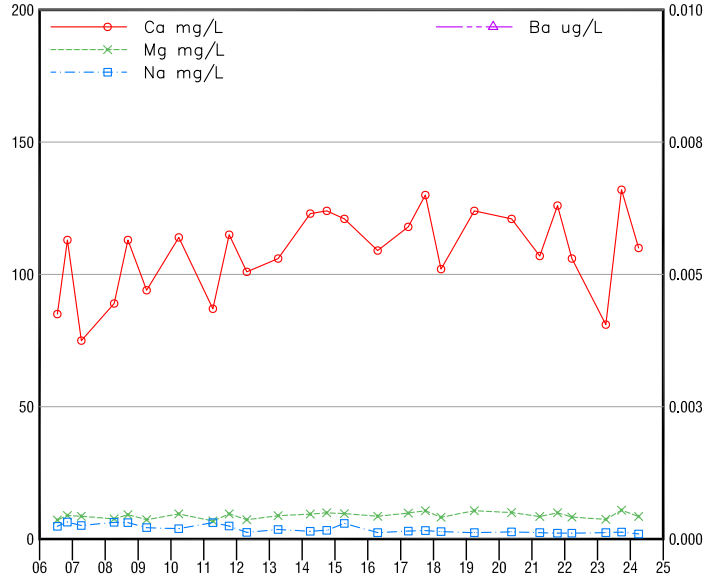
South Fill Area - Overburden Monitors



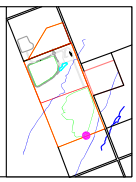








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-5-VI

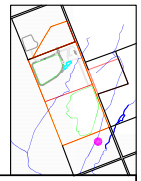
Shallow Overburden

CA008825 24 Mar 25	wsp	F324001

BH-5-VI

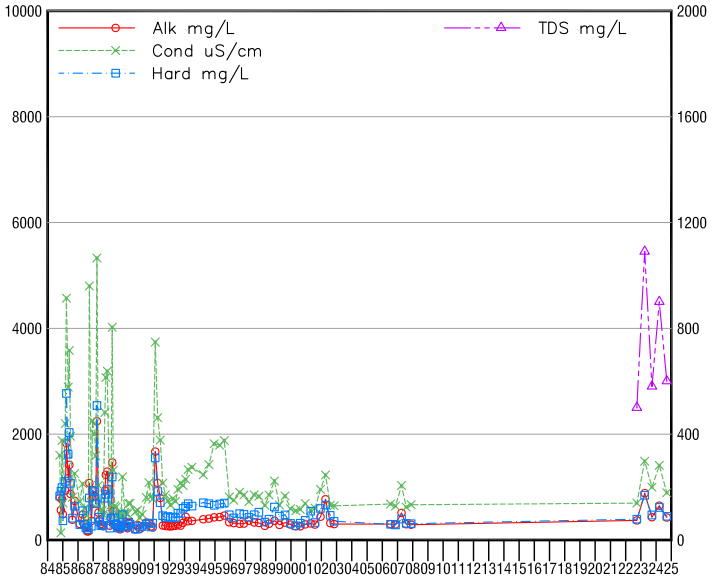
Shallow Overburden

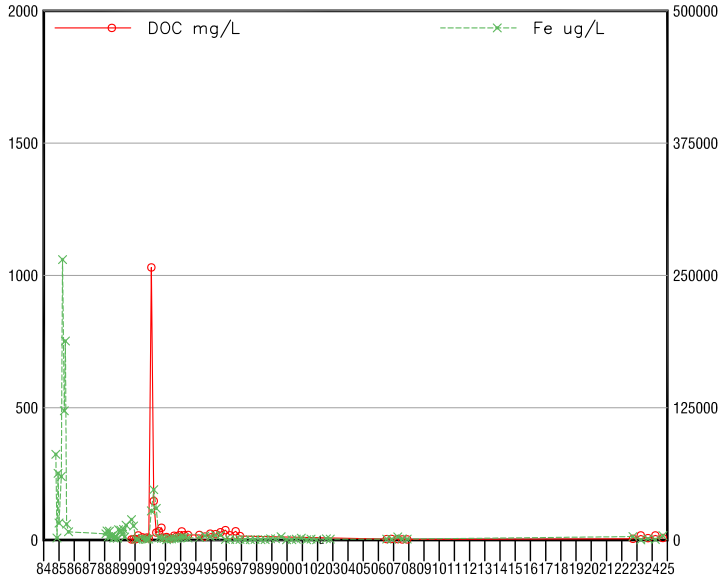
Monitoring Well

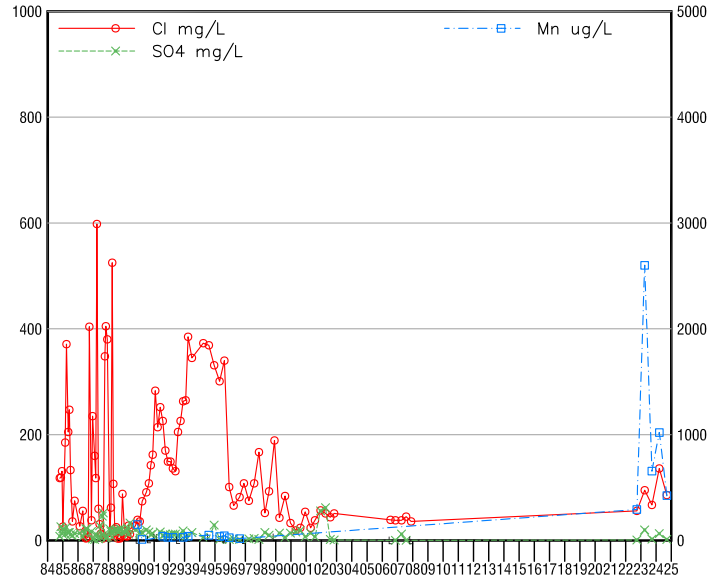


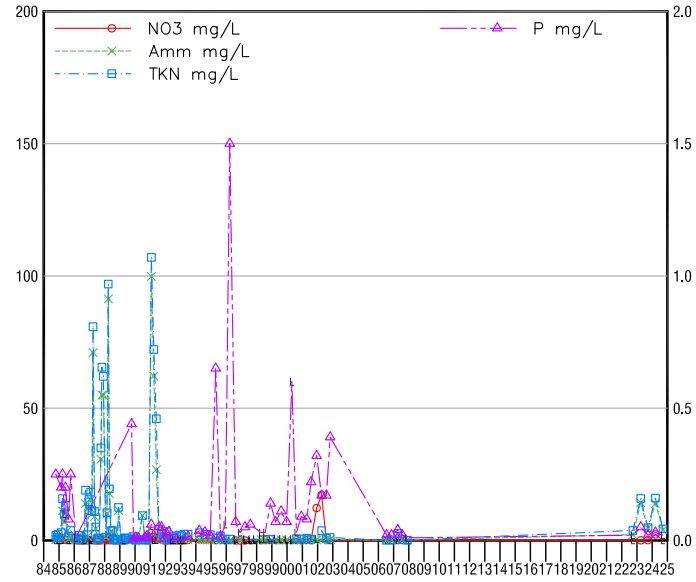
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
18-Jul-06	37166	290	564	243		6	15	85	7.2	4.8	0.76	1.6	0.1	<0.05	0.1		-10.4
06-Nov-06	39349	323	626	319		7	19	113	8.9	6.4	1.17	1.3	0.3	<0.05	<0.1		-2.7
10-Apr-07	42239	281	545	221		5	17	75	8.6	5.1	<0.5	<1	0.05	<0.05	<0.1		-13.6
09-Apr-08	48636	240	443	253		8	17	89	7.6	6.3	<0.5	1.4	<0.05	<0.1	0.1	242	-0.2
09-Sep-08	51170	309	567	320	7.5	7	18	113	9.2	6.2	0.91	2.3	<0.05	<0.1	0.2	412	-0.2
06-Apr-09	54903	272	509	264	7.5	3	11	94	7.3	4.3	<0.5	1.5	<0.05	<0.1	0.3	262	-2.4
29-Mar-10	61622	261	658	324	7.2	4	12	114	9.5	3.9	0.67	1.3	0.07	<0.05	<0.1	380	8.8
13-Apr-11	67481	245	507	246	7.8	3	14	87	6.8	6.2	<0.5	1.6	<0.05	<0.05	<0.1	310	-0.9
11-Oct-11	70807	310	659	326	7.5	9	14	115	9.5	4.9	1.19	2.7	0.05	<0.05	<0.1	390	0.0
24-Apr-12	74165	281	547	282	7.4	2	14	101	7.3	2.5	0.61	1.6	<0.05	<0.05	<0.1	310	-1.8
08-Apr-13	81447	307	591	301	7.4	3	14	106	8.8	3.6	0.24	2	<0.05	<0.05	<0.1	340	-2.7
01-Apr-14	88809	310	662	346	7.5	3	14	123	9.4	2.9	0.6	1.5	0.2	<0.05	<0.1	400	3.5
01-Oct-14	92763	323	657	350	7.4	4	12	124	9.9	3.3	1.1	1.2	<0.05	<0.05	<0.1	370	2.7
15-Apr-15	96365	342	667	342	7.4	4	12	121	9.6	5.9	<0.5	1.8	<0.05	<0.05	0.1	360	-0.7
20-Apr-16	103802	278	560	308	7.6	27	109	109	8.6	2.4	<0.5	1.5	<0.05	<0.05	0.1	320	-15.7
27-Mar-17	111811	313	605	335	7.3	3	14	118	9.8	3.0	<0.5	1.2	<0.05	<0.05	0.2	370	1.5
03-Oct-17	116861	366	689	369	7.5	3	18	130	10.7	3.2	1.1	2.5	<0.5	<0.5	0.1	410	-1.3
26-Mar-18	121021	316	583	288	7.3	3	9	102	8.2	2.8	<0.5	1.4	<0.5	<0.5	0.1	340	-5.5
01-Apr-19	130707	349	679	354	7.4	1	10	124	10.7	2.4	0.5	3.3	<0.5	<0.5	<0.1	310	0.0
19-May-20	141000	296	612	343	7.4	3	9	121	10.0	2.7	0.6	1	<0.5	<0.5	0.2	470	6.2
29-Mar-21	148824	300	565	302	7.3	2	8	107	8.5	2.4	<0.5	2	<0.5	<0.5	0.1	310	-0.6
12-Oct-21	154580	364	714	355	7.2	1	11	126	9.9	2.2	0.6	1.6	<0.5	<0.5	0.2	400	-2.1
21-Mar-22	159050	297	592	299	7.4	6	6	106	8.3	2.2	<0.5	1.2	<0.5	<0.5	0.2	310	-1.2
03-Apr-23	169328	248	436	233	7.4	2	7	81	7.4	2.4	<0.5	1.9	<0.05	<0.05	0.2	260	-3.6
25-Sep-23	2023A023	359	672	374	7.3	1	10.9	132	10.9	2.6	1	3.3	<0.05	<0.05	0.1	380	3.1
02-Apr-24	179744	299	489	310	7.0	2	8	110	8.5	1.9	<0.5	1.7	<0.05	<0.05	0.1	340	2.5
TOTAL SAMPLES		26	26	26	22	26	26	26	26	26	26	26	26	26	26	23	
AVERAGE 2024																	

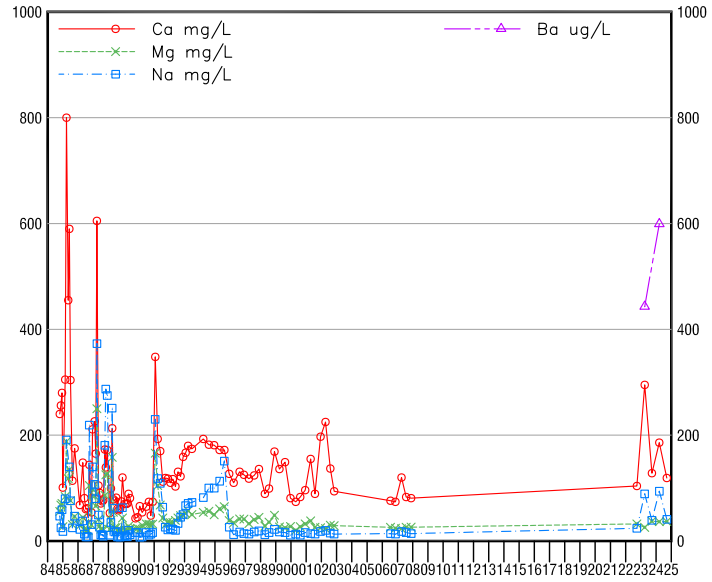
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



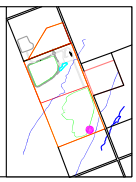








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-17B

Shallow Overburden

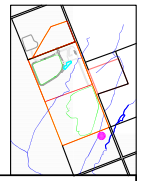
Screen 190.2 - 186.6 masl

CA008825 24 Mar 25	wsp	F324002

BH-17B

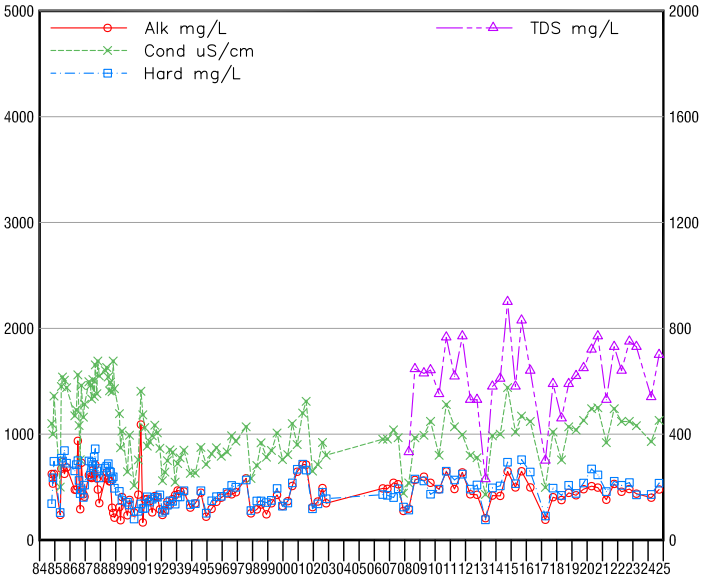
Shallow Overburden

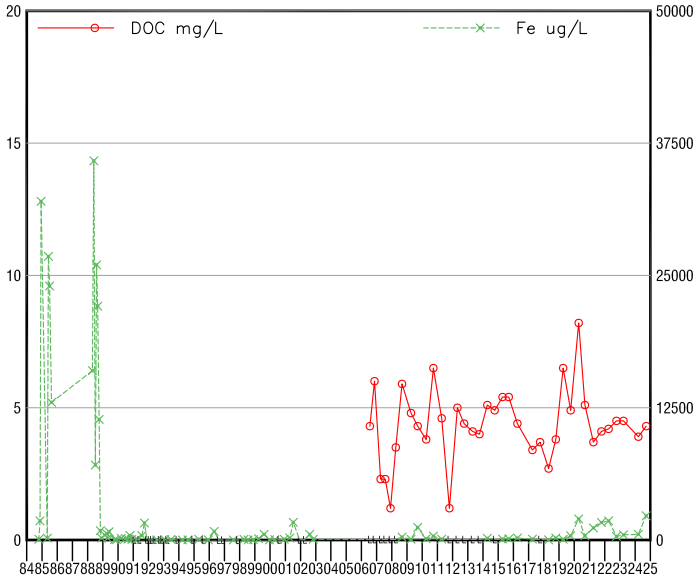
Monitoring Well
Screen 190.2 - 186.6 masl

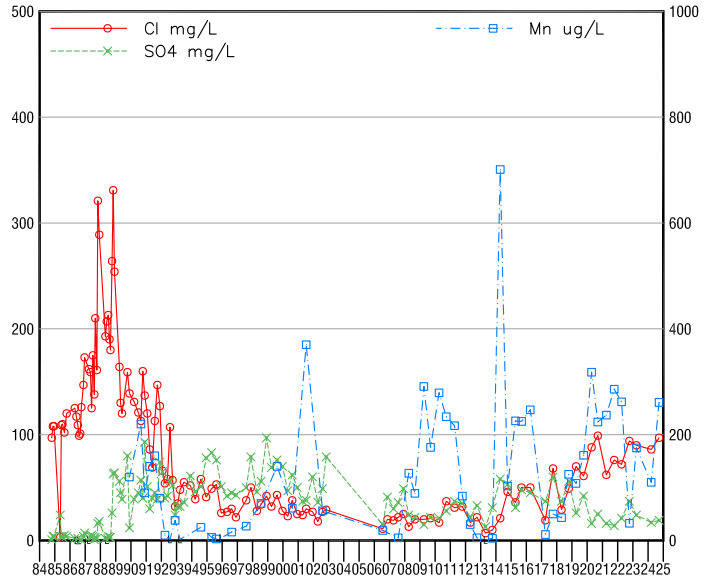


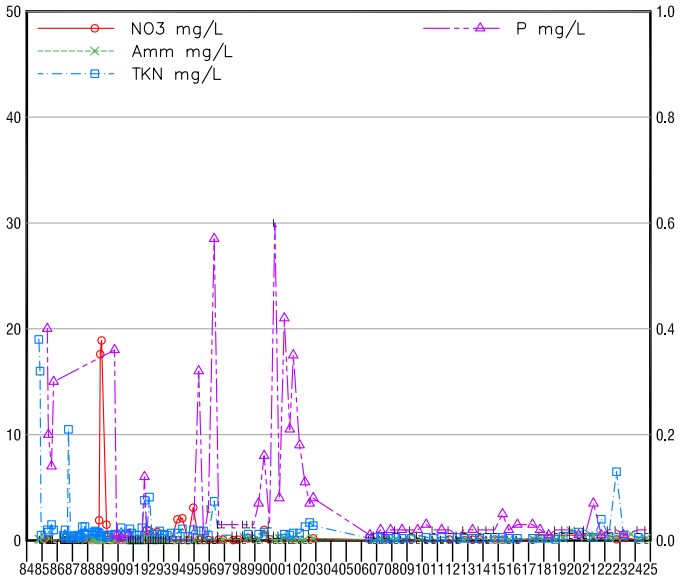
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
16-Aug-96	HGW0417	305	901	499	7.7	82	2	131	41.7	17	2.2	**33**	0.010	0.046	<0.1		12.1
27-Nov-96	HGW0418	309	850	482	7.4	108	<0.5	125	41.3	14	3.64	**15**	0.032	0.025	0.1		5.8
27-Mar-97	HGW0419	364	724	430	7.6	75	3	118	32.8	13	2.37		0.017	0.026	<0.1		-1.2
01-Aug-97	HGW0420	332	853	476	7.8	108	4	124	40.5	17	2.54		<0.005	<0.006	<0.1		2.8
21-Nov-97	HGW0421	323	827	524	7.4	167	2	136	44.8	19	2.91		<0.05	<0.06	<0.1		0.7
13-Apr-98	HGW0422	268	654	339	7.7	52	15	89	28.2	12	2.42		<0.05	<0.06	0.3		1.8
23-Jul-98	HGW0423	305	851	393	7.9	93	10	99	35.6	16	2.9		<0.05	<0.06	0.1		-1.7
01-Dec-98	HGW0424	364	1115	622	7.1	189	<6	169	48.6	22	4.56		<0.5	<0.6	<0.1		3.6
30-Mar-99	HGW0425	284	659	449	8.0	43	14	136	26.6	17	3.18		<0.05	<0.06	0.2		15.7
12-Aug-99	HGW0426	329	833	475	8.0	84	6	149	25.0	16	3.48		<0.05	<0.06	0.2		6.8
20-Dec-99	HGW0427	290	591	315	7.3	33	14	81	27.5	11	3.33		<0.05	<0.06	0.2		-1.1
25-Apr-00	HGW0428	259	553	268	7.7	19	16	74	20.3	13	2.98		<0.05	<0.06	<0.1		-0.5
11-Aug-00	HGW0429	258	578	318	8.0	24	19	83	27.0	11	2.94		<0.05	<0.06	0.2		5.5
08-Dec-00	HGW0430	294	690	372	7.7	54	7	96	32.3	16	3.81		<0.05	<0.06	0.2		4.9
18-Apr-01	HGW0431	312	567	544	7.8	24	14	155	38.0	14	3.88		0.2	<0.06	0.1		23.2
30-Jul-01	HGW0432	292	604	328	7.6	38	7	89	25.8	13	2.89		<0.05	<0.06	0.5		1.5
10-Dec-01	HGW0433	438	955	595	7.8	57	56	197	25.1	18	3.66		**12.3**	<0.06	0.2		1.6
10-Apr-02	HGW0434	768	1230	659	7.7	51	62	225	23.6	20	3.88		**17.2**	0.06	0.3		-15.3
01-Aug-02	HGW0435	319	657	466	7.9	44	2	137	30.0	15	3.27		<0.05	<0.06	0.7		13.9
01-Nov-02	HGW0436	301	645	354	7.6	51	1	94	29.1	13	2.56		<0.05	<0.06	0.4		1.9
19-Jul-06	37168	299	679	296		39	<0.3	76	25.8	14	2.37	3.5	<0.05	<0.05	0.1		-3.4
13-Nov-06	39472	293	641	284		38	0.4	74	24.0	13	2.32	4.1	<0.05	<0.05	0.2		-4.3
10-Apr-07	42235	511	1030	395		38	12	120	23.2	18	5.23	3.1	<0.05	<0.05	2.4		-11.9
30-Jul-07	44200	296	622	315		45	0.3	83	26.0	16	2.55	2.1	<0.05	<0.05	0.3		-0.5
26-Nov-07	46385	289	666	308		36	<0.3	81	26.1	14	2.59	1.9	<0.05	<0.1	0.2		0.7
27-Sep-22	164659	369	696	393	7.2	56	0.9	104	32.3	24	4.7	4.6	<0.05	<0.05	2.2	500	1.7
03-Apr-23	169332	885	1490	843	6.7	95	20	295	25.8	89	21.2	**17**	0.07	0.07	14.3	1090	3.5
25-Sep-23	2023A019	430	1000	473	7.2	67	2.5	128	37.3	39.2	9.5	**7**	0.15	<0.05	4.6	580	6.9
20-Mar-24	179413	648	1410	615	6.9	136	13	186	36.5	94	22.1	**17**	2.3	0.12	14	900	3.5
17-Sep-24	184550	423	892	448	7.0	86	2	119	36.7	41	8.1	**7.4**	<0.05	<0.05	4	600	2.9
TOTAL SAMPLES		107	107	107	102	107	104	107	107	106	107	42	106	106	107	5	
AVERAGE 2024		536	1151	532	7.0	111	8	153	36.6	68	15.1	12	1.2	0.06	9	750	

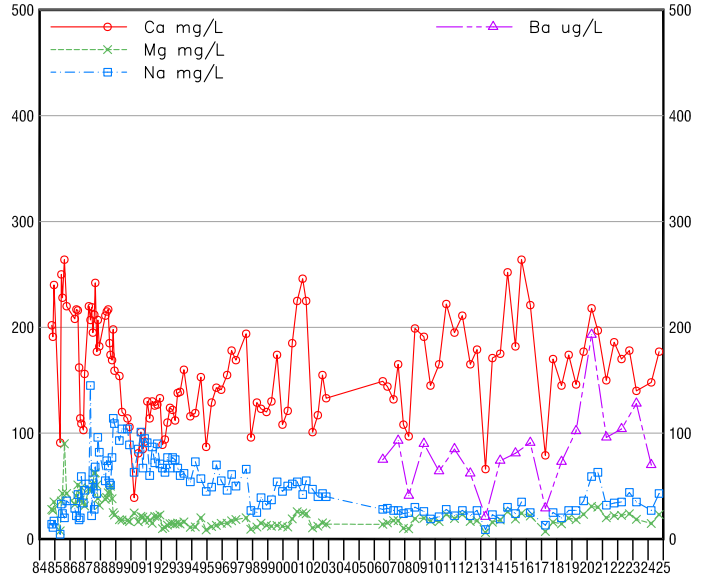
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









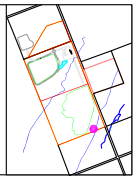


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-18B

Shallow Overburden

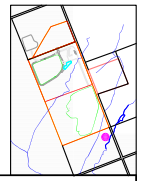
Screen 188.6 - 186.3 masl

CA008825 24 Mar 25	wsp	F324003

BH-18B

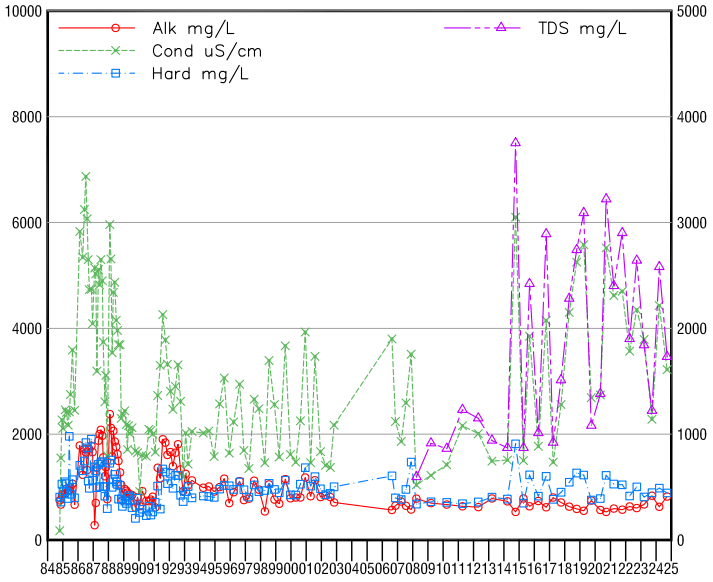
Shallow Overburden

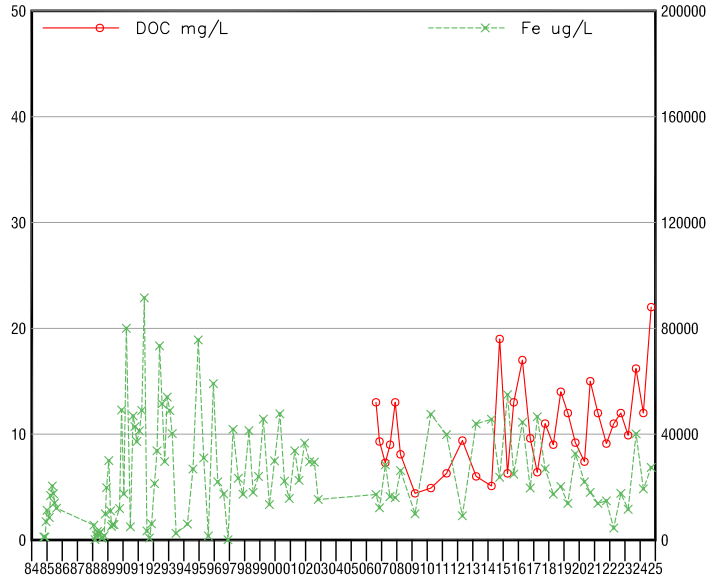
Monitoring Well
Screen 188.6 - 186.3 masl

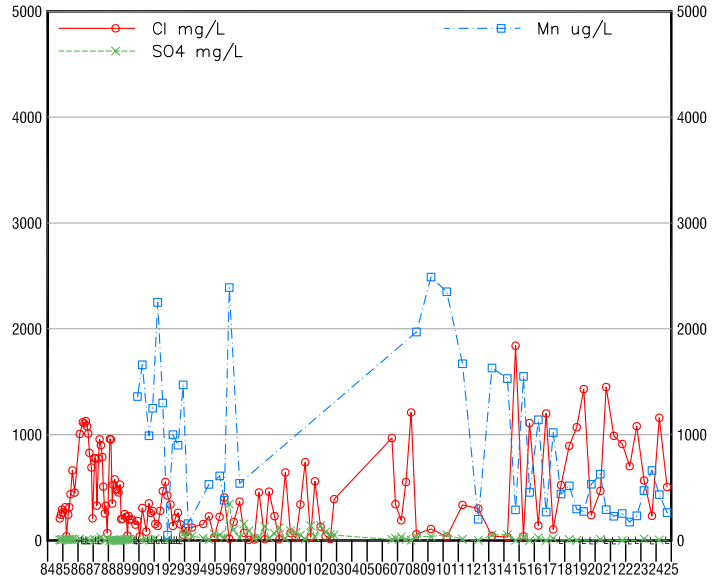


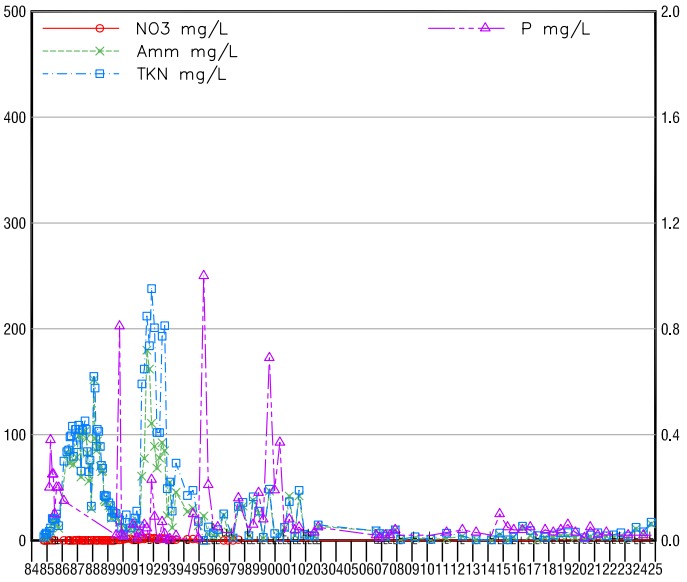
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
14-Sep-09	57916	540	1120	432	7.6	21	22	145	16.9	19	0.9	4.3	<0.05	<0.1	0.2	642	-10.7
06-Apr-10	61739	479	800	480	7.1	17	21	165	16.5	21	<0.5	3.8	<0.05	<0.05	<0.1	552	0.0
27-Sep-10	64390	647	1280	650	7.2	37	28	222	23.2	28	0.9	**6.5**	<0.05	<0.05	<0.1	766	-1.1
13-Apr-11	67477	481	1070	567	7.5	31	37	195	19.4	22	0.61	4.6	<0.05	<0.05	<0.1	618	4.5
18-Oct-11	71018	638	994	622	7.1	32	35	211	23.2	27	0.86	1.2	0.09	<0.05	<0.1	770	-2.7
24-Apr-12	74163	432	799	480	7.3	17	22	165	16.6	22	0.6	5	<0.05	<0.05	<0.1	530	4.9
03-Oct-12	77702	427	778	519	7.6	22	33	179	17.4	27	0.79	4.4	0.4	<0.05	0.1	530	7.9
24-Apr-13	81858	206	430	191	7.6	7	13	66	6.1	8.9	0.34	4.1	0.07	<0.05	<0.1	230	-4.2
08-Oct-13	85582	420	984	492	7.4	10	31	171	15.9	23	0.6	4	0.1	<0.05	<0.1	580	7.6
14-Apr-14	89056	416	1000	511	7.2	21	58	175	17.9	19	0.5	**5.1**	<0.05	<0.05	<0.1	610	4.6
07-Oct-14	92838	647	1440	735	7.2	46	53	252	25.8	30	0.8	4.9	0.09	<0.05	0.1	900	2.2
15-Apr-15	96369	496	1020	532	7.0	36	31	182	18.9	24	0.5	**5.4**	0.07	<0.05	0.1	580	0.6
09-Sep-15	99511	649	1170	759	7.3	50	48	264	24.3	35	1	**5.4**	<0.05	<0.05	0.1	830	4.3
05-Apr-16	103410	496	1120	642	7.3	50	45	221	21.8	25	0.6	4.4	<0.05	<0.05	<0.1	640	6.3
03-Apr-17	112039	191	497	226	7.9	19	37	79	7.1	13	<0.5	3.4	<0.05	<0.05	0.2	300	-0.3
03-Oct-17	116863	404	1020	490	7.5	68	60	170	15.9	25	0.6	3.7	<0.5	<0.5	0.2	590	-1.4
25-Apr-18	121900	377	757	421	7.3	29	37	145	14.4	20	0.6	2.7	<0.5	<0.5	0.2	460	1.0
14-Oct-18	127085	445	1070	516	7.2	49	56	174	19.7	27	1.1	3.8	<0.5	<0.5	0.1	590	0.3
09-Apr-19	130962	422	1040	440	7.3	70	26	146	18.2	27	0.8	**6.5**	<0.5	<0.5	0.2	620	-4.5
07-Oct-19	135824	480	1130	538	7.1	61	42	177	23.3	36	1.4	4.9	<0.5	<0.5	0.9	650	1.0
16-Apr-20	140283	509	1240	671	7.2	88	16	218	30.8	59	2.9	**8.2**	<0.5	<0.5	0.6	720	10.9
13-Sep-20	144106	495	1250	615	7.1	99	25	197	30.0	63	2.5	**5.1**	<0.5	<0.5	0.3	770	6.8
06-Apr-21	149000	380	920	457	7.2	62	16	150	20.1	32	1.5	3.7	<0.5	<0.5	0.4	530	4.7
12-Oct-21	154582	530	1240	555	7.1	76	14	186	22.0	34	1.6	4.1	<0.5	<0.5	0.5	730	-1.3
06-Apr-22	159595	455	1120	516	7.1	72	21	170	22.3	35	1.3	4.2	<0.5	<0.5	0.3	640	1.7
11-Oct-22	165002	482	1120	542	7.2	94	37	178	23.8	44	1.9	4.5	0.1	<0.05	0.3	750	-0.8
29-Mar-23	169225	438	1080	426	7.2	90	24	140	18.5	35	1.6	4.5	0.3	<0.05	0.4	730	-7.7
19-Sep-23	174346				7.0										0.6		
18-Mar-24	179274	399	930	430	7.5	86	17	148	14.7	27	0.6	3.9	<0.05	<0.05	0.2	540	3.3
23-Sep-24	184718	477	1130	537	6.9	97	19	177	23.1	43	1.6	4.3	<0.05	<0.05	0.2	700	1.4
TOTAL SAMPLES		121	122	121	117	122	121	121	121	121	121	37	120	122	123	32	
AVERAGE 2024		438	1030	484	7.2	92	18	163	18.9	35	1.1	4.1	<0.05	<0.05	0.2	620	

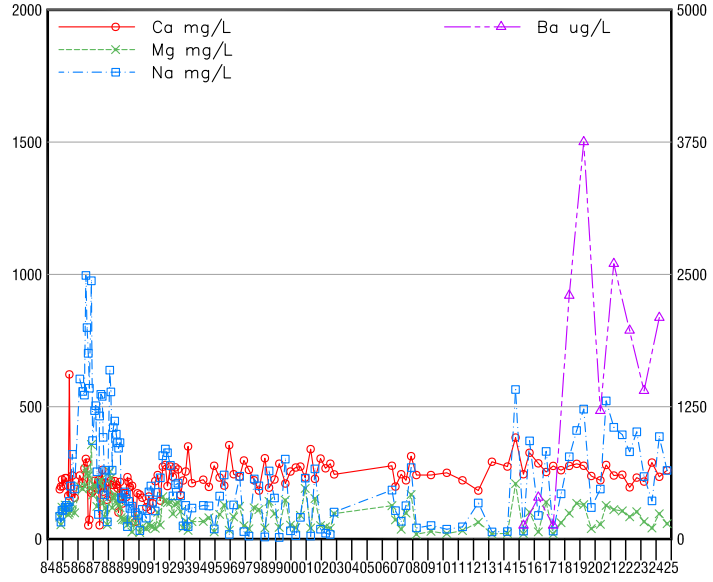
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



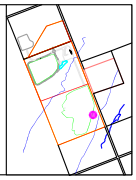








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-19B

Shallow Overburden

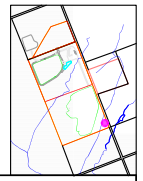
Screen 190.1 - 186.6 masl

CA008825 24 Mar 25	wsp	F324004

BH-19B

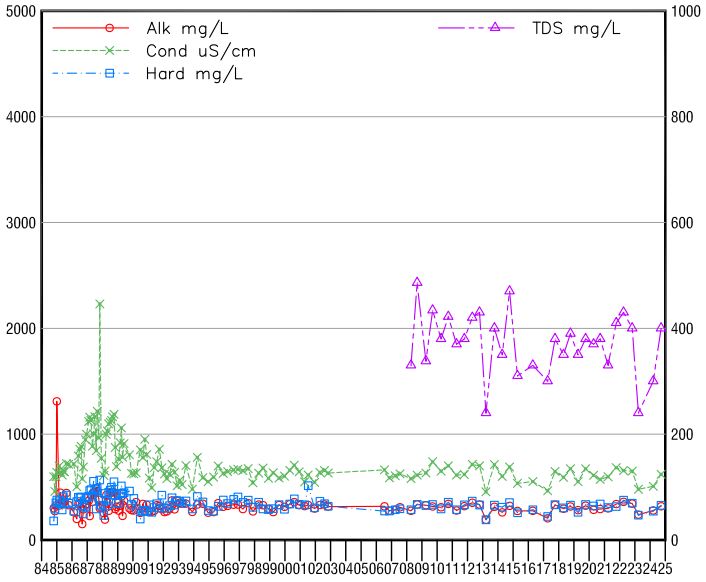
Shallow Overburden

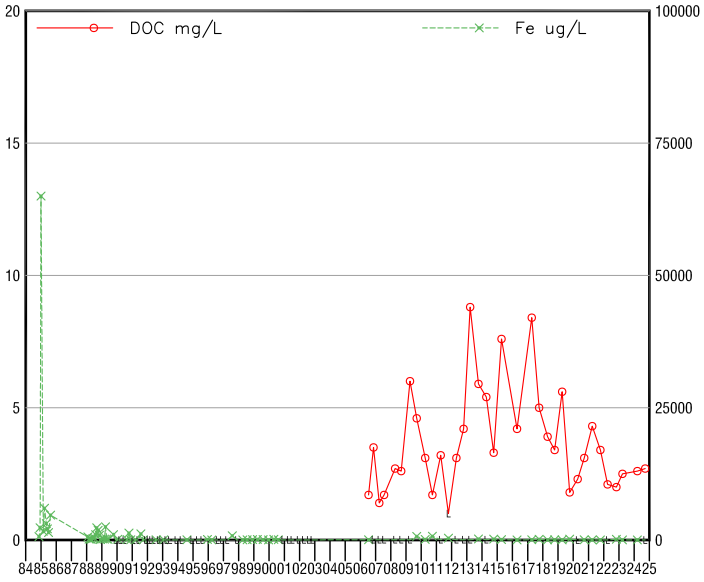
Monitoring Well
Screen 190.1 - 186.6 masl

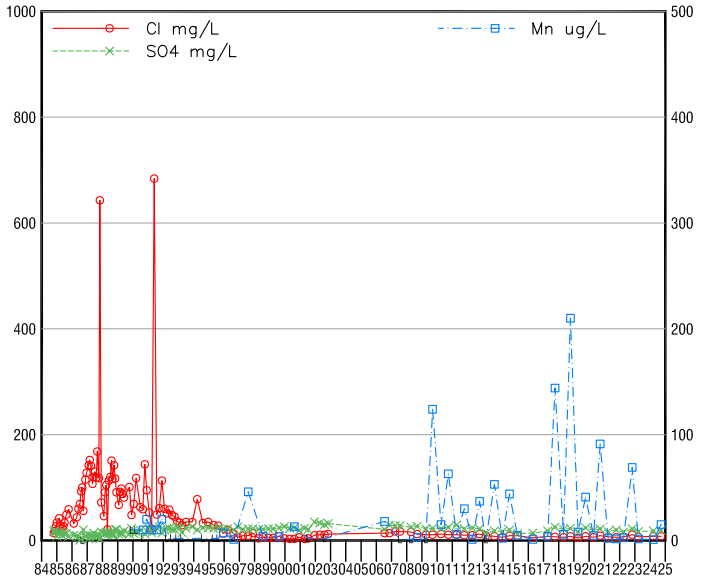


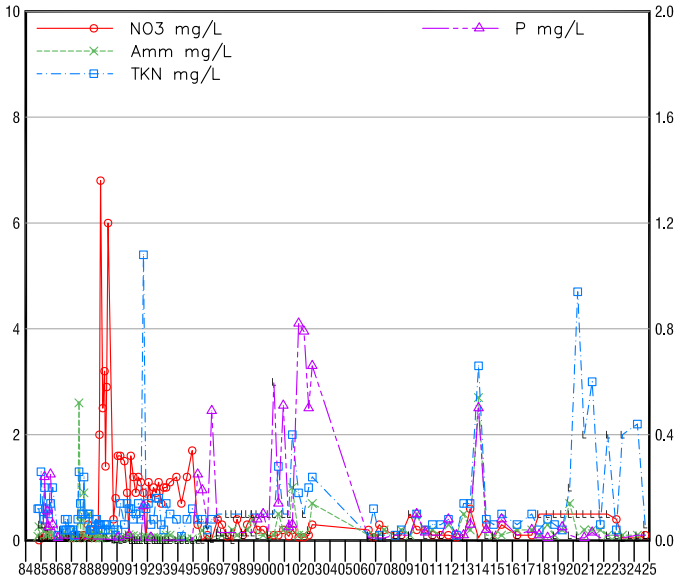
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Jul-07	44094	646	2590	956		**552**	9	222	97.6	126	14.5	**9**	<0.5	<0.5	6.5		-4.9
26-Nov-07	46383	575	3510	1473		**1210**	3	313	168	**270**	18.7	**13**	<0.05	<0.1	10.1		-3.1
01-Apr-08	48473	781	1040	678		59	38	242	17.8	42	1.9	**8.1**	<0.05	<0.1	1	594	-4.8
16-Mar-09	54431	695	1220	722	6.9	109	37	242	28.7	51	5.09	4.4	<0.05	<0.1	2.1	914	-1.2
29-Mar-10	61627	670	1420	709	6.7	37	55	250	20.5	37	2.38	4.9	<0.5	<0.5	1	862	6.1
11-Apr-11	67421	636	2160	685	6.9	**336**	11	222	31.8	46	4.38	**6.3**	<0.5	0.09	1.9	1230	-12.6
25-Apr-12	74221	621	2010	718	7.1	**303**	1	183	63.4	136	11.5	**9.4**	<0.05	<0.05	4.1	1150	0.5
20-Mar-13	81109	783	1490	809	6.5	43	51	292	19.4	27	1.83	**6**	<0.05	<0.05	0.5	940	2.9
25-Mar-14	88673	731	1510	772	6.6	32	54	274	21.3	28	1.9	**5.1**	<0.05	<0.05	0.5	870	4.9
07-Oct-14	92840	531	6100	1817	6.8	**1840**	1	383	209	**565**	16.9	**19**	<0.05	0.05	5.4	3750	0.0
15-Apr-15	96372	785	1500	694	6.4	40	31	245	19.9	30	1.6	**6.3**	<0.05	<0.05	0.5	870	-0.7
09-Sep-15	99513	637	3850	1230	6.7	**1110**	0.4	326	101	**371**	11.7	**13**	<0.05	<0.05	3.2	2420	-2.2
07-Apr-16	103503	737	1770	827	6.5	141	25	286	27.3	89	10.3	**17**	<0.05	<0.05	12.4	1010	9.2
11-Oct-16	108015	619	4150	1204	6.8	**1200**	0.7	253	139	**331**	16.8	**9.6**	<0.05	<0.05	4.7	2890	-7.3
29-Mar-17	111932	802	1470	769	6.5	104	19	276	19.4	30	2	**6.4**	<0.1	<0.1	0.9	920	-2.3
03-Oct-17	116857	709	2560	902	6.7	**523**	<2	260	61.3	171	7.3	**11**	<0.5	<0.5	3	1510	-3.8
18-Apr-18	121703	631	4300	1091	6.8	**894**	9	276	97.5	**311**	12.0	**9**	<0.5	<0.5	3.5	2280	-2.0
14-Oct-18	127087	587	5250	1265	6.6	**1070**	0.9	284	135	**410**	12.5	**14**	<0.5	<0.5	4.4	2740	2.9
01-Apr-19	130704	551	5580	1227	7.0	**1430**	<2	277	130	**491**	13.7	**12**	<0.5	<0.5	4.4	3090	-4.4
30-Sep-19	135556	744	2690	756	6.6	239	<0.2	238	39.3	119	6.7	**9.2**	<0.5	<0.5	2.8	1080	0.5
05-May-20	140694	565	2740	783	6.7	**469**	11	222	55.6	189	6.4	**7.4**	<0.5	<0.5	1.4	1380	0.4
21-Sep-20	144376	531	5520	1222	6.9	**1450**	<2	280	127	**522**	13.2	**15**	<0.5	<0.5	3.6	3220	-3.1
23-Mar-21	148727	595	4620	1056	7.0	**989**	<0.2	240	111	**422**	12.8	**12**	<0.5	<0.5	4	2400	1.0
12-Oct-21	154584	574	4700	1043	6.9	**912**	0.3	243	106	**394**	12.0	**9.1**	<0.5	**2.80**	4.1	2900	2.5
07-Apr-22	159619	633	3570	832	6.9	**701**	<0.2	195	83.8	**330**	11.4	**11**	<0.5	<0.5	3.5	1900	-1.2
26-Sep-22	164642	604	4350	1003	6.9	**1080**	<2	232	103	**405**	11.0	**12**	<0.5	<0.5	4.2	2640	-4.5
20-Mar-23	168875	671	3790	812	6.8	**567**	15	217	65.5	**236**	7.8	**9.9**	<0.5	<0.5	2.4	1840	-4.3
26-Sep-23	2023A025	836	2280	893	6.6	233	<0.2	289	41.6	144	12.2	**16.2**	<0.05	<0.05	11	1220	5.3
20-Mar-24	179417	628	4430	980	6.8	**1160**	4	235	95.6	**387**	10.6	**12**	<0.5	<0.5	5.6	2580	9.4
23-Sep-24	184720	821	3220	888	6.5	**505**	<2	260	58.0	**259**	14.3	**22**	<0.5	<0.5	15.8	1730	0.8
TOTAL SAMPLES		130	131	131	125	131	125	131	131	131	131	33	131	127	127	28	
AVERAGE 2024		725	3825	934	6.7	833	2	248	76.8	323	12.5	17	<0.5	<0.5	10.7	2155	

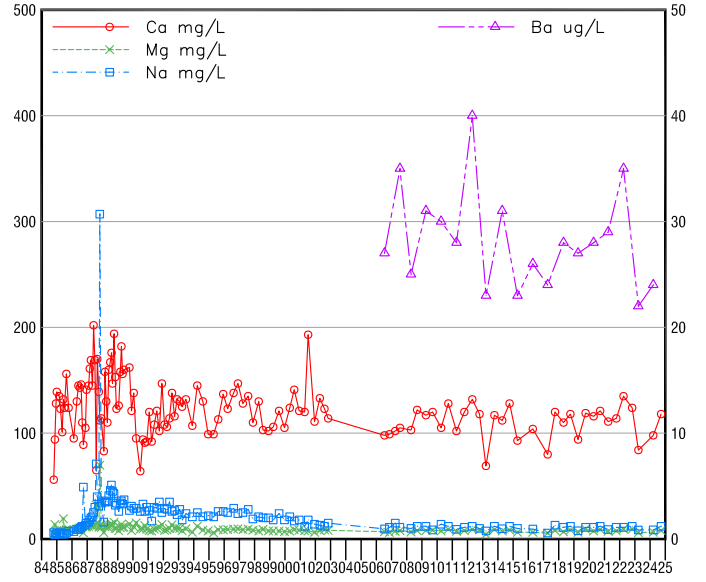
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









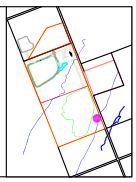


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-20B

Shallow Overburden

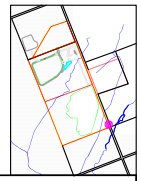
Screen 189.4 - 186.9 masl

CA008825 24 Mar 25	wsp	F324005

BH-20B

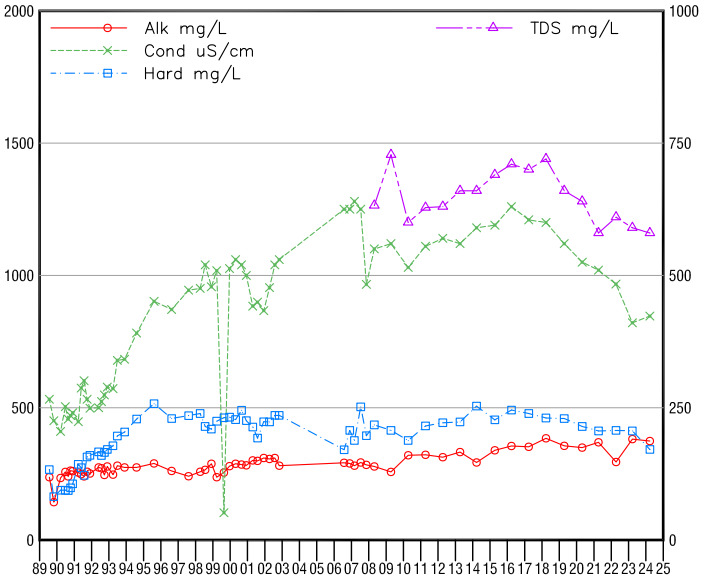
Shallow Overburden

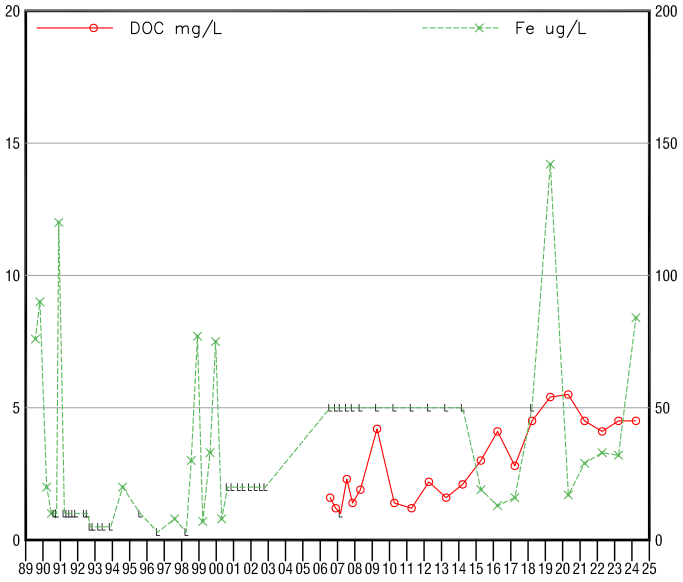
Monitoring Well
Screen 189.4 - 186.9 masl

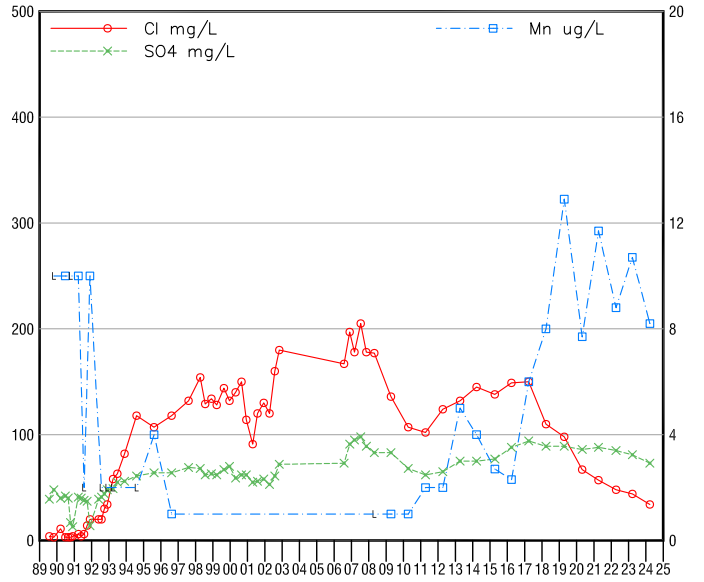


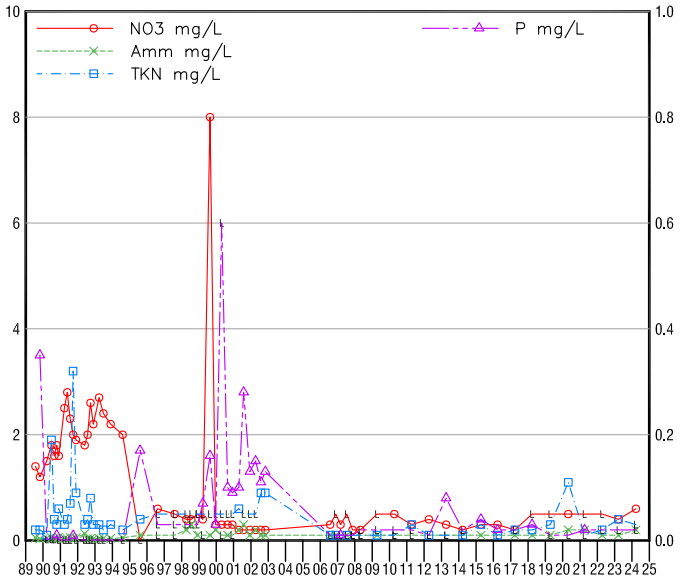
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-09	54924	328	633	325	7.5	11	22	117	8.0	12	<0.5	**6**	<0.5	<0.1	0.1	338	-2.2
15-Sep-09	57950	316	739	335	7.5	11	23	120	8.5	8.6	0.86	4.6	0.2	<0.1	0.5	434	0.2
06-Apr-10	61740	309	650	294	7.4	12	22	105	7.6	14	0.6	3.1	0.2	<0.05	<0.1	380	-3.7
27-Sep-10	64388	341	701	357	7.4	11	25	128	9.2	12	<0.5	1.7	0.1	<0.05	0.2	422	0.4
13-Apr-11	67478	278	613	285	7.8	11	29	102	7.3	9.1	<0.5	3.2	0.1	<0.05	<0.1	370	-3.1
18-Oct-11	71019	319	619	332	7.4	10	22	120	7.9	11	0.74	<1	0.1	<0.05	0.3	380	0.2
25-Apr-12	74216	351	714	367	7.4	10	24	132	9.0	12	<0.5	3.1	0.06	<0.05	<0.1	420	0.5
17-Oct-12	78010	335	701	330	7.4	12	22	118	8.6	10	0.62	4.2	<0.05	<0.05	0.5	430	-2.8
20-Mar-13	81114	191	455	191	7.7	9	14	69	4.5	7.6	1.41	**8.8**	0.6	<0.05	0.2	240	-2.3
08-Oct-13	85583	313	712	329	7.4	8	18	117	8.9	12	1.2	**5.9**	<0.05	<0.05	2.7	400	3.4
14-Apr-14	89057	260	601	310	7.7	6	17	112	7.5	9.7	0.9	**5.4**	0.3	<0.05	<0.1	350	7.3
07-Oct-14	92841	323	690	354	7.4	9	20	128	8.4	12	<0.5	3.3	<0.05	<0.05	0.1	470	3.5
15-Apr-15	96370	274	535	257	7.6	9	13	93	6.3	10	0.6	**7.6**	0.3	<0.05	0.1	310	-3.3
19-Apr-16	103709	276	552	286	8.0	5	14	104	6.4	9.4	0.6	4.2	0.1	<0.05	0.2	330	1.6
09-Apr-17	112156	205	464	222	7.9	8	18	80	5.6	5.6	2	**8.4**	0.1	<0.05	0.2	300	0.5
03-Oct-17	116859	331	647	333	7.5	7	25	120	8.0	13	0.5	5	<0.5	<0.5	0.1	380	-0.6
25-Apr-18	121897	296	592	303	7.5	6	21	110	6.8	11	<0.5	3.9	<0.5	<0.5	0.3	350	0.0
09-Oct-18	126931	316	673	329	7.6	8	23	118	8.4	12	0.5	3.4	<0.5	<0.5	0.1	390	0.7
09-Apr-19	130963	281	551	261	7.7	5	17	94	6.4	7.8	<0.5	**5.6**	<0.5	<0.5	0.2	350	-4.7
07-Oct-19	135825	324	673	335	7.5	8	24	119	9.3	11	<0.5	1.8	<0.5	<0.5	0.7	380	0.5
16-Apr-20	140284	285	611	321	7.8	6	19	116	7.5	11	<0.5	2.3	<0.5	<0.5	<0.1	370	4.7
21-Sep-20	144377	293	572	339	7.7	9	22	121	8.9	12	<0.5	3.1	<0.5	<0.5	0.2	380	5.4
30-Mar-21	148866	299	597	307	7.6	7	17	111	7.2	9.0	<0.5	4.3	<0.5	<0.5	0.2	330	0.3
12-Oct-21	154585	339	684	316	7.4	6	20	114	7.7	11	<0.5	3.4	<0.5	<0.5	0.2	410	-3.8
06-Apr-22	159596	361	656	376	7.4	7	16	135	9.4	11	<0.5	2.1	<0.5	<0.5	0.1	430	1.5
31-Oct-22	165525	344	650	348	7.4	11	22	124	9.4	12	0.5	2	0.4	<0.05	0.1	400	-1.2
27-Mar-23	169150	240	479	234	7.7	7	17	84	6.1	8.5	<0.5	2.5	<0.05	<0.05	0.1	240	-2.7
19-Sep-23	174347				7.4										<0.1		
19-Mar-24	179376	279	507	272	7.6	8	18	98	6.4	8.6	<0.5	2.6	<0.05	<0.05	0.1	300	1.2
23-Sep-24	184721	318	620	327	7.3	8	19	118	8.0	12	<0.5	2.7	0.1	<0.05	<0.1	400	2.0
TOTAL SAMPLES		132	133	133	129	133	132	133	133	133	132	35	132	133	134	31	
AVERAGE 2024		299	564	300	7.5	8	19	108	7.2	10	<0.5	2.7	0.1	<0.05	<0.1	350	

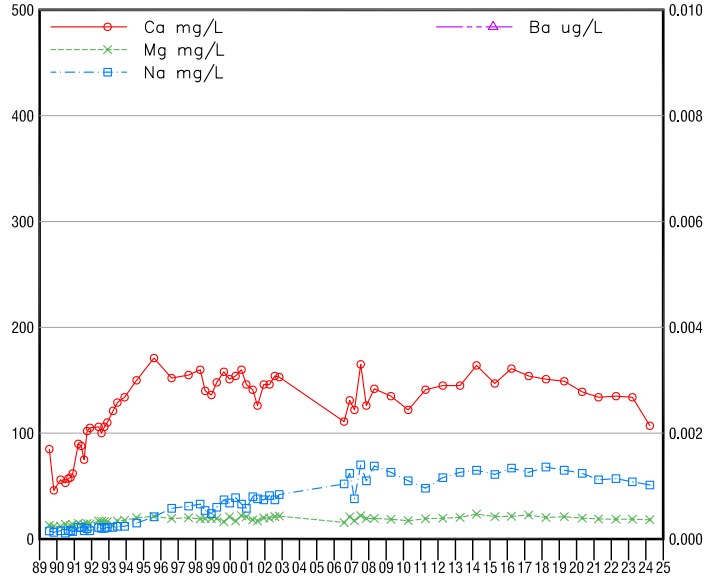
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



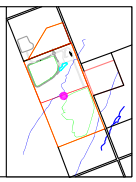








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-33-II

Overburden Formation

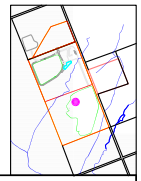
Screen 187.5 - 186.7 masl

CA008825 24 Mar 25	wsp	F324006

BH-33-II

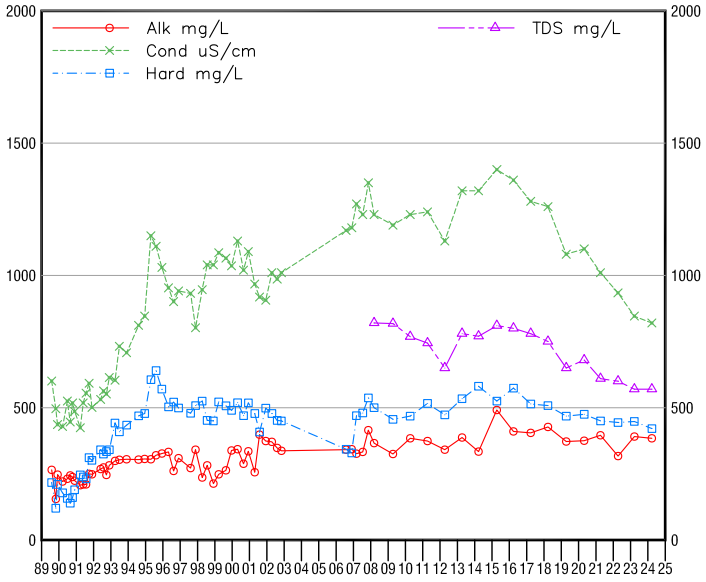
Overburden Formation

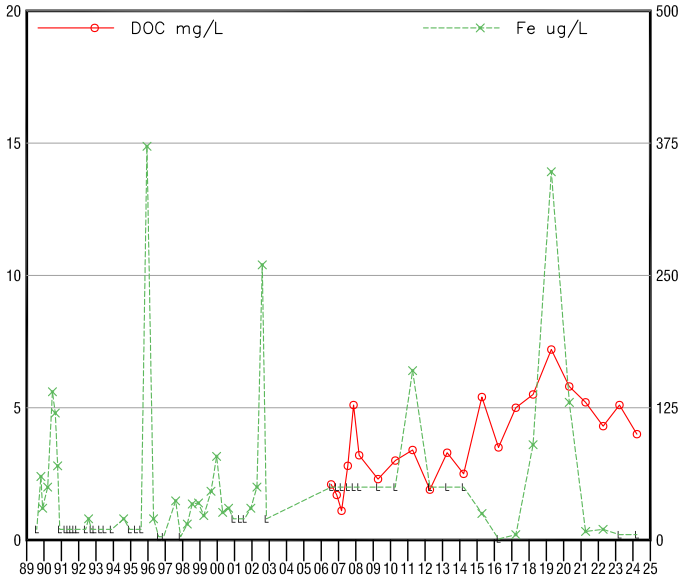
Stand Pipe Piezometer
Screen 187.5 - 186.7 masl

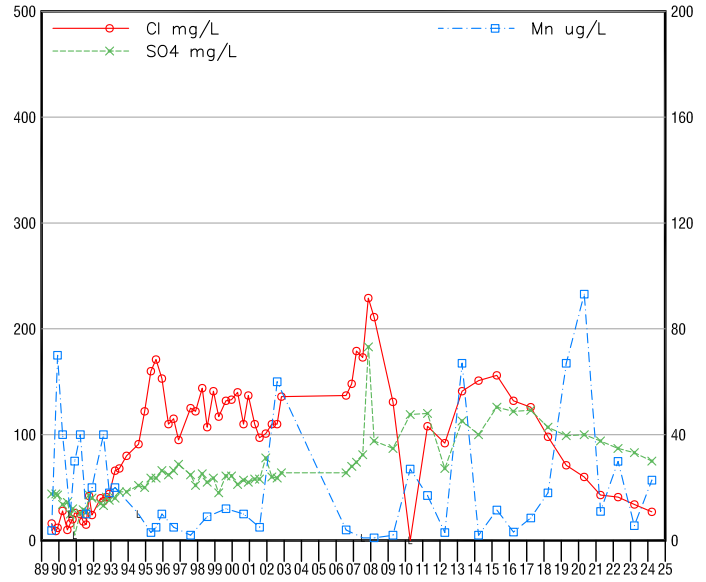


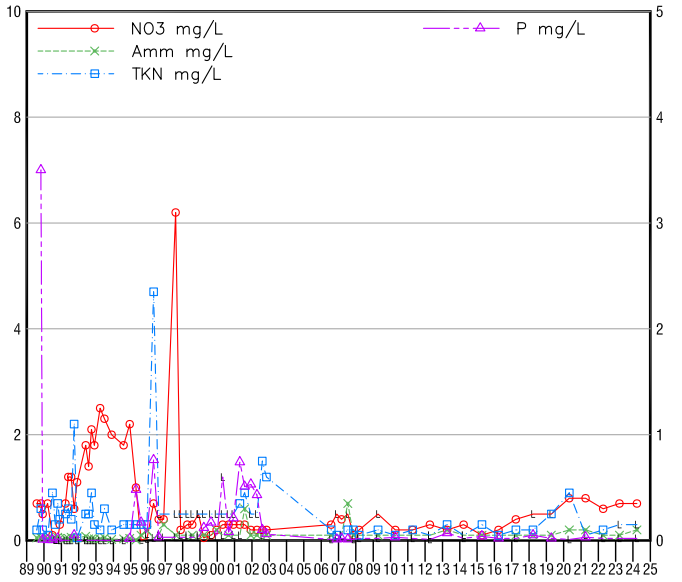
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
29-Aug-00	HGW1368	285	1040	490	7.8	150	62	160	22.0	33	2.2		0.3	<0.06	0.1		0.2
08-Dec-00	HGW1369	282	1000	451	7.7	114	62	146	21.0	29	2.17		0.3	<0.06	<0.1		0.8
22-Apr-01	HGW1370	301	884	427	7.8	91	55	141	18.1	40	1.13		0.2	<0.06	0.2		2.7
01-Aug-01	HGW1371	299	899	385	7.7	120	56	126	17.1	38	1.1		0.2	<0.06	0.3		-5.7
10-Dec-01	HGW1372	310	867	447	7.7	130	58	146	20.0	37	1.15		0.2	<0.06	0.1		-2.3
10-Apr-02	HGW1373	306	954	446	7.8	120	53	146	19.8	41	1.11		0.2	<0.06	0.2		0.6
01-Aug-02	HGW1374	310	1040	471	7.9	160	61	154	21.1	37	1.39		0.2	<0.06	0.1		-3.9
01-Nov-02	HGW1375	281	1060	471	7.7	180	72	153	21.7	42	1.13		0.2	<0.06	0.1		-4.0
31-Jul-06	37413	292	1250	341		167	73	111	15.6	52	1	1.6	0.3	<0.25	0.1		-14.1
27-Nov-06	39752	289	1250	414		197	91	131	21.0	62	1.26	1.2	<0.5	<0.5	0.1		-9.1
06-Mar-07	41509	281	1280	376		178	95	122	17.3	38	1.15	<1	0.3	<0.05	<0.1		-15.8
16-Jul-07	43945	293	1250	503		205	98	165	22.0	70	1.59	2.3	<0.5	<0.5	0.1		-2.1
13-Nov-07	46163	284	966	394		178	89	126	19.3	55	1.23	1.4	0.2	<0.1	<0.1		-9.8
28-Apr-08	48968	278	1100	435	7.6	177	83	142	19.5	69	1.31	1.9	0.2	<0.1	<0.1	632	-2.3
14-Apr-09	55015	257	1120	414	7.6	136	83	135	18.6	63	1.19	4.2	<0.5	<1	0.1	728	1.6
12-Apr-10	61844	320	1030	376	7.2	107	68	122	17.3	55	1.23	1.4	0.5	<0.1	<0.1	600	-4.4
13-Apr-11	67483	322	1110	431	7.5	102	62	141	19.2	48	1.26	1.2	0.3	<0.1	<0.1	628	0.5
11-Apr-12	73922	313	1140	443	7.5	124	65	145	19.6	58	1.39	2.2	0.4	<0.05	<0.1	630	1.1
09-Apr-13	81500	332	1120	446	7.3	132	75	145	20.4	63	1.34	1.6	0.3	<0.05	<0.1	660	-1.0
24-Mar-14	88625	293	1180	506	7.6	145	75	164	23.5	65	1.4	2.1	0.2	<0.05	<0.1	660	6.0
14-Apr-15	96321	339	1190	454	7.4	138	77	147	21.2	61	1.2	3	0.3	<0.05	0.1	690	-2.2
29-Mar-16	103221	355	1260	491	7.6	149	88	161	21.5	67	1.4	4.1	0.3	<0.05	<0.1	710	-1.6
29-Mar-17	111927	352	1210	478	7.4	150	94	154	22.6	63	1.3	2.8	0.2	<0.05	0.1	700	-3.5
26-Mar-18	121010	384	1200	461	7.5	110	89	151	20.3	68	1.3	4.5	<0.5	<0.5	0.1	720	-1.7
16-Apr-19	131142	356	1120	459	7.5	98	89	149	21.1	65	1.4	**5.4**	<0.5	<0.5	0.1	660	1.3
29-Apr-20	140548	349	1050	429	7.4	67	86	139	19.8	62	1.3	**5.5**	0.5	<0.5	0.2	640	2.9
08-Apr-21	149079	369	1020	412	7.3	57	88	134	18.9	56	1.4	4.5	<0.5	<0.5	0.2	580	-0.3
11-Apr-22	159718	295	967	414	7.2	48	85	135	18.7	57	1.4	4.1	<0.5	<0.5	0.1	610	8.9
22-Mar-23	169031	381	821	412	7.3	44	81	134	18.7	54	1.4	4.5	0.4	<0.05	0.1	590	0.3
25-Mar-24	179563	374	846	342	7.4	34	73	107	18.2	51	1.3	4.5	0.6	<0.05	0.2	580	3.3
TOTAL SAMPLES		60	60	60	53	60	60	60	60	60	60	22	60	60	60	17	
AVERAGE 2024																	

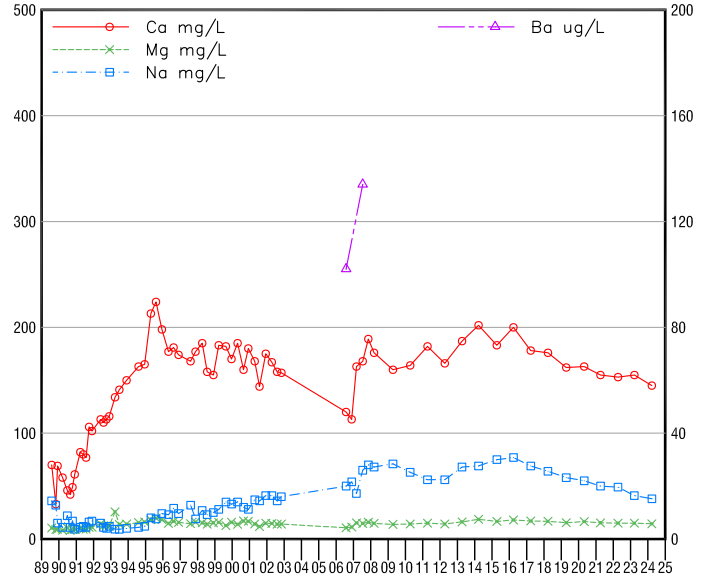
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



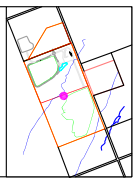








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-33-III

Shallow Overburden

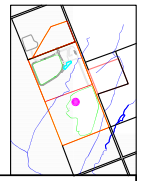
Screen 195.8 - 192.8 masl

CA008825 24 Mar 25	wsp	F324007

BH-33-III

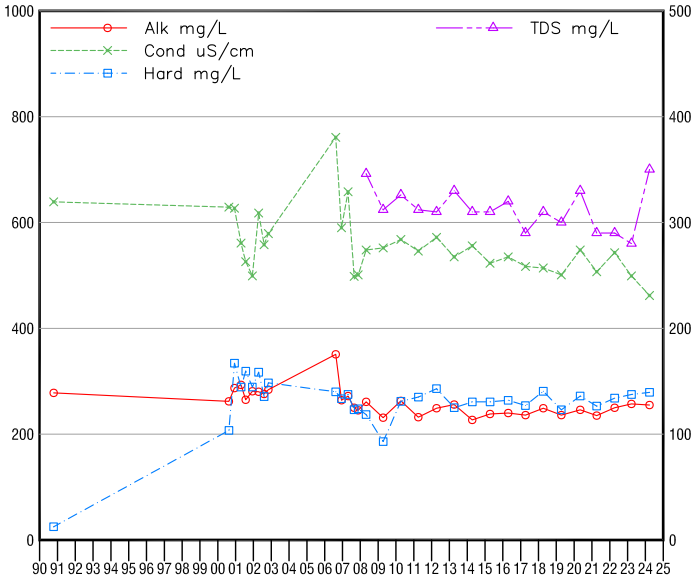
Shallow Overburden

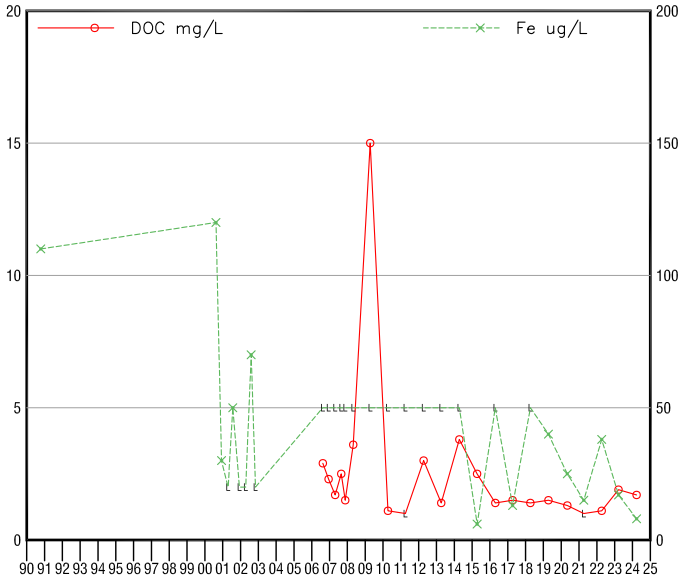
Monitoring Well
Screen 195.8 - 192.8 masl

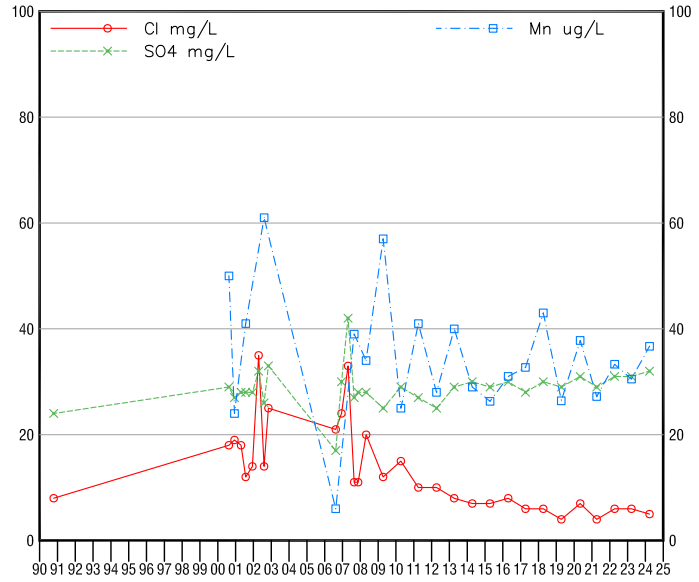


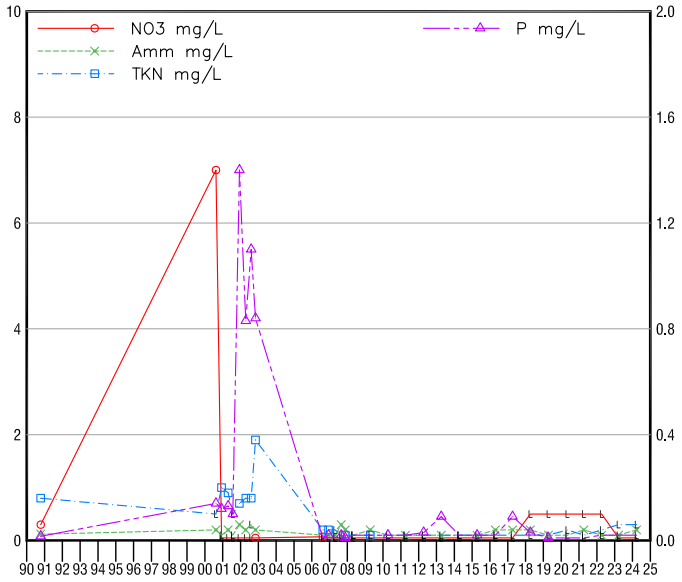
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
29-Aug-00	HGW1415	288	1020	470	7.9	110	57	160	17.0	30	2.3		0.3	<0.06	0.1		3.3
08-Dec-00	HGW1416	335	1090	518	7.7	137	55	180	16.7	28	2.03		0.3	<0.06	<0.1		-0.4
22-Apr-01	HGW1417	256	967	478	7.8	110	58	168	14.2	37	0.95		0.3	<0.06	<0.1		8.3
01-Aug-01	HGW1418	398	918	408	7.6	97	58	144	11.8	36	0.99		0.3	<0.06	0.6		-9.9
10-Dec-01	HGW1419	374	906	498	7.7	101	78	175	14.9	41	1.12		0.2	<0.06	0.1		-0.7
18-Apr-02	HGW1420	371	1010	478	7.9	110	60	167	14.7	41	1.03		0.2	<0.06	0.1		-1.8
08-Aug-02	HGW1421	348	986	452	7.9	110	59	158	14.0	36	1.54		0.2	<0.06	<0.1		-3.0
04-Nov-02	HGW1422	337	1010	450	7.7	136	64	157	14.1	40	1.11		0.2	<0.06	0.1		-5.0
31-Jul-06	37408	341	1170	343		137	64	120	10.6	50	0.93	2.1	0.3	<0.25	0.1		-14.0
27-Nov-06	39753	343	1180	329		148	70	113	11.3	54	1.14	1.7	<0.5	<0.5	<0.1		-16.4
06-Mar-07	41510	326	1270	470		179	74	163	15.2	43	1.14	1.1	0.4	<0.05	<0.1		-7.7
16-Jul-07	43911	333	1230	480		173	81	168	14.7	65	1.62	2.8	<0.5	<0.5	0.7		-2.8
13-Nov-07	46164	415	1350	537		229	183	189	15.9	70	2.08	**5.1**	0.1	<0.1	0.1		-14.5
12-Mar-08	48145	366	1230	500		211	94	176	14.8	68	0.99	3.2	0.2	<0.05	<0.1	820	-7.9
14-Apr-09	55016	325	1190	456	7.6	131	87	160	13.8	71	0.94	2.3	<0.5	<1	0.1	818	0.9
12-Apr-10	61845	384	1230	468	7.2	<0.1	119	164	14.2	63	1.7	3	0.2	<0.1	<0.1	768	8.9
13-Apr-11	67484	374	1240	516	7.5	108	120	182	15.0	56	1.5	3.4	0.2	<0.05	<0.1	744	-0.9
11-Apr-12	73923	341	1130	473	7.6	92	68	166	14.2	56	1.06	1.9	0.3	<0.05	<0.1	650	4.6
09-Apr-13	81501	387	1320	534	7.2	141	113	187	16.2	68	1.27	3.3	0.2	<0.05	0.2	780	-1.5
24-Mar-14	88626	334	1320	581	7.5	151	100	202	18.6	69	1.2	2.5	0.3	<0.05	<0.1	770	5.7
14-Apr-15	96322	491	1400	525	7.5	156	126	183	16.6	75	1.5	**5.4**	0.1	<0.05	0.1	810	-9.9
29-Mar-16	103222	410	1360	574	7.7	132	122	200	18.0	77	1.2	3.5	0.2	<0.05	<0.1	800	1.2
29-Mar-17	111928	405	1280	514	7.3	126	123	178	17.0	69	1	5	0.4	<0.05	0.1	780	-3.3
26-Mar-18	121012	427	1260	508	7.4	98	107	176	16.7	64	1.1	**5.5**	<0.5	<0.5	0.1	750	-2.0
16-Apr-19	131143	372	1080	468	7.4	71	99	162	15.4	58	2.1	**7.2**	<0.5	<0.5	0.1	650	1.9
29-Apr-20	140549	375	1100	475	7.4	60	100	163	16.5	55	1.1	**5.8**	0.8	<0.5	0.2	680	2.6
08-Apr-21	149080	396	1010	450	7.4	43	94	155	15.3	50	1.2	**5.2**	0.8	<0.5	0.2	610	0.2
11-Apr-22	159719	317	934	444	7.2	41	87	153	15.0	49	1	4.3	0.6	<0.05	0.1	600	8.3
22-Mar-23	169033	391	846	448	7.3	34	83	155	14.9	41	1.2	**5.1**	0.7	<0.05	0.1	570	1.1
25-Mar-24	179564	384	820	421	7.5	27	75	145	14.4	38	0.9	4	0.7	<0.05	0.2	570	1.6
TOTAL SAMPLES		67	67	67	59	67	67	67	67	67	67	22	67	67	67	17	
AVERAGE 2024																	

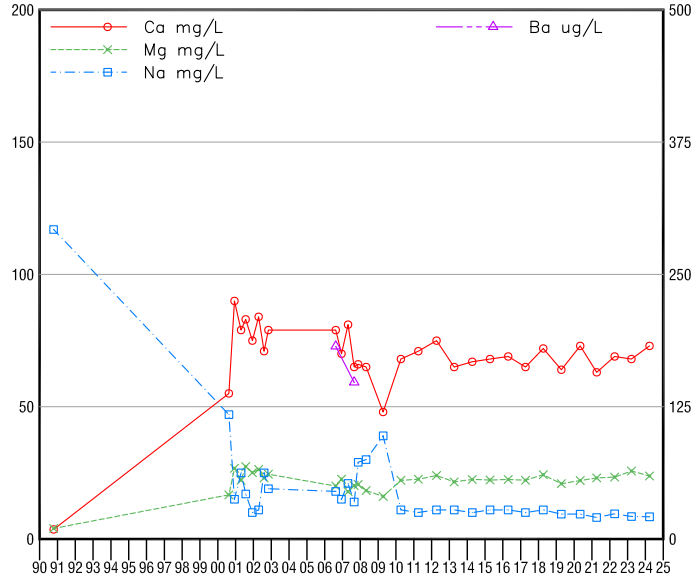
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



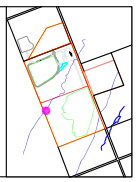








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-40-II

Shallow Overburden

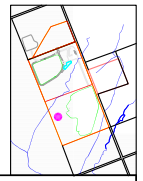
Screen 193.8 - 190.7 masl

CA008825 24 Mar 25	wsp	F324008

BH-40-II

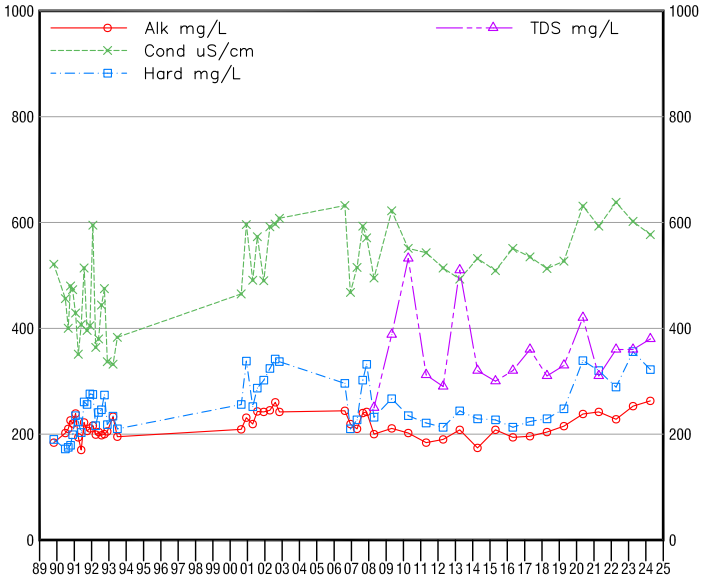
Shallow Overburden

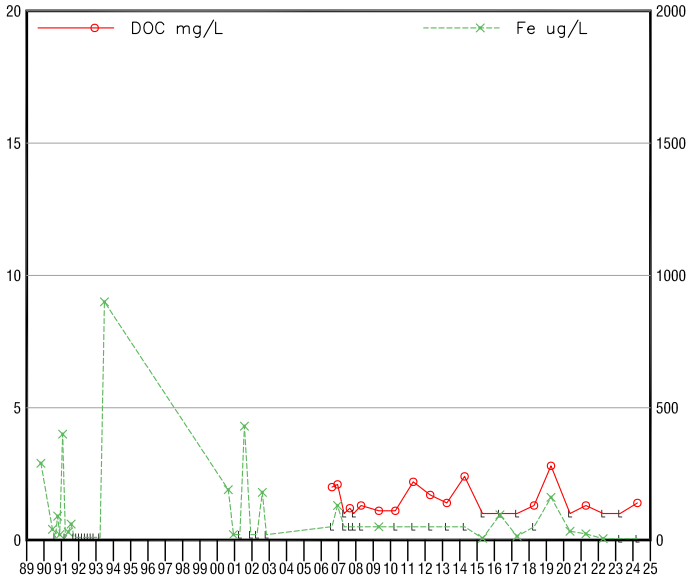
Monitoring Well
Screen 193.8 - 190.7 masl

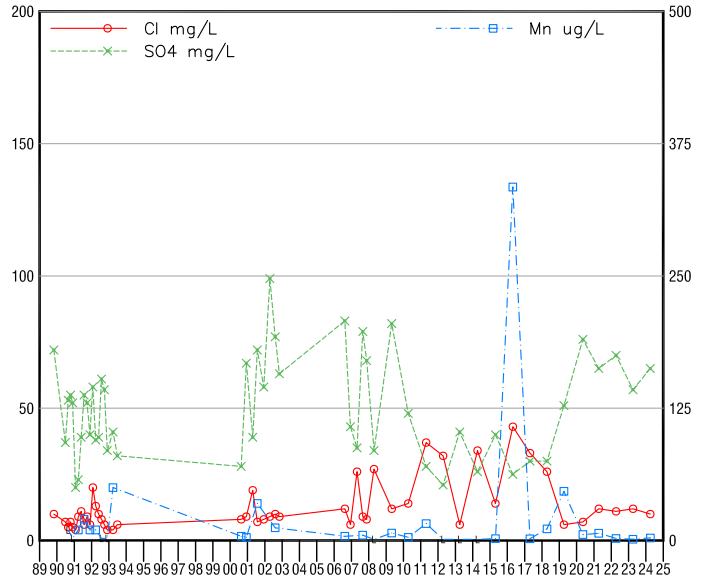


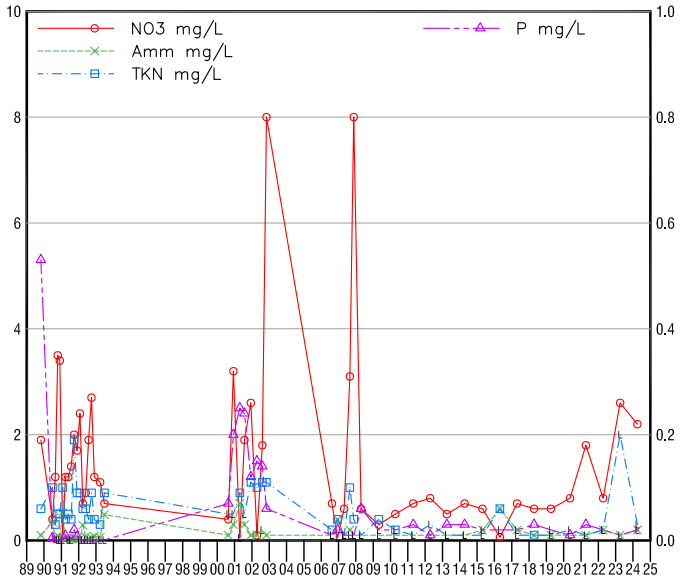
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
16-Aug-00	HGW1580	262	629	207	8.2	18	29	55	16.7	47	4.13		7.0	<0.06	0.2		-4.1
08-Dec-00	HGW1581	287	627	334	7.7	19	27	90	26.7	15	2.72		<0.05	<0.06	<0.1		3.9
22-Apr-01	HGW1582	293	561	289	8.2	18	28	79	22.2	25	1.56		<0.05	<0.06	0.2		-0.4
27-Jul-01	HGW1583	265	526	319	8.3	12	28	83	27.4	17	2.03		<0.05	<0.06	<0.1		7.0
10-Dec-01	HGW1584	281	499	289	7.9	14	28	75	25.1	10	1.73		<0.05	<0.06	0.3		-2.3
18-Apr-02	HGW1585	280	618	317	8.0	35	32	84	26.3	11	1.47		<0.05	<0.06	0.2		-2.6
08-Aug-02	HGW1586	276	558	271	8.1	14	26	71	23.1	25	1.96		<0.05	<0.06	<0.3		0.9
04-Nov-02	HGW1587	284	579	297	7.9	25	33	79	24.5	19	1.73		0.05	<0.06	0.2		-1.8
15-Aug-06	37688	351	761	280		21	17	79	20.0	18	1.99	2.9	0.07	<0.05	<0.1		-10.9
11-Dec-06	39998	264	590	267		24	30	70	22.6	15	1.7	2.3	<0.05	<0.05	0.1		-4.3
24-Apr-07	42484	272	658	275		33	42	81	17.9	21	1.46	1.7	<0.05	<0.05	0.1		-5.8
28-Aug-07	44751	250	498	246		11	27	65	20.2	14	2.11	2.5	<0.05	<0.05	0.3		-2.3
19-Nov-07	46268	245	501	248		11	28	66	20.6	29	1.93	1.5	<0.05	<0.05	0.2		4.0
29-Apr-08	49012	261	548	237		20	28	65	18.3	30	2.06	3.6	<0.05	<0.1	<0.1	346	-2.1
14-Apr-09	55012	231	552	186	7.7	12	25	48	16.1	39	1.9	**15**	<0.05	<0.1	0.2	312	-0.2
12-Apr-10	61846	263	568	262	7.6	15	29	68	22.2	11	1.55	1.1	<0.05	<0.05	<0.1	326	-4.4
05-Apr-11	67321	232	546	270	7.9	10	27	71	22.6	10	1.64	<1	<0.05	<0.05	0.1	312	3.4
11-Apr-12	73924	249	572	286	7.8	10	25	75	24.0	11	1.74	3	<0.05	<0.05	<0.1	310	3.7
09-Apr-13	81502	256	535	250	7.7	8	29	65	21.6	11	1.59	1.4	<0.05	<0.05	0.1	330	-3.7
14-Apr-14	89059	227	556	261	7.7	7	30	67	22.5	10	1.6	3.8	<0.05	<0.05	<0.1	310	3.0
14-Apr-15	96318	238	523	261	7.8	7	29	68	22.3	11	1.5	2.5	<0.05	<0.05	0.1	310	1.9
20-Apr-16	103797	240	535	264	7.8	8	30	69	22.5	11	1.7	1.4	<0.05	<0.05	0.2	320	1.4
09-Apr-17	112149	236	517	254	7.9	6	28	65	22.2	10	1.8	1.5	<0.05	<0.05	0.2	290	0.9
09-Apr-18	121422	249	514	281	7.7	6	30	72	24.3	11	1.8	1.4	<0.5	<0.5	0.2	310	3.3
14-Apr-19	131080	236	501	246	7.7	4	29	64	20.9	9.4	1.6	1.5	<0.5	<0.5	0.1	300	-0.5
05-May-20	140686	246	548	272	7.7	7	31	73	22.1	9.4	1.7	1.3	<0.5	<0.5	<0.1	330	1.0
08-Apr-21	149076	235	507	253	7.7	4	29	63	23.1	8.1	1.6	<1	<0.5	<0.5	0.2	290	0.4
11-Apr-22	159720	250	543	268	7.6	6	31	69	23.4	9.5	1.7	1.1	<0.5	<0.5	0.1	290	0.2
22-Mar-23	169034	257	499	275	7.7	6	31	68	25.7	8.5	1.6	1.9	<0.05	<0.05	0.1	280	-0.2
26-Mar-24	179597	255	462	279	7.7	5	32	73	23.8	8.4	1.6	1.7	<0.05	<0.05	0.2	350	2.5
TOTAL SAMPLES		31	31	31	25	31	31	31	31	31	31	22	31	31	31	17	
AVERAGE 2024																	

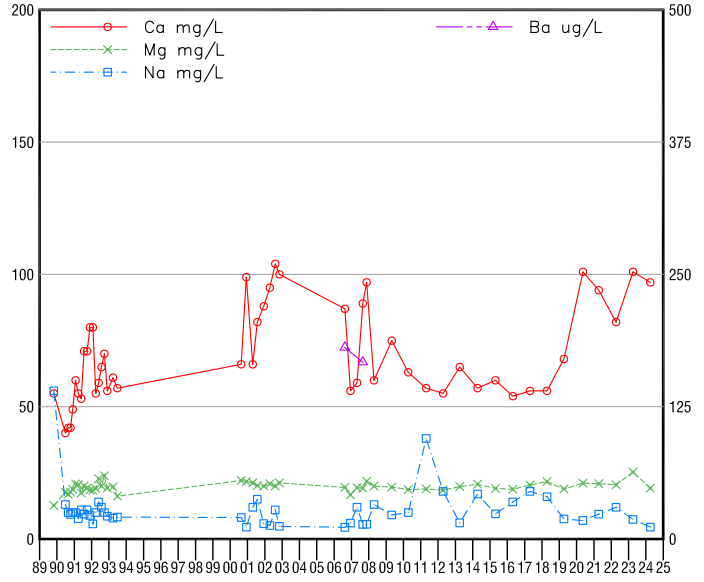
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



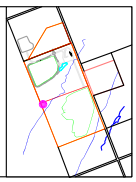








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-44-III

Shallow Overburden

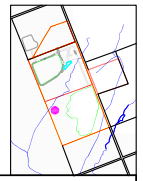
Screen 195.2 - 192.1 masl

CA008825 24 Mar 25	wsp	F324009

BH-44-III

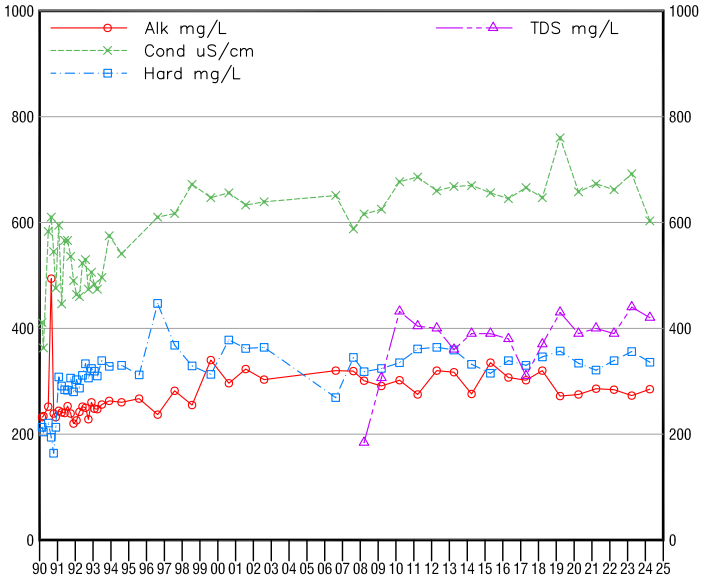
Shallow Overburden

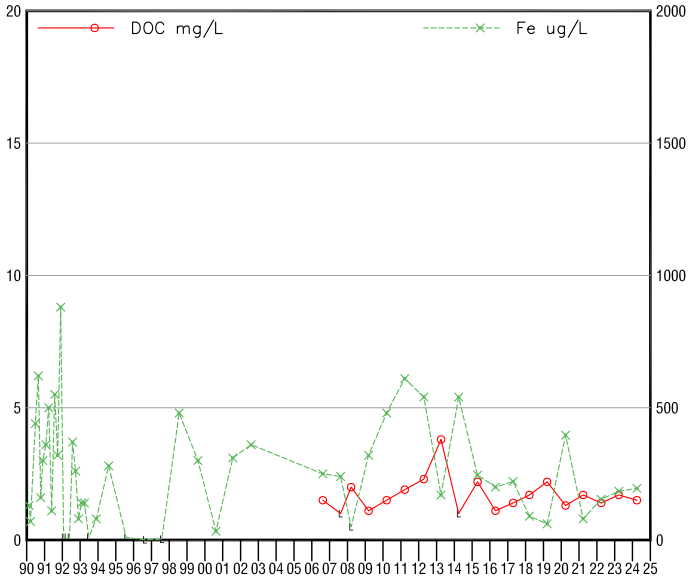
Monitoring Well
Screen 195.2 - 192.1 masl

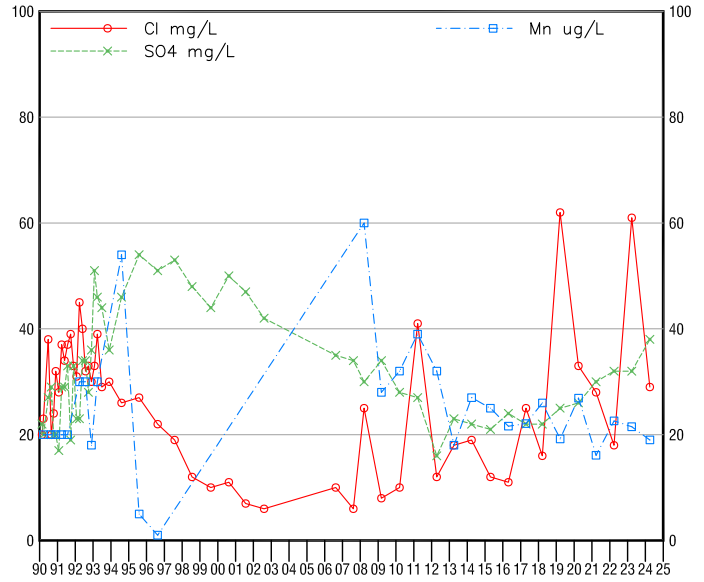


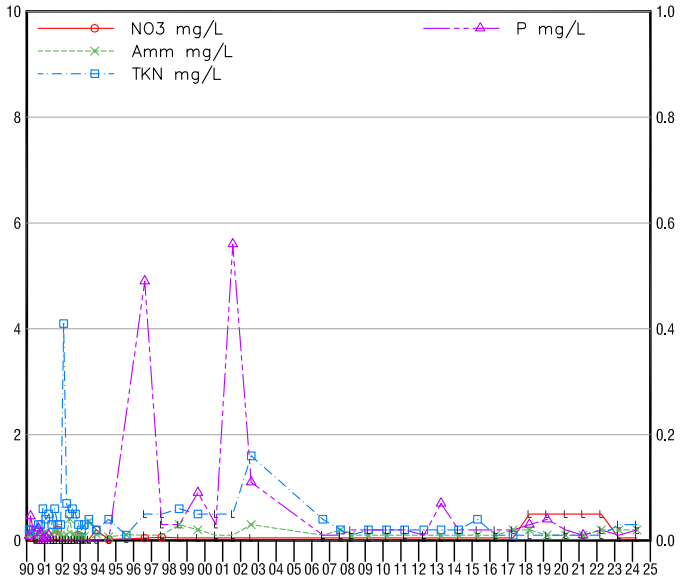
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Aug-00	HGW1716	209	465	256	8.1	8	28	66	22.1	8.1	2.69		0.4	<0.06	0.1		5.1
08-Dec-00	HGW1717	231	596	338	7.9	9	67	99	21.7	4.5	2.14		3.2	<0.06	0.3		3.9
22-Apr-01	HGW1718	219	491	252	8.0	19	39	66	21.2	12	2.51		<0.05	<0.06	0.7		-0.3
27-Jul-01	HGW1719	243	573	287	7.7	7	72	82	20.2	15	2.17		1.9	<0.06	0.3		-1.5
10-Dec-01	HGW1720	242	490	302	7.9	8	58	88	20.0	5.8	1.52		2.6	<0.06	0.1		-1.0
18-Apr-02	HGW1721	245	592	324	8.0	9	99	95	20.9	5.1	1.28		0.1	<0.06	0.1		-3.5
08-Aug-02	HGW1722	260	597	342	8.1	10	77	104	20.0	11	1.59		1.8	<0.06	<0.2		1.1
04-Nov-02	HGW1723	242	608	337	7.8	9	63	100	21.2	4.8	1.59		8.0	<0.06	0.1		0.1
15-Aug-06	37690	244	632	296		12	83	87	19.5	4.4	1.64	2	0.7	<0.05	<0.1		-6.3
11-Dec-06	40000	219	468	210		6	43	56	16.7	6.0	1.59	2.1	<0.05	<0.05	0.4		-9.3
30-Apr-07	42582	210	515	227		26	35	59	19.4	12	2.79	<1	0.6	<0.05	<0.1		-5.2
28-Aug-07	44753	240	593	302		9	79	89	19.2	5.5	2.1	1.2	3.1	<0.05	0.2		-4.2
19-Nov-07	46270	242	571	332		8	68	97	21.8	5.6	1.9	<1	8.0	<0.05	<0.1		-0.9
22-Apr-08	48849	200	495	232		27	34	60	20.0	13	2.59	1.3	0.6	<0.1	<0.1	250	-2.1
29-Apr-09	55453	211	622	267	7.7	12	82	75	19.6	9.1	1.75	1.1	0.3	<0.1	<0.1	388	-4.2
14-Apr-10	61890	202	551	235	7.8	14	48	63	18.7	10	2.25	1.1	0.5	<0.05	<0.1	532	-2.3
26-Apr-11	67648	184	543	221	7.8	37	28	57	18.9	38	3.7	2.2	0.7	<0.05	<0.1	312	7.2
18-Apr-12	74085	190	514	213	8.0	32	21	55	18.5	18	3.53	1.7	0.8	<0.05	<0.1	290	-0.6
02-Apr-13	81305	208	493	244	7.9	6	41	65	19.8	6.1	1.99	1.4	0.5	<0.05	<0.1	510	-0.2
14-Apr-14	89064	174	532	229	7.8	34	26	57	20.7	17	3.4	2.4	0.7	<0.05	<0.1	320	3.8
27-Apr-15	96621	208	509	227	7.9	14	40	60	19.1	9.5	2.5	<1	0.6	<0.05	0.2	300	-3.6
26-Apr-16	103890	194	551	213	8.1	43	25	54	18.8	14	3.6	<1	0.06	<0.05	0.6	320	-5.6
23-Apr-17	112543	196	535	224	7.9	33	30	56	20.4	18	3.4	<1	0.7	<0.05	0.2	360	-1.8
17-Apr-18	121641	204	513	229	8.0	26	30	56	21.7	16	3.2	1.3	0.6	<0.5	0.1	310	-1.2
09-Apr-19	130968	215	527	248	8.0	6	51	68	18.9	7.6	1.9	2.8	0.6	<0.5	0.1	330	-2.2
13-May-20	140871	238	631	339	7.8	7	76	101	21.1	7.0	1.5	<1	0.8	<0.5	<0.1	420	3.8
12-Apr-21	149198	242	593	320	7.6	12	65	94	20.9	9.4	2	1.3	1.8	<0.5	0.1	310	1.7
12-Apr-22	159787	228	638	289	7.5	11	70	82	20.5	12	2.2	<1	0.8	<0.5	0.2	360	-0.4
04-Apr-23	169370	253	602	356	7.6	12	57	101	25.3	7.4	1.1	<1	2.6	<0.05	0.1	360	4.9
04-Apr-24	179819	263	577	322	7.3	10	65	97	19.2	4.5	1.6	1.4	2.2	<0.05	0.2	380	1.2
TOTAL SAMPLES		49	49	49	42	49	49	49	49	49	49	22	49	49	49	17	
AVERAGE 2024																	

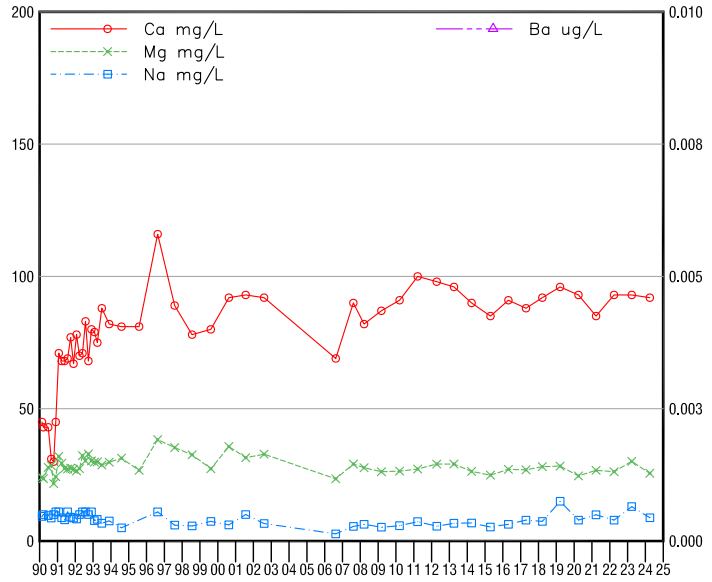
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



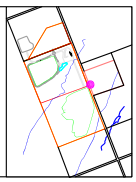








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-46-II

Overburden Formation

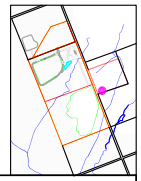
Screen 187.5 - 186.9 masl

CA008825 24 Mar 25	wsp	F324010

BH-46-II

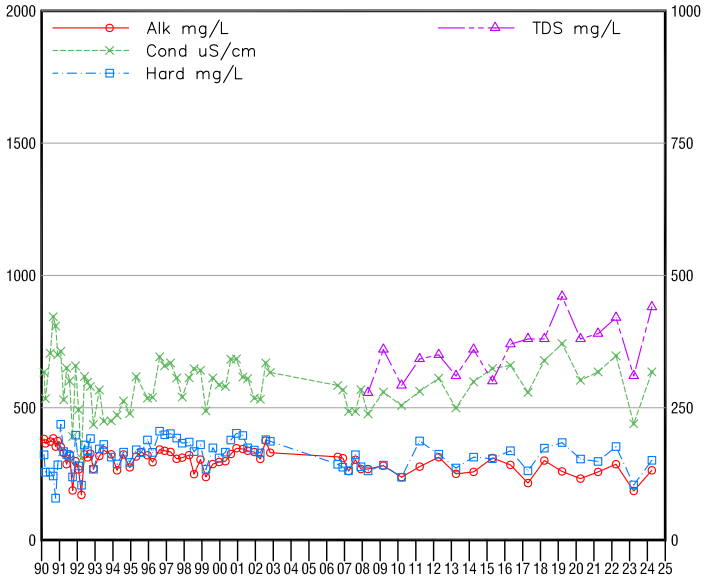
Overburden Formation

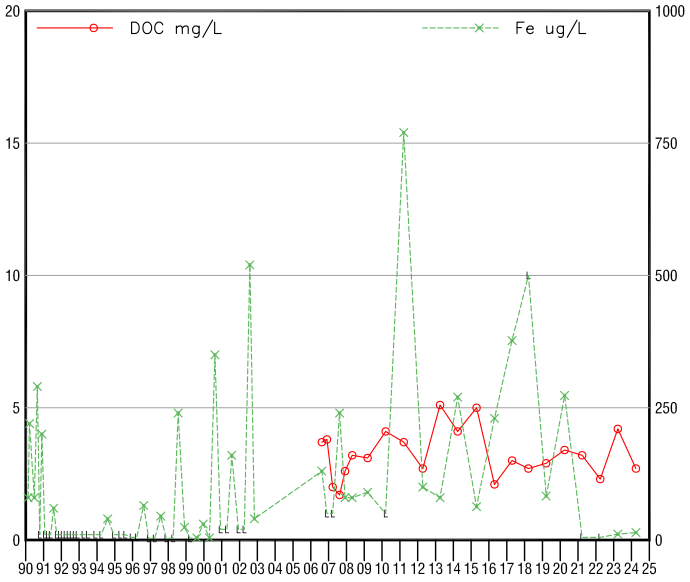
Stand Pipe Piezometer
Screen 187.5 - 186.9 masl

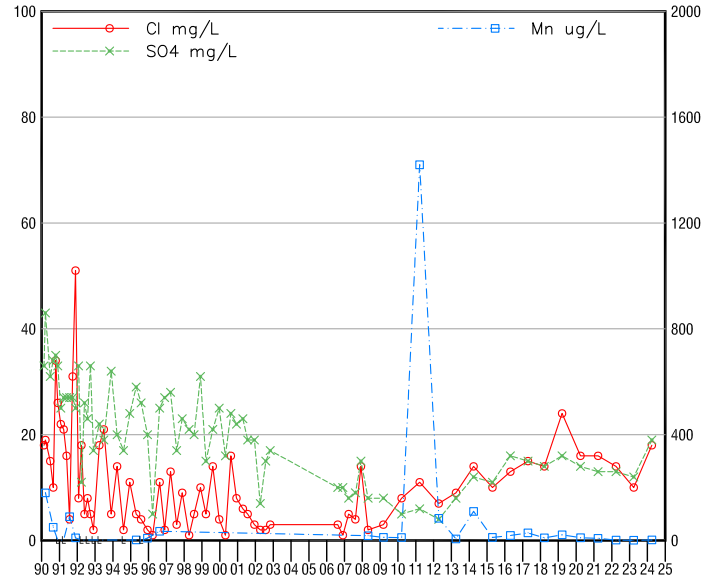


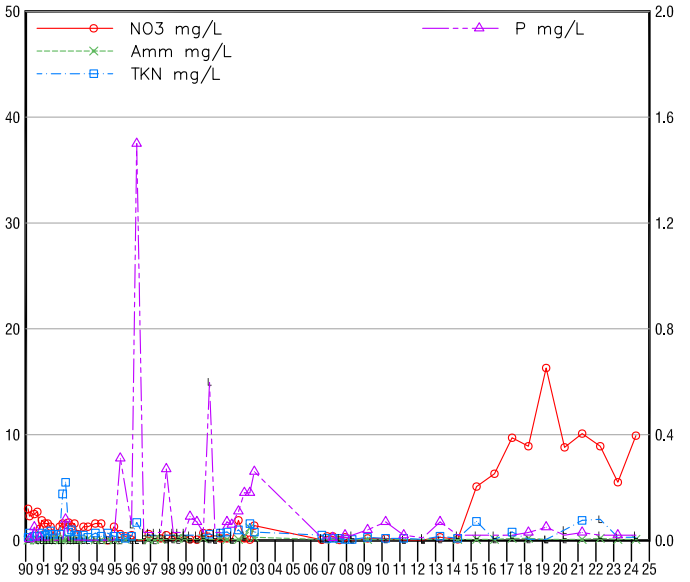
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW1824	256	496	339	7.4	29	44	88	28.7	6.7	1.79		<0.02	<0.001	0.36		2.0
28-Nov-93	HGW1825	263	575	328	7.6	30	36	82	29.8	7.6	2		0.2	0.006	0.12		0.7
08-Aug-94	HGW1826	260	541	330	7.6	26	46	81	31.3	5.0	2.07		0.020	<0.002	0.07		-0.2
03-Aug-95	HGW1827	267		312		27	54	81	26.7				<0.03	<0.01	0.11		
16-Aug-96	HGW1828	237	610	447	7.9	22	51	116	38.3	11	4.68		0.045	<0.006	<0.1		19.5
01-Aug-97	HGW1829	282	617	368	8.0	19	53	89	35.3	6.0	3.51		0.06	0.044	<0.1		2.9
23-Jul-98	HGW1830	255	672	329	8.4	12	48	78	32.6	5.7	2.27		<0.05	<0.06	0.3		3.7
12-Aug-99	HGW1831	340	647	313	8.3	10	44	80	27.3	7.4	3.03		<0.05	<0.06	0.2		-8.8
15-Aug-00	HGW1832	296	656	378	8.1	11	50	92	35.7	6.1	3.28		<0.05	<0.06	<0.1		4.3
26-Jul-01	HGW1833	323	633	362	8.0	7	47	93	31.5	10	2.31		<0.05	<0.06	<0.1		0.7
08-Aug-02	HGW1834	303	639	364	8.0	6	42	92	32.8	6.6	2.09		<0.05	<0.06	0.3		3.8
15-Aug-06	37699	320	651	269		10	35	69	23.5	2.7	1.75	1.5	<0.05	<0.05	<0.1		-14.4
13-Aug-07	44442	319	588	345		6	34	90	29.1	5.5	2.17	<1	<0.05	<0.05	0.2		-0.1
18-Mar-08	48237	301	616	318		25	30	82	27.7	6.3	2.15	2	<0.05	<0.1	0.1	184	-4.6
09-Mar-09	54305	291	625	324	7.6	8	34	87	26.2	5.2	2.06	1.1	<0.05	<0.1	0.1	306	0.1
15-Mar-10	61254	302	677	335	7.7	10	28	91	26.4	5.8	2.18	1.5	<0.05	<0.05	0.1	432	0.9
21-Mar-11	67066	275	686	361	7.7	41	27	100	27.2	7.3	2.25	1.9	<0.05	<0.05	<0.1	404	2.7
16-Apr-12	73999	320	660	364	7.4	12	16	98	29.1	5.6	2.3	2.3	<0.05	<0.05	<0.1	400	3.6
03-Apr-13	81361	317	668	359	7.6	18	23	96	29.1	6.7	2.32	3.8	<0.05	<0.05	0.1	360	1.4
31-Mar-14	88757	276	670	332	7.7	19	22	90	26.3	6.8	2.2	<1	<0.05	<0.05	0.1	390	3.7
21-Apr-15	96463	335	656	315	7.5	12	21	85	24.9	5.3	2	2.2	<0.05	<0.05	0.1	390	-6.2
24-Apr-16	103860	307	645	339	7.7	11	24	91	27.1	6.3	2.3	1.1	<0.05	<0.05	0.1	380	1.4
19-Apr-17	112411	302	666	330	7.5	25	22	88	26.9	7.9	2	1.4	<0.05	<0.05	0.2	310	-1.2
21-Mar-18	120950	320	647	346	7.5	16	22	92	28.1	7.4	2.3	1.7	<0.5	<0.5	0.2	370	0.1
20-Mar-19	130489	272	760	357	7.7	62	25	96	28.3	15	2.6	2.2	<0.5	<0.5	0.1	430	1.1
31-Mar-20	139939	275	658	334	7.7	33	26	93	24.6	7.9	2.1	1.3	<0.5	<0.5	0.1	390	1.0
25-Mar-21	148776	286	673	321	7.7	28	30	85	26.7	9.9	2.2	1.7	<0.5	<0.5	0.1	400	-1.6
30-Mar-22	159376	284	662	339	7.7	18	32	93	26.2	7.9	2.8	1.4	<0.5	<0.5	0.2	390	2.7
27-Mar-23	169144	273	692	356	7.5	61	32	93	30.1	13	2.7	1.7	<0.05	<0.05	0.2	440	-0.4
02-Apr-24	179746	285	603	336	7.2	29	38	92	25.6	8.8	3.2	1.5	<0.05	<0.05	0.2	420	0.7
TOTAL SAMPLES		50	49	50	46	50	50	50	50	49	49	19	49	50	50	17	
AVERAGE 2024																	

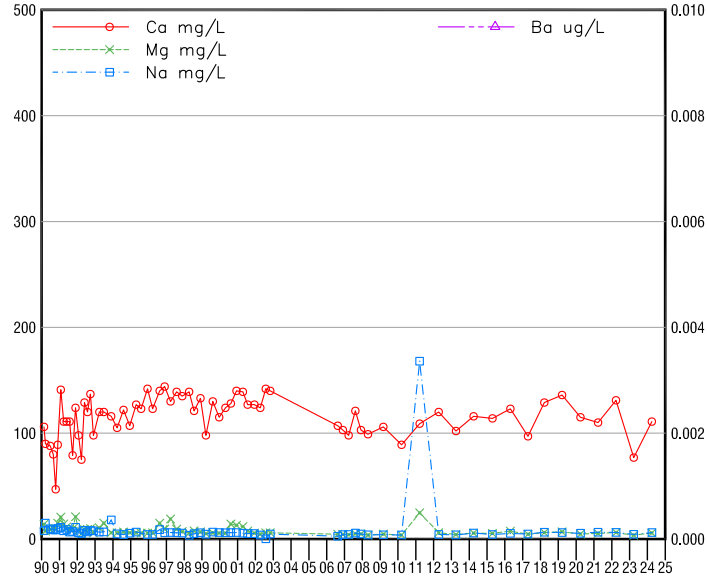
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



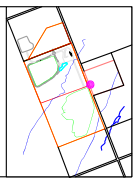








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-46-III

Shallow Overburden

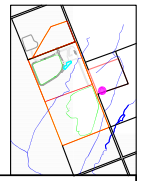
Screen 193.6 - 191.5 masl

CA008825 24 Mar 25	wsp	F324011

BH-46-III

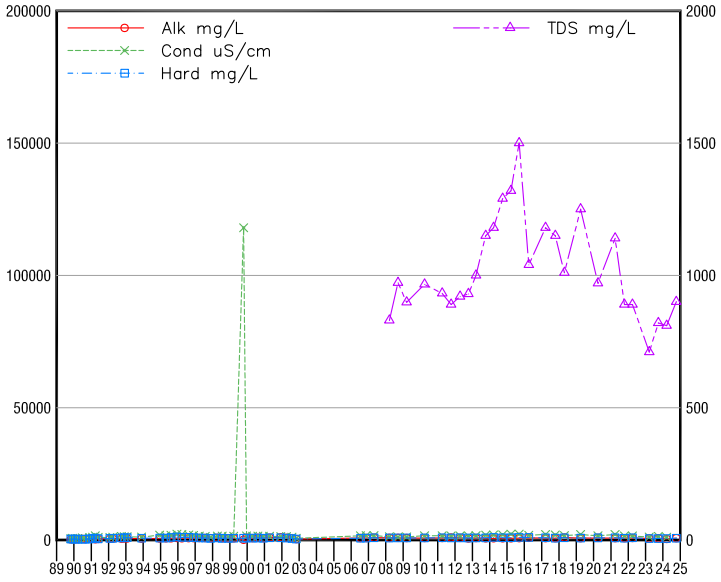
Shallow Overburden

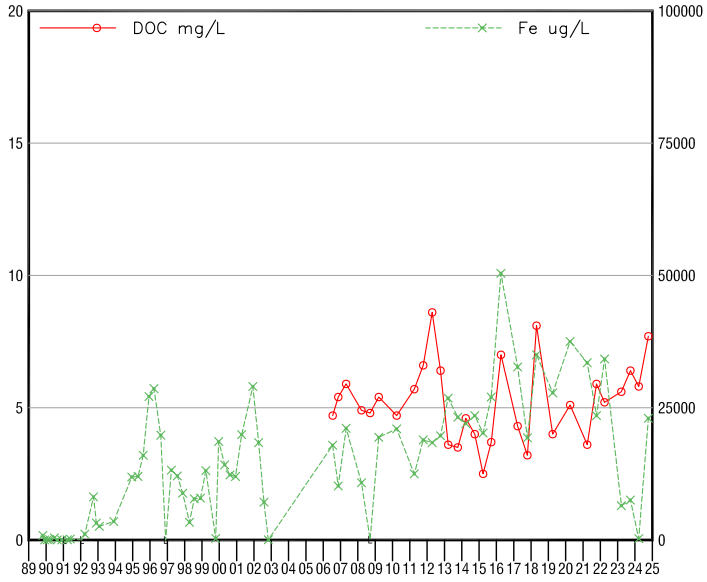
Monitoring Well
Screen 193.6 - 191.5 masl

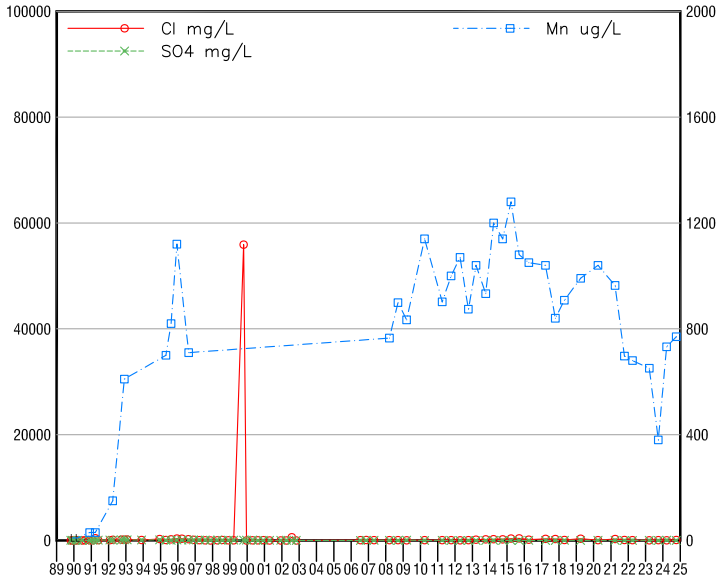


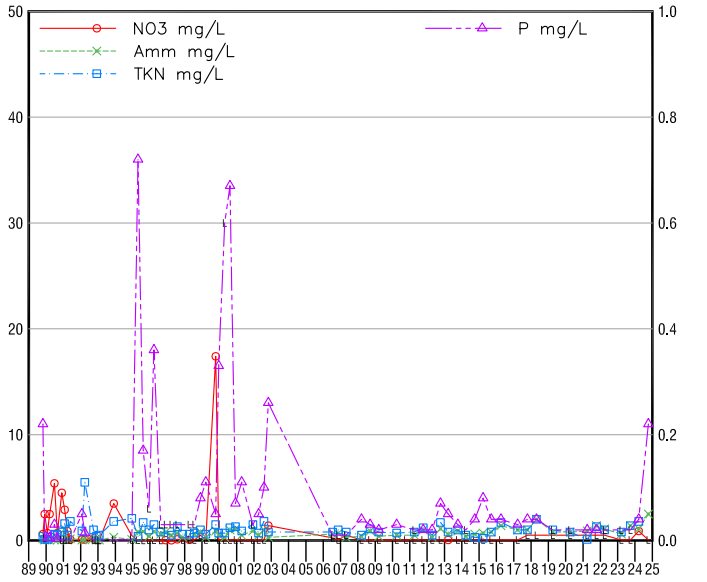
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
15-Aug-00	HGW1875	325	683	378	8.1	16	24	128	14.1	6.0	1.18		<0.05	<0.06	<0.1		2.7
08-Dec-00	HGW1876	347	684	403	7.6	8	22	140	13.0	6.1	1		0.2	<0.06	0.3		4.6
18-Apr-01	HGW1877	344	616	395	7.8	6	23	139	11.7	5.5	0.98		0.2	<0.06	0.1		4.0
26-Jul-01	HGW1878	337	610	348	7.9	5	19	127	7.5	5.1	0.55		<0.05	<0.06	<0.1		-0.4
10-Dec-01	HGW1879	332	536	340	7.7	3	19	127	5.6	5.1	0.43		1.9	<0.06	0.1		-1.5
10-Apr-02	HGW1880	306	532	329	8.0	2	7	124	4.6	3.8	0.39		0.2	<0.06	0.4		3.5
01-Aug-02	HGW1881	376	669	379	7.9	2	15	142	5.9	0.2	0.68		0.08	<0.06	1.2		-1.2
01-Nov-02	HGW1882	330	633	373	7.7	3	17	140	5.8	4.7	0.38		1.4	<0.06	0.3		3.9
15-Aug-06	37701	314	584	286		3	10	107	4.5	2.6	0.69	3.7	0.06	<0.05	<0.1		-5.7
27-Nov-06	39741	309	567	275		1	10	103	4.4	4.1	0.68	3.8	0.4	<0.05	<0.1		-6.1
26-Mar-07	41934	260	486	262		5	8	98	4.1	4.3	0.51	2	0.4	<0.05	0.1		-0.9
13-Aug-07	44443	303	486	322		4	9	121	4.9	5.6	0.75	1.7	0.05	<0.05	0.2		2.8
04-Dec-07	46508	268	568	277		14	15	103	4.8	4.7	0.61	2.6	0.3	<0.05	<0.1		-2.6
28-Apr-08	48969	268	477	261	7.6	2	8	99	3.7	3.9	0.61	3.2	<0.05	<0.1	<0.1	278	-1.5
09-Mar-09	54306	281	559	283	7.5	3	8	106	4.6	4.0	0.5	3.1	0.2	<0.1	0.1	360	-0.2
15-Mar-10	61255	237	508	237	7.6	8	5	89	3.7	3.8	<0.5	4.1	0.2	<0.05	<0.1	292	-1.7
21-Mar-11	67067	277	562	374	7.6	11	6	109	24.7	168	7.77	3.7	<0.05	<0.05	<0.1	342	43.1
16-Apr-12	74000	313	611	324	7.4	7	4	120	6.0	4.3	0.51	2.7	<0.05	<0.05	<0.1	350	1.2
03-Apr-13	81362	250	499	272	7.6	9	8	102	4.2	3.9	0.52	**5.1**	0.3	<0.05	<0.1	310	1.8
31-Mar-14	88758	257	598	313	7.5	14	12	116	5.6	5.6	<0.5	4.1	0.1	<0.05	0.1	360	5.9
21-Apr-15	96464	310	648	307	7.3	10	11	114	5.3	4.3	<0.5	5	5.1	<0.05	0.1	300	-5.6
24-Apr-16	103861	284	660	337	7.6	13	16	123	7.4	5.3	0.5	2.1	6.3	<0.05	0.1	370	1.2
19-Apr-17	112413	215	558	261	7.5	15	15	97	4.5	4.7	<0.5	3	9.7	<0.05	0.2	380	-2.3
21-Mar-18	120952	300	678	347	7.3	14	14	129	6.1	6.4	<0.5	2.7	8.9	<0.5	0.2	380	-0.4
20-Mar-19	130490	259	742	368	7.6	24	16	136	6.8	6.1	0.5	2.9	**16.3**	<0.5	<0.1	460	1.8
31-Mar-20	139941	232	604	306	7.7	16	14	115	4.7	5.4	<0.5	3.4	8.8	<0.5	<0.1	380	3.0
25-Mar-21	148777	257	635	297	7.6	16	13	110	5.3	6.4	<0.5	3.2	**10.1**	<0.5	0.1	390	-2.9
30-Mar-22	159377	286	696	353	7.6	14	13	131	6.2	6.2	<0.5	2.3	8.9	<0.05	0.2	420	2.2
27-Mar-23	169145	185	439	208	7.5	10	12	77	3.6	4.4	<0.5	4.2	5.5	<0.05	0.1	310	-2.9
02-Apr-24	179747	263	635	301	7.1	18	19	111	5.7	6.1	0.8	2.7	9.9	<0.05	0.1	440	3.0
TOTAL SAMPLES		70	69	70	64	70	70	70	70	69	69	22	70	70	70	17	
AVERAGE 2024																	

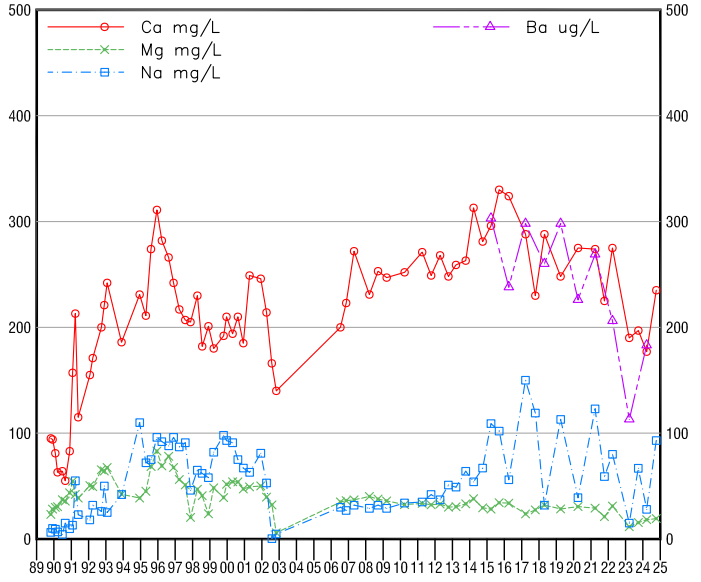
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



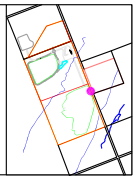








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-48

Shallow Overburden

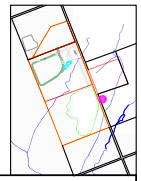
Screen 194.1 - 191.1 masl

CA008825 24 Mar 25	wsp	F324012

BH-48

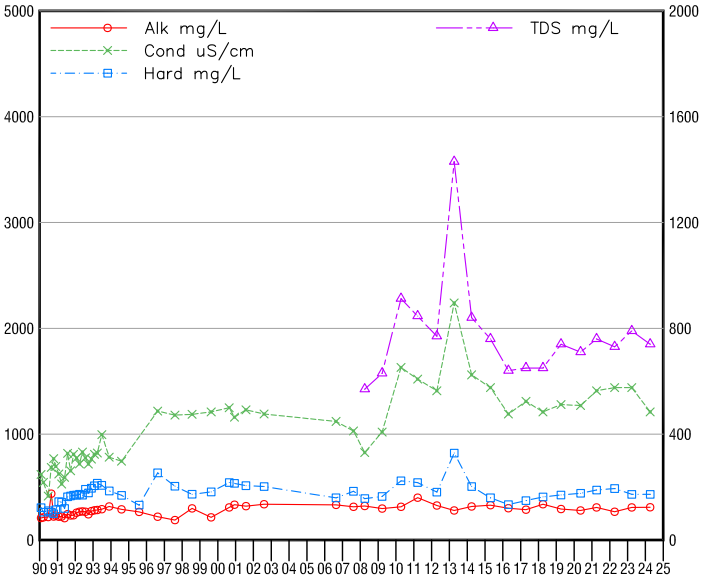
Shallow Overburden

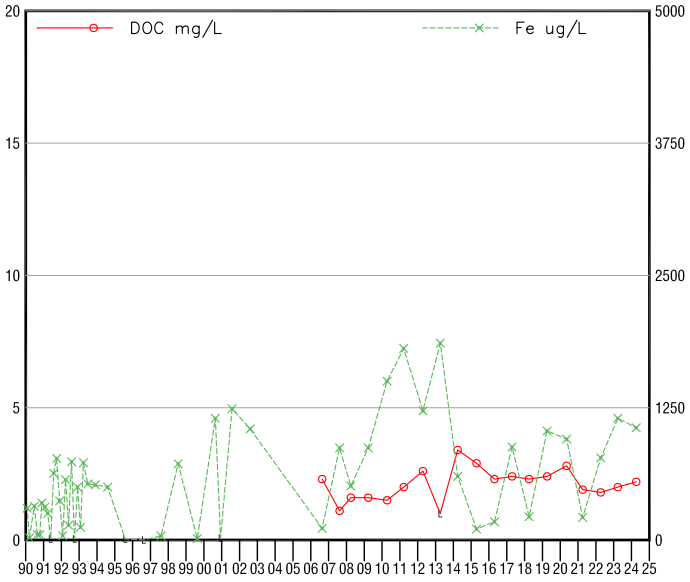
Monitoring Well
Screen 194.1 - 191.1 masl

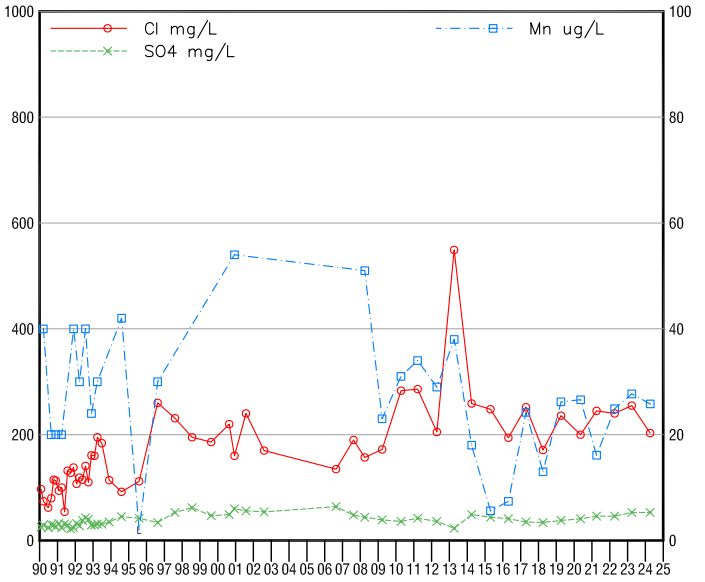


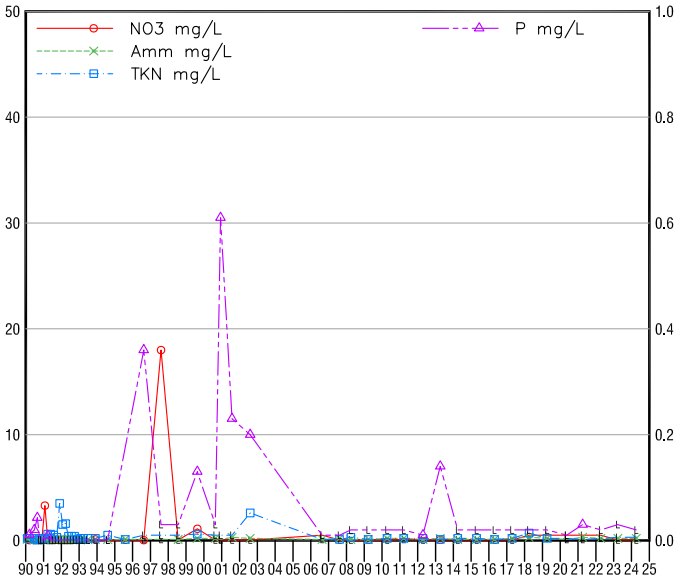
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
14-Nov-06	39480	770	1680	706		100	26	223	36.3	27	1.2	**5.4**	<0.05	<0.05	0.7		-8.7
30-Apr-07	42583	897	1640	832		50	20	272	37.0	32	1.17	**5.9**	<0.5	<0.5	0.3		-2.5
18-Mar-08	48236	793	1230	742		56	18	231	40.2	29	1.22	4.9	<0.05	<0.1	0.4	830	-3.6
16-Sep-08	51303	794	1080	787	7.1	50	5	253	37.7	32	<0.5	4.8	<0.05	<0.1	0.9	972	-0.6
16-Mar-09	54432	738	1150	765	7.2	37	58	247	36.0	29	1.26	**5.4**	<0.05	<0.1	0.4	898	0.9
29-Mar-10	61619	774	1600	763	6.7	64	13	252	32.5	34	1.55	4.7	<0.05	<0.05	0.5	966	0.0
12-Oct-10	64599												<0.05				
06-Apr-11	67365	754	1570	815	6.9	49	21	271	33.7	35	1.59	**5.7**	<0.05	<0.05	0.5	932	4.1
11-Oct-11	70805	949	1530	755	6.7	66	1	249	32.3	42	2	**6.6**	<0.05	<0.05	1	890	-8.1
16-Apr-12	73997	784	1520	806	6.6	46	8	268	33.1	37	1.78	**8.6**	<0.05	<0.05	0.3	920	3.6
09-Oct-12	77778	560	1540	743	6.7	74	9	248	30.1	51	2.12	**6.4**	<0.05	<0.05	1.1	930	14.2
19-Mar-13	81053	718	1670	772	6.6	140	10	259	30.5	49	1.89	3.6	0.05	<0.05	0.6	1000	0.4
09-Oct-13	85638	626	1830	793	6.8	211	7	263	33.2	64	2.1	3.5	<0.05	<0.05	0.9	1150	2.6
25-Mar-14	88681	650	1920	938	6.6	236	19	313	38.0	54	1.7	4.6	<0.05	<0.05	0.4	1180	4.6
01-Oct-14	92761	652	1980	823	6.7	222	2	281	29.5	67	2.2	4	<0.05	<0.05	0.6	1290	2.5
26-Mar-15	95964	630	2220	856	6.8	**378**	8	296	28.3	109	2	2.5	<0.05	<0.05	0.7	1320	-1.6
14-Sep-15	99616	676	2210	965	6.5	**387**	8	330	34.3	102	2.3	3.7	<0.05	<0.05	0.8	1500	0.5
05-Apr-16	103411	810	1800	949	6.8	150	19	324	33.9	56	1.8	**7**	<0.05	<0.05	1.4	1040	5.7
23-Mar-17	111768	689	2070	817	6.8	**300**	9	288	23.7	150	2.4	4.3	<0.05	<0.05	1	1180	3.7
16-Oct-17	117170	693	1920	688	6.9	**265**	11	230	27.5	119	2.3	3.2	<0.5	<0.5	1	1150	-4.4
25-Apr-18	121895	917	1650	851	6.5	93	23	288	32.0	32	1.7	**8.1**	<0.5	<0.5	2	1010	-3.9
03-Apr-19	130809	712	2060	736	6.7	**335**	14	248	28.4	113	2.2	4	<0.5	<0.5	0.8	1250	-7.2
02-Apr-20	139976	787	1580	813	6.6	76	23	275	30.6	39	1.4	**5.1**	<0.5	<0.5	0.8	970	2.7
29-Mar-21	148826	704	2070	804	6.6	**264**	16	274	29.2	123	2	3.6	<0.5	<0.5	0.9	1140	2
12-Oct-21	154589	689	1520	649	6.7	83	12	225	21.1	59	1.7	**5.9**	<0.5	<0.5	1.4	890	0.5
31-Mar-22	159433	774	1510	815	6.7	69	14	275	31.1	80	1.9	**5.2**	<0.5	<0.5	1.1	890	8.8
20-Mar-23	168876	570	1080	522	6.6	19	31	190	11.6	15	0.5	**5.6**	<0.05	<0.05	0.6	710	-5.1
26-Sep-23	2023A027	651	1350	556	6.8	67	7	197	15.5	66.8	1.6	**6.4**	<0.05	<0.05	1.4	820	1.5
20-Mar-24	179418	406	1040	517	7.0	23	66	177	18.2	28	1.6	**5.8**	0.9	0.06	1.1	810	8.1
09-Oct-24	185176	712		666	6.6	107	6	235	19.3	93	2.6	**7.7**	<0.05	<0.05	2.5	900	3.0
TOTAL SAMPLES		70	69	70	64	70	69	70	70	70	70	30	71	70	70	27	
AVERAGE 2024		559		592	6.8	65	36	206	18.8	61	2.1	6.75	0.5	<0.05	1.8	855	

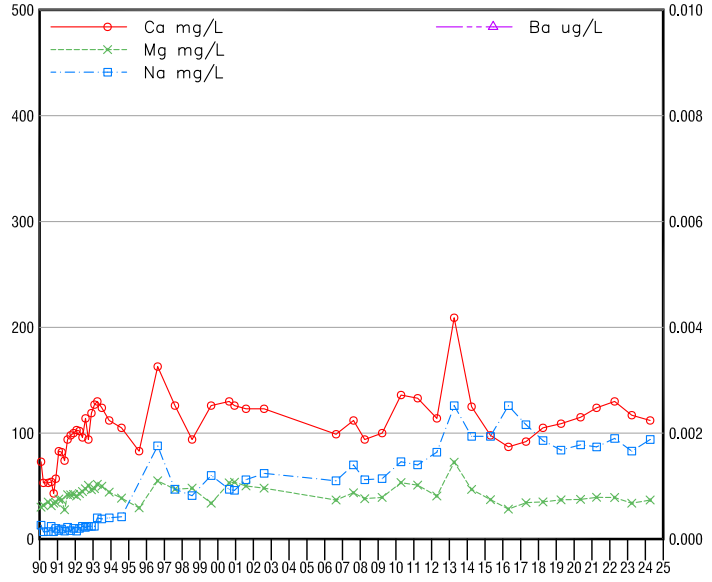
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



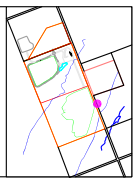








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-50-II

Overburden Formation

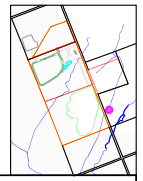
Screen 186.7 - 186.1 masl

CA008825 24 Mar 25	wsp	F324013

BH-50-II

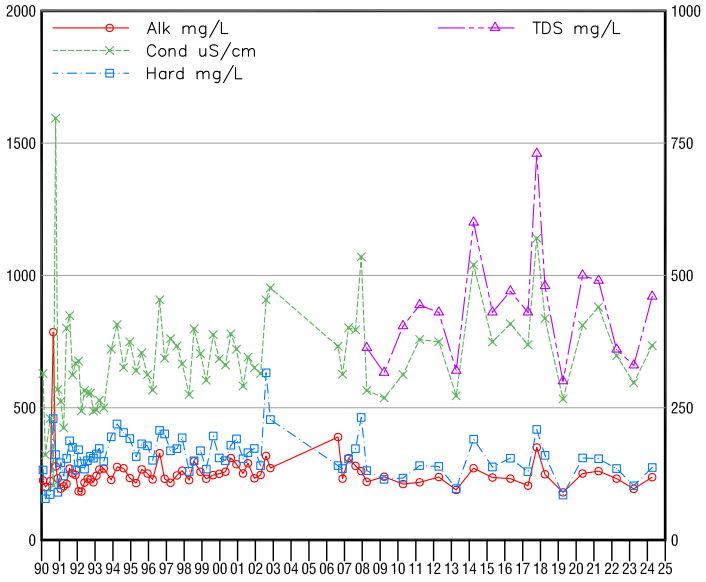
Overburden Formation

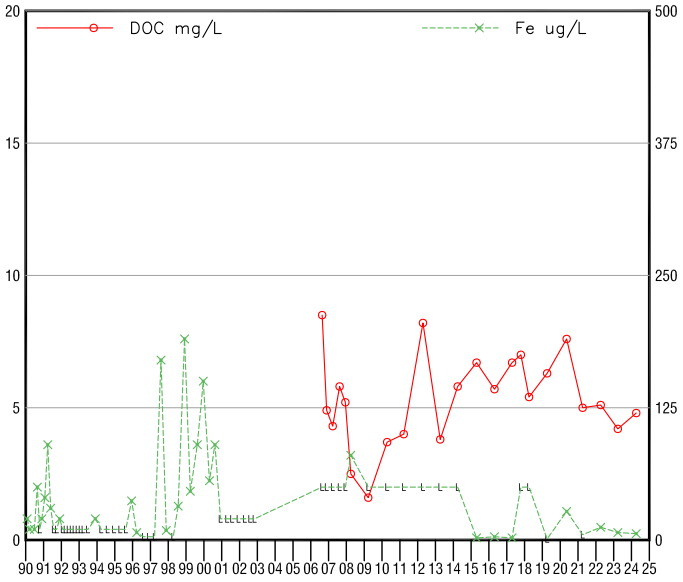
Stand Pipe Piezometer
Screen 186.7 - 186.1 masl

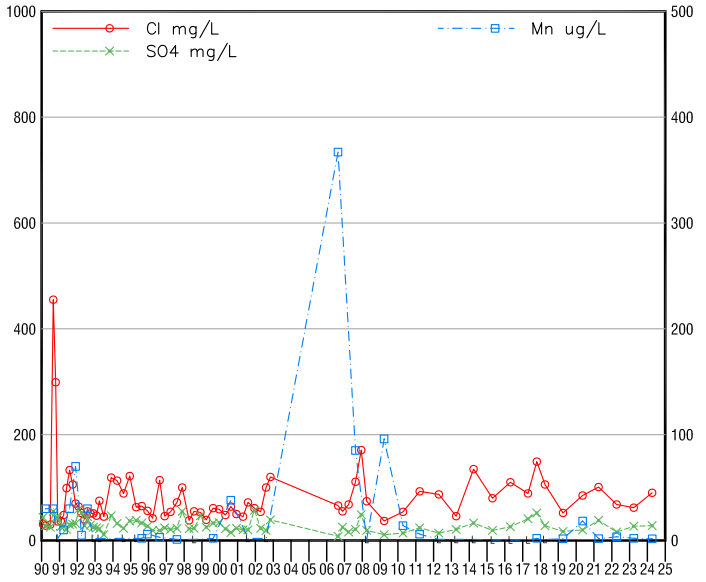


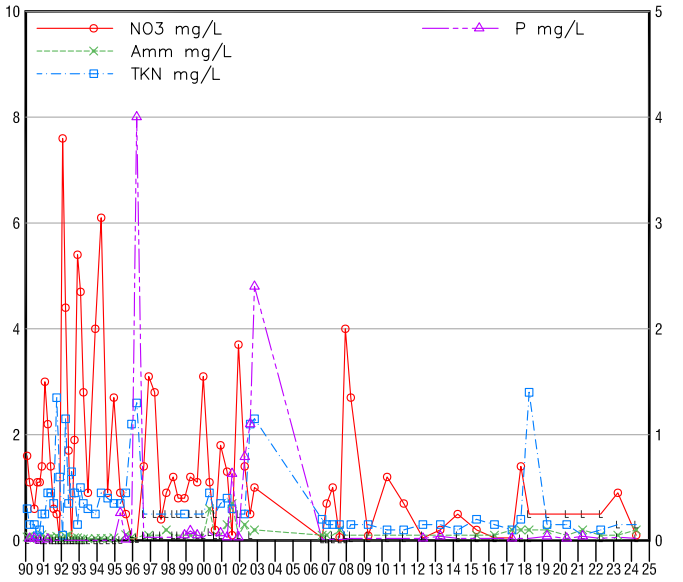
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-93	HGW2374	317	782	463	7.3	114	35	112	44.3	20	2.67		0.1	0.001	0.07		-0.5
08-Aug-94	HGW2375	289	745	422	7.5	92	45	105	38.6	21	1.11		<0.02	0.16	0.09		0.5
03-Aug-95	HGW2376	265		329		112	42	83	29.4				<0.03	<0.01	0.1		
16-Aug-96	HGW2377	220	1218	634	7.7	**260**	34	163	55.0	88	4.92		0.037	<0.006	<0.1		14.3
05-Aug-97	HGW2378	188	1180	508	7.7	231	53	126	47.0	47	1.98		**18.0**	0.009	<0.1		-1.6
23-Jul-98	HGW2379	299	1187	432	8.2	195	62	94	48.0	41	3.3		<0.05	<0.06	0.1		-9.6
19-Aug-99	HGW2380	214	1210	454	8.2	186	47	126	33.8	60	4.6		1.1	<0.06	0.2		5.6
23-Aug-00	HGW2381	308	1250	543	7.9	220	49	130	53.0	47	5.78		<0.05	<0.06	0.2		-1.1
08-Dec-00	HGW2382	333	1160	535	7.7	160	60	126	53.6	46	5.74		<0.05	<0.06	<0.1		1.8
01-Aug-01	HGW2383	320	1230	513	7.7	240	56	123	50.1	56	2.73		<0.05	<0.06	0.3		-5.6
08-Aug-02	HGW2384	337	1190	505	7.9	170	54	123	48.0	62	2.82		<0.05	<0.06	0.2		0.9
21-Aug-06	37847	332	1120	398		135	64	99	36.8	55	2.46	2.3	<0.5	<0.5	0.1		-6.2
14-Aug-07	44476	314	1030	460		190	48	112	43.7	70	2.99	1.1	<0.05	<0.05	0.2		-1.1
01-Apr-08	48468	321	826	391		157	44	94	38.1	56	2.65	1.6	<0.05	<0.1	0.1	570	-6.4
23-Mar-09	54641	297	1020	411	7.6	172	39	100	39.3	57	2.64	1.6	<0.05	<0.1	0.1	630	-3.6
14-Apr-10	61886	314	1630	559	7.5	**283**	36	136	53.3	73	3.18	1.5	<0.05	<0.05	0.2	912	-1.8
21-Mar-11	67070	399	1520	542	7.5	**286**	42	133	50.9	70	3.35	2	<0.1	<0.1	0.2	846	-9.4
17-Apr-12	74038	325	1410	452	7.3	205	36	114	40.6	82	2.98	2.6	<0.05	<0.05	0.1	770	-1.2
09-Apr-13	81498	278	2240	821	7.3	**549**	23	209	72.6	126	4.13	<1	0.06	<0.05	0.2	1430	1.2
01-Apr-14	88811	317	1560	505	7.5	**259**	49	125	46.8	97	3	3.4	<0.05	<0.05	0.1	840	-0.8
22-Apr-15	96518	328	1440	398	7.4	248	44	98	37.2	97	3	2.9	<0.05	<0.05	0.1	760	-8.3
24-Apr-16	103863	300	1190	334	7.7	194	41	87	28.3	126	3.1	2.3	<0.05	<0.05	0.1	640	-0.3
19-Apr-17	112405	286	1310	372	7.7	**252**	35	92	34.3	108	2.9	2.4	<0.05	<0.05	0.2	650	-5.0
03-Apr-18	121268	338	1210	407	7.5	171	34	105	35.1	93	3.1	2.3	<0.5	<0.5	0.3	650	0.0
07-Apr-19	130910	293	1280	425	7.6	236	38	109	37.0	84	2.8	2.4	<0.5	<0.5	0.2	740	-4.0
13-May-20	140873	279	1270	441	7.7	200	41	115	37.4	89	2.8	2.8	<0.5	<0.5	<0.1	710	2.9
06-Apr-21	149006	307	1410	472	7.5	245	46	124	39.4	87	3.1	1.9	<0.5	<0.5	0.3	760	-2.4
11-Apr-22	159715	266	1440	486	7.3	240	46	130	39.2	95	3.4	1.8	<0.5	<0.5	0.2	730	3.4
28-Mar-23	169186	308	1440	431	7.5	**255**	53	117	33.8	83	3.1	2	<0.05	<0.05	0.2	790	-7.9
09-Apr-24	179939	309	1210	431	7.1	203	53	112	36.8	94	3.2	2.2	<0.05	<0.05	0.2	740	0.2
TOTAL SAMPLES		51	50	51	47	51	51	51	51	50	50	19	51	51	51	17	
AVERAGE 2024																	

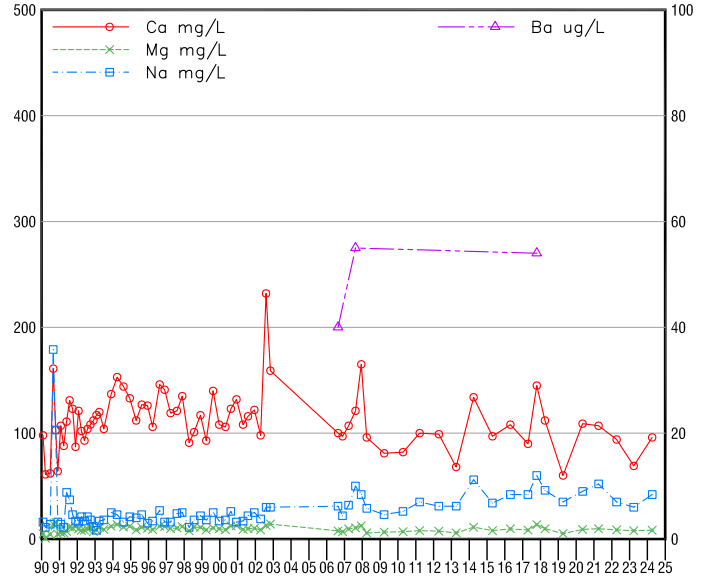
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



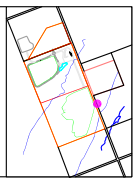








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-50-III

Shallow Overburden

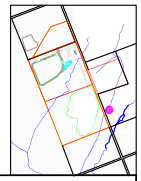
Screen 193.5 - 187.7 masl

CA008825 24 Mar 25	wsp	F324014

BH-50-III

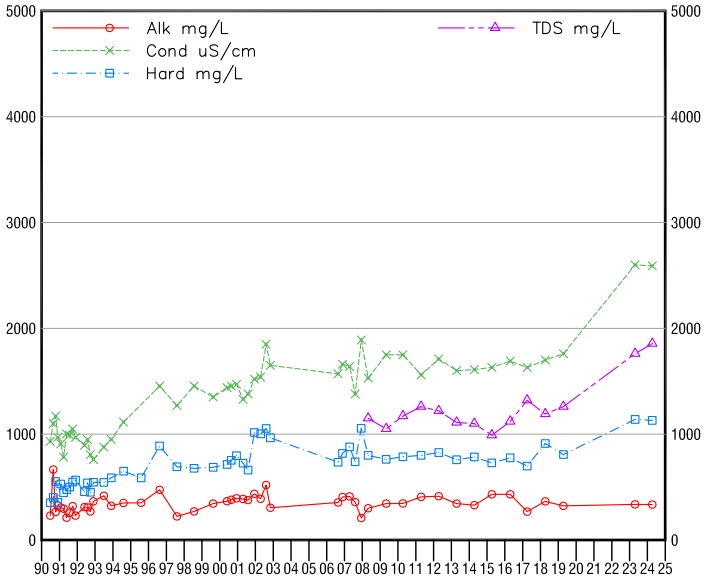
Shallow Overburden

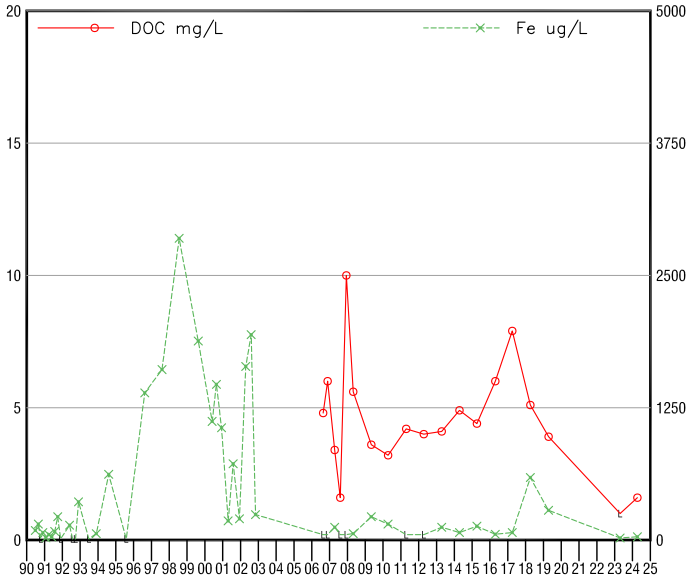
Monitoring Well
Screen 193.5 - 187.7 masl

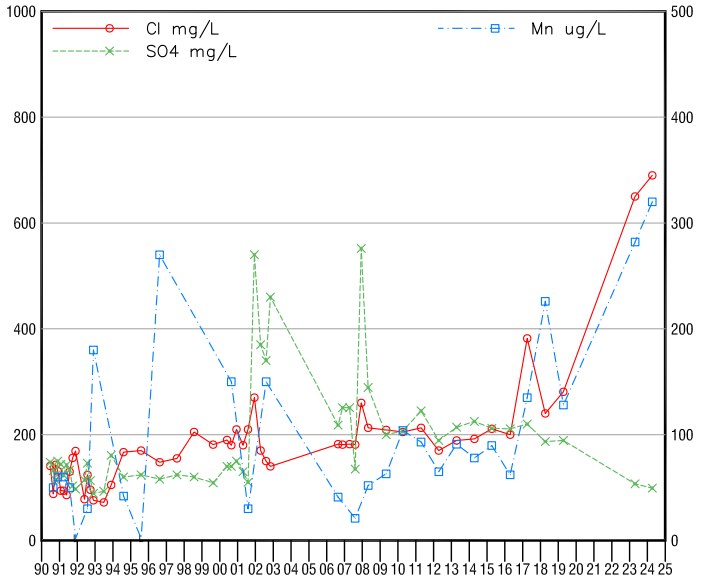


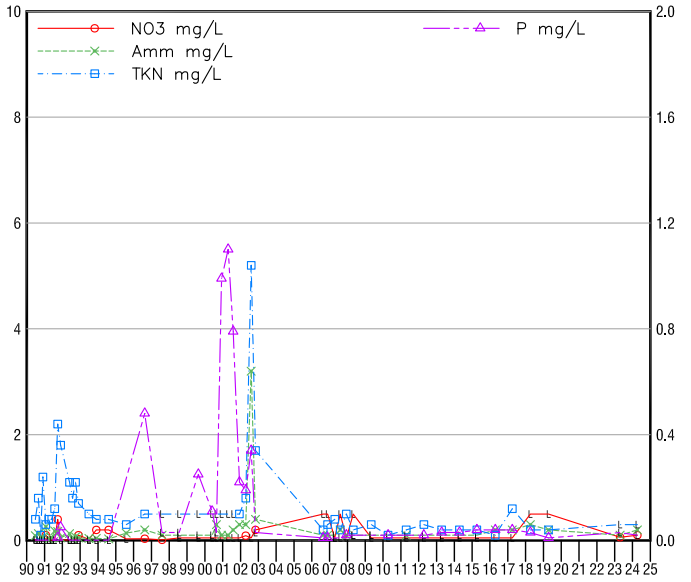
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
08-Dec-00	HGW2427	286	721	382	7.6	50	23	132	12.7	16	1.33		1.8	<0.06	<0.1		4.0
22-Apr-01	HGW2428	251	582	307	8.0	45	20	108	9.0	17	0.87		1.3	<0.06	0.3		1.0
01-Aug-01	HGW2429	290	691	330	7.8	72	20	116	9.8	22	1.12		0.1	<0.06	0.7		-3.8
10-Dec-01	HGW2430	233	651	346	7.8	61	57	122	10.1	25	0.8		3.7	<0.06	<0.1		1.2
18-Apr-02	HGW2431	246	629	281	7.9	54	23	98	8.6	19	0.78		1.4	<0.06	0.3		-4.1
08-Aug-02	HGW2432	318	908	632	8.0	100	19	232	12.9	30	1.76		0.5	<0.06	<0.1		18.5
04-Nov-02	HGW2433	272	953	455	7.7	120	39	159	14.1	30	1.65		1.0	<0.06	0.2		3.7
21-Aug-06	37825	389	732	281		66	8	100	7.7	31	1.67	**8.5**	<0.05	<0.05	0.1		-16.4
21-Nov-06	39648	232	626	270		55	25	97	6.9	22	0.89	4.9	0.7	<0.05	0.1		-2.8
26-Mar-07	41939	310	802	306		68	16	107	9.5	32	1.06	4.3	1.0	<0.05	<0.1		-6.1
14-Aug-07	44470	280	794	345		111	21	121	10.5	50	1.93	**5.8**	0.06	<0.05	0.2		-0.3
10-Dec-07	46638	260	1070	463		171	49	165	12.5	42	2.37	**5.2**	4.0	<0.05	<0.1		-0.8
01-Apr-08	48469	220	565	262		74	19	96	5.7	29	0.56	2.5	2.7	<0.1	<0.1	363	-4.0
23-Mar-09	54643	239	537	229	7.7	37	11	81	6.5	23	1.07	1.6	0.09	<0.1	<0.1	316	-3.6
14-Apr-10	61887	211	625	234	7.7	54	14	82	6.9	26	1.17	3.7	1.2	<0.5	<0.1	404	-2.2
21-Mar-11	67071	218	758	281	7.7	93	24	100	7.9	35	1.34	4	0.7	<0.05	<0.1	444	-2.5
17-Apr-12	74044	238	749	278	7.5	87	14	99	7.4	31	1.8	**8.2**	<0.05	<0.05	<0.1	430	-4.0
09-Apr-13	81499	189	545	194	7.7	46	21	68	5.7	31	1.15	3.8	0.2	<0.05	<0.1	320	-2.8
01-Apr-14	88812	271	1040	381	7.5	135	33	134	11.2	56	1.5	**5.8**	0.5	<0.05	<0.1	600	0.7
22-Apr-15	96519	236	749	276	7.6	80	19	97	7.9	34	1.2	**6.7**	0.2	<0.05	0.1	430	-2.4
24-Apr-16	103864	232	817	309	7.7	110	26	108	9.6	42	2.6	**5.7**	<0.05	<0.05	0.1	470	-1.4
19-Apr-17	112406	205	738	258	7.8	89	41	90	8.4	42	2	**6.7**	<0.05	<0.05	0.2	430	-2.8
16-Oct-17	117171	350	1140	418	7.2	149	52	145	13.6	60	2.6	**7**	1.4	<0.5	0.2	730	-5.7
03-Apr-18	121269	248	837	320	7.5	106	28	112	9.7	46	1.6	**5.4**	<0.5	<0.5	0.2	480	-0.4
07-Apr-19	130911	180	533	170	7.9	52	17	60	5.1	35	1.5	**6.3**	<0.5	<0.5	0.2	300	-4.5
13-May-20	140875	251	811	310	7.8	85	20	109	9.1	45	2.6	**7.6**	<0.5	<0.5	<0.1	500	2.2
06-Apr-21	149007	260	880	307	7.5	101	38	107	9.7	52	1.9	5	<0.5	<0.5	0.2	490	-2.2
11-Apr-22	159716	232	697	270	7.5	68	16	94	8.6	35	2.1	**5.1**	<0.5	<0.5	0.1	360	0.8
28-Mar-23	169188	193	594	205	7.7	62	27	69	7.8	30	1.4	4.2	0.9	<0.05	0.1	330	-6.9
09-Apr-24	179940	237	735	274	7.2	90	28	96	8.3	42	1.9	4.8	0.1	<0.05	0.2	460	2.1
TOTAL SAMPLES		72	72	72	66	72	72	72	72	72	72	23	72	72	72	18	
AVERAGE 2024																	

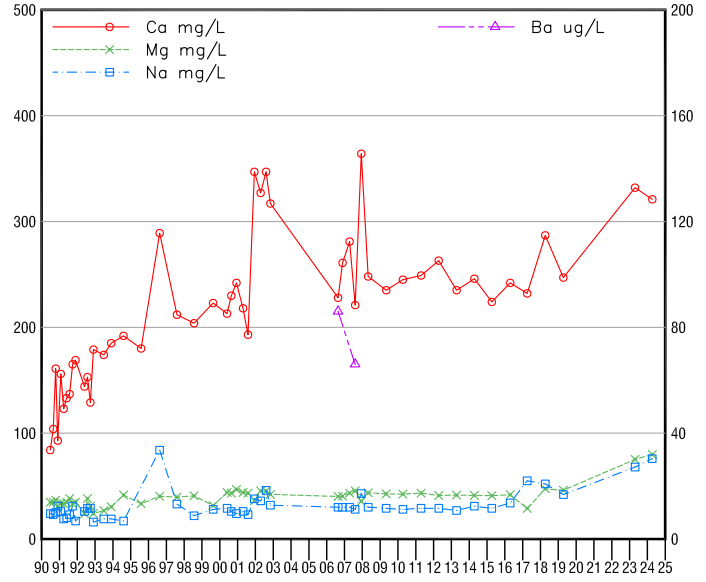
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-52-II

Shallow Overburden

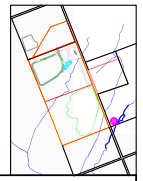
Screen 188.0 - 187.2 masl

CA008825 24 Mar 25	wsp	F324015

BH-52-II

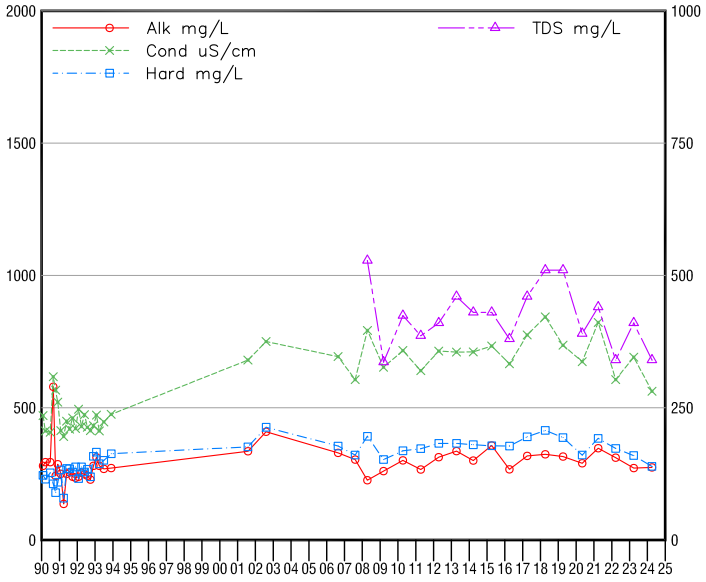
Shallow Overburden

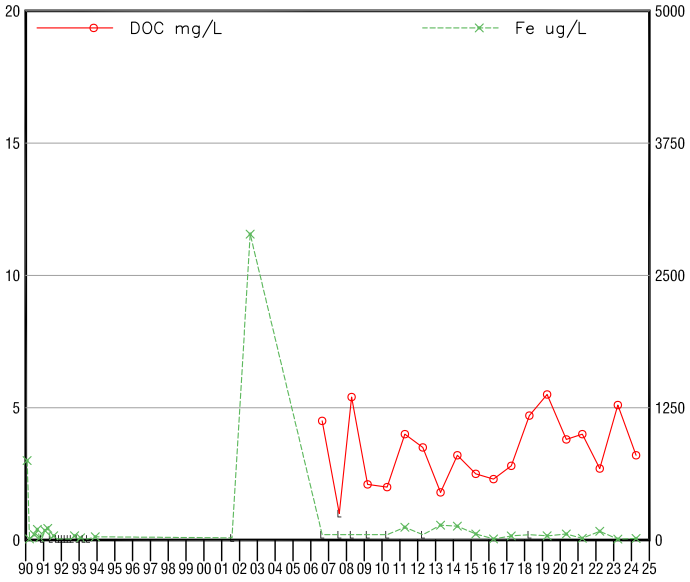
Monitoring Well
Screen 188.0 - 187.2 masl

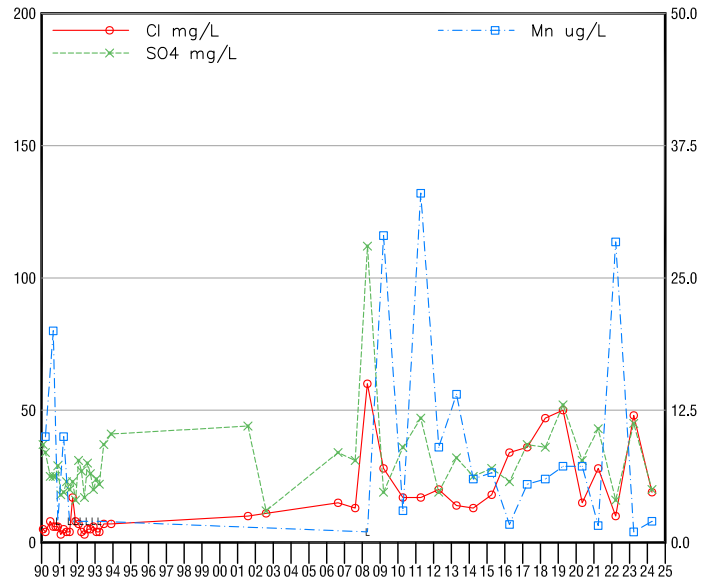


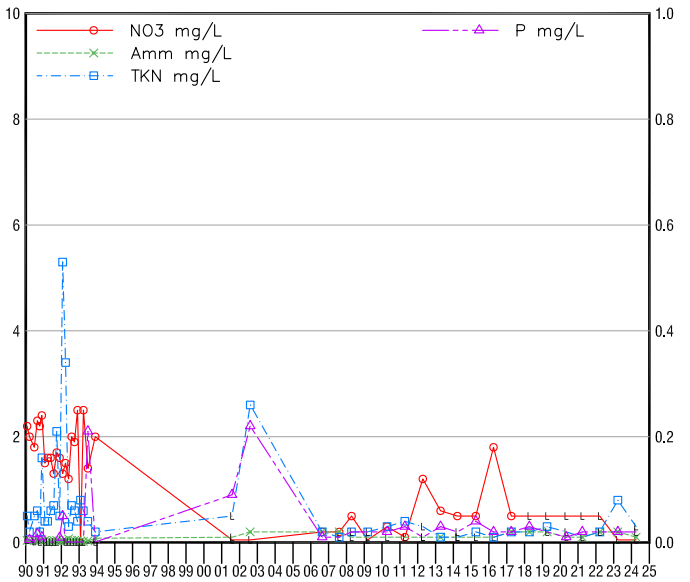
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
23-Jul-98	HGW2542	269	1455	677	7.7	205	120	204	40.8	22	2.31		<0.05	<0.06	<0.1		3.5
19-Aug-99	HGW2543	343	1350	687	8.0	181	109	223	31.6	28	3.05		<0.05	<0.06	<0.1		2.9
30-May-00	HGW2544	366	1440	713	7.4	190	140	213	44.0	29	2.47		<0.05	<0.06	<0.1		0.1
24-Aug-00	HGW2545	380	1454	753	8.2	180	140	230	43.4	26	3.18		<0.05	<0.06	0.3		2.4
08-Dec-00	HGW2546	393	1470	797	7.7	210	150	242	46.9	24	2.91		<0.05	<0.06	0.1		0.5
23-Apr-01	HGW2547	387	1330	726	7.7	180	130	218	44.0	26	1.37		<0.05	<0.06	0.1		0.6
03-Aug-01	HGW2548	377	1380	660	7.6	210	110	193	43.3	23	1.74		<0.05	<0.06	0.2		-4.8
10-Dec-01	HGW2549	436	1520	1016	7.8	**270**	**540**	347	36.3	38	0.99		<0.05	<0.06	0.3		-11.2
18-Apr-02	HGW2550	389	1540	1003	7.8	170	370	327	45.4	36	1.02		0.09	<0.06	0.3		3.4
08-Aug-02	HGW2551	519	1850	1053	7.7	150	340	347	45.4	46	1.32		<0.05	<0.06	3.2		3.8
04-Nov-02	HGW2552	304	1650	965	7.8	140	460	317	42.2	32	1.38		0.2	<0.06	0.4		2.8
22-Aug-06	37829	354	1570	735		182	218	228	40.2	30	1.75	4.8	<0.5	<0.5	0.1		-2.2
21-Nov-06	39651	406	1660	818		181	251	261	40.5	30	1.45	**6**	<0.5	<0.5	0.1		-2.0
16-Apr-07	42342	411	1640	880		182	251	281	43.4	30	1.29	3.4	<0.05	<0.05	<0.1		1.0
07-Aug-07	44327	357	1380	739		181	135	221	45.5	28	1.87	1.6	<0.5	<0.5	0.2		3.2
10-Dec-07	46636	207	1890	1055		**260**	**552**	364	35.5	43	1.37	**10**	<0.05	<0.05	0.1		0.0
30-Apr-08	49010	300	1530	799		213	289	248	43.7	30	1.33	**5.6**	<0.5	<1	<0.1	1150	-2.0
04-May-09	55535	343	1750	762	7.4	209	200	235	42.6	29	1.25	3.6	<0.05	<0.1	<0.1	1050	-1.2
13-Apr-10	61860	345	1750	786	7.6	205	207	245	42.4	28	1.23	3.2	<0.05	<0.05	<0.1	1170	-0.1
20-Apr-11	67592	407	1560	800	7.2	213	245	249	43.4	29	1.33	4.2	<0.05	<0.05	0.1	1260	-5.3
16-Apr-12	74004	413	1710	826	7.2	170	189	263	41.1	29	1.35	4	<0.05	<0.05	<0.1	1220	2.3
17-Apr-13	81658	343	1600	758	7.5	189	214	235	41.5	27	1.23	4.1	<0.05	<0.05	<0.1	1110	-0.9
16-Apr-14	89113	329	1610	784	7.3	192	225	246	41.2	31	1.2	4.9	<0.05	<0.05	<0.1	1100	1.1
08-Apr-15	96183	431	1630	728	7.3	211	212	224	40.9	29	1.1	4.4	<0.05	<0.05	<0.1	990	-9.1
19-Apr-16	103708	432	1690	776	7.5	200	211	242	41.8	34	1.2	**6**	<0.05	<0.05	0.2	1120	-4.5
03-Apr-17	112041	268	1630	698	7.8	**382**	220	232	28.9	55	0.8	**7.9**	<0.05	<0.05	0.2	1320	-11.7
09-Apr-18	121418	365	1700	912	7.2	240	187	287	47.4	52	1.2	**5.1**	<0.5	<0.5	0.3	1190	6.8
16-Apr-19	131145	322	1760	807	7.4	**281**	189	247	46.1	42	1.3	3.9	<0.5	<0.5	0.2	1260	-0.8
24-Apr-23	169871	336	2600	1139	7.0	**650**	107	332	75.3	68	2.6	<1	0.06	<0.05	0.1	1760	-2.8
10-Apr-24	179980	335	2590	1130	7.0	**690**	99	321	79.8	76	2.8	1.6	0.1	<0.05	0.2	1855	3.5
TOTAL SAMPLES		50	49	50	43	50	50	50	50	49	49	19	50	50	50	14	
AVERAGE 2024																	

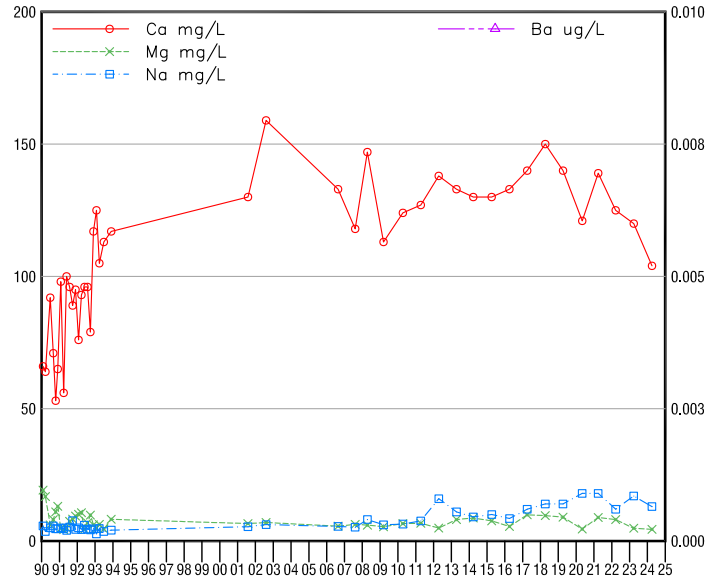
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



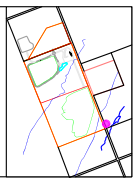








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-54-II

Shallow Overburden

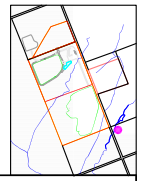
Screen 194.9 - 189.0 masl

CA008825 24 Mar 25	wsp	F324016

BH-54-II

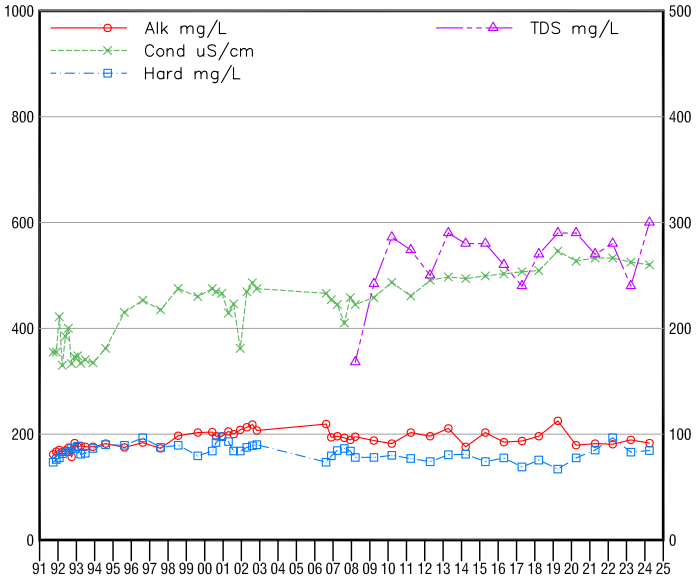
Shallow Overburden

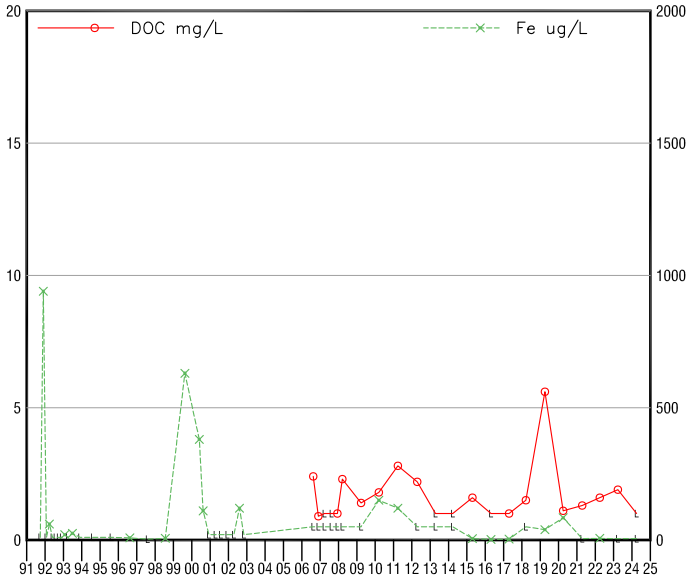
Monitoring Well
Screen 194.9 - 189.0 masl

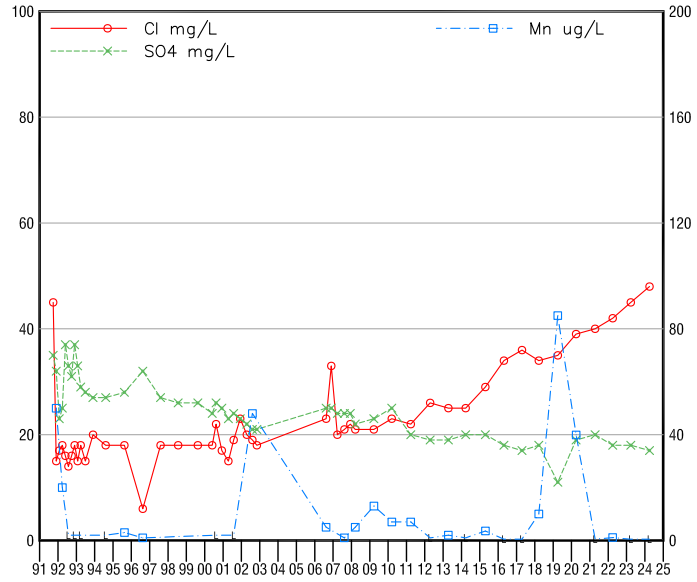


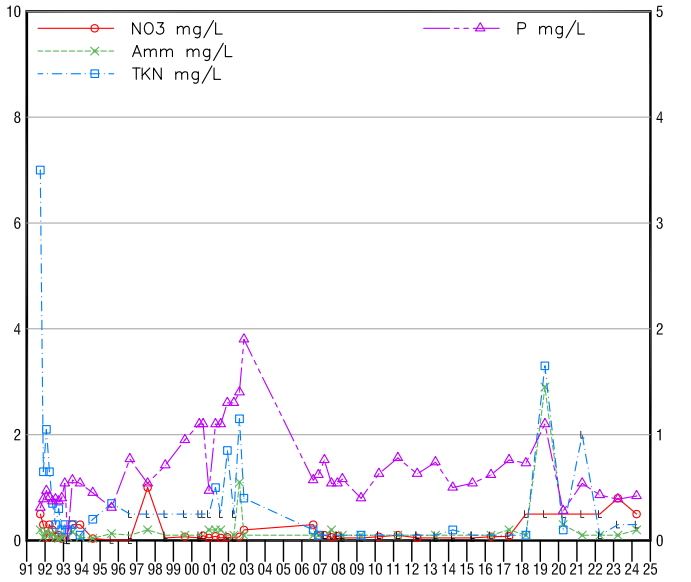
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Mar-92	HGW2629	254	429	276	7.6	4	27	93	10.7	4.3	1.82		1.5	<0.001	0.04		-0.9
28-May-92	HGW2630	248	474	257	7.8	3	17	96	4.4	6.0	0.47		1.2	<0.001	0.07		-0.6
28-Jul-92	HGW2631	243	426	267	7.8	5	30	96	6.9	4.5	1.15		2.0	<0.001	0.04		-1.7
28-Sep-92	HGW2632	228	413	239	7.5	5	26	79	9.8	4.2	1.25		1.9	<0.001	0.04		-3.5
28-Nov-92	HGW2633	280	432	316	7.6	6	20	117	6.1	4.6	6.63		2.5	<0.001	0.04		2.8
28-Jan-93	HGW2634	312	472	332	7.4	4	24	125	4.8	2.7	0.51		<0.02	<0.001	0.02		-0.5
28-Mar-93	HGW2635	280	412	288	7.4	4	22	105	6.3	4.7	0.63		2.5	<0.001	0.02		-3.0
28-Jun-93	HGW2636	269	446	301	7.6	7	37	113	4.5	3.6	0.45		1.4	<0.001	0.03		-2.1
28-Nov-93	HGW2637	272	475	326	7.3	7	41	117	8.2	4.1	0.95		2.0	<0.001	0.08		0.7
31-Jul-01	HGW2638	335	680	352	7.9	10	44	130	6.6	5.4	1.13		<0.05	<0.06	<0.1		-3.9
08-Aug-02	HGW2639	409	750	426	7.8	11	12	159	7.0	6.2	1.27		<0.05	<0.06	0.2		1.1
22-Aug-06	37834	329	693	355		15	34	133	5.6	5.5	0.93	4.5	0.2	<0.05	0.2		-2.2
07-Aug-07	44331	304	606	321		13	31	118	6.3	5.2	0.82	<1	0.2	<0.05	0.2		-3.1
15-Apr-08	48713	226	792	392		60	112	147	6.0	8.1	<0.5	**5.4**	0.5	<0.1	<0.1	528	-2.4
11-Mar-09	54364	260	653	304	7.7	28	19	113	5.4	6.1	<0.5	2.1	<0.05	<0.1	<0.1	336	-0.2
13-Apr-10	61858	301	716	337	7.8	17	36	124	6.6	6.4	0.85	2	0.3	<0.05	<0.1	424	-1.7
13-Apr-11	67486	266	640	345	7.7	17	47	127	6.7	7.6	0.61	4	0.1	<0.05	<0.1	386	3.3
16-Apr-12	74001	313	714	365	7.5	20	19	138	4.9	16	<0.5	3.5	1.2	<0.05	<0.1	410	4.5
15-Apr-13	81581	336	710	365	7.5	14	32	133	8.1	11	0.92	1.8	0.6	<0.05	0.1	460	0.1
25-Mar-14	88675	300	711	360	7.5	13	25	130	8.7	9.1	0.9	3.2	0.5	<0.05	<0.1	430	4.7
07-Apr-15	96146	357	733	356	7.7	18	28	130	7.6	10	0.8	2.5	0.5	<0.05	<0.1	430	-4.4
05-Apr-16	103415	267	666	355	7.7	34	23	133	5.5	8.5	<0.5	2.3	1.8	<0.05	<0.1	380	3.8
03-Apr-17	112042	318	775	390	7.5	36	37	140	9.9	12	0.9	2.8	0.5	<0.05	0.2	460	1.0
09-Apr-18	121416	324	843	414	7.2	47	36	150	9.6	14	0.9	4.7	<0.5	<0.5	0.2	510	2.1
07-Apr-19	130908	315	736	387	7.8	50	52	140	9.0	14	0.8	**5.5**	<0.5	<0.5	0.2	510	-2.4
05-May-20	140690	290	674	321	7.4	15	31	121	4.5	18	<0.5	3.8	<0.5	<0.5	<0.1	390	2.2
29-Mar-21	148820	347	822	384	7.2	28	43	139	8.9	18	0.7	4	<0.5	<0.5	0.1	440	-0.9
22-Mar-22	159171	311	606	346	7.3	10	16	125	8.1	12	<0.5	2.7	<0.5	<0.5	0.2	340	4.3
27-Mar-23	169147	272	691	319	7.5	48	45	120	4.8	17	<0.5	**5.1**	<0.05	<0.05	0.2	410	-4.0
04-Apr-24	179820	274	562	278	7.2	19	20	104	4.4	13	0.6	3.2	<0.05	<0.05	0.1	340	0.6
TOTAL SAMPLES		43	43	43	40	43	43	43	43	43	43	19	43	43	43	17	
AVERAGE 2024																	

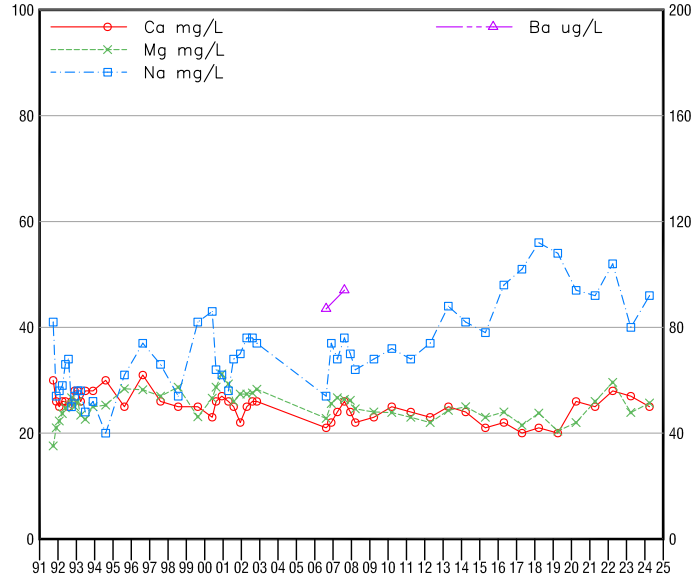
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



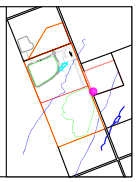








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-61-II

Overburden Formation

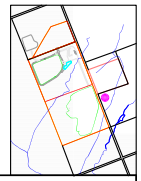
Screen 181.9 - 181.2 masl

CA008825 24 Mar 25	wsp	F324017

BH-61-II

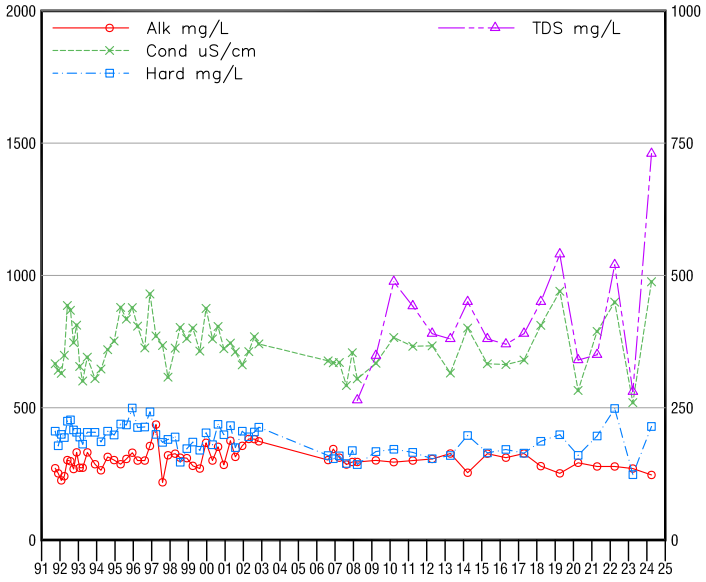
Overburden Formation

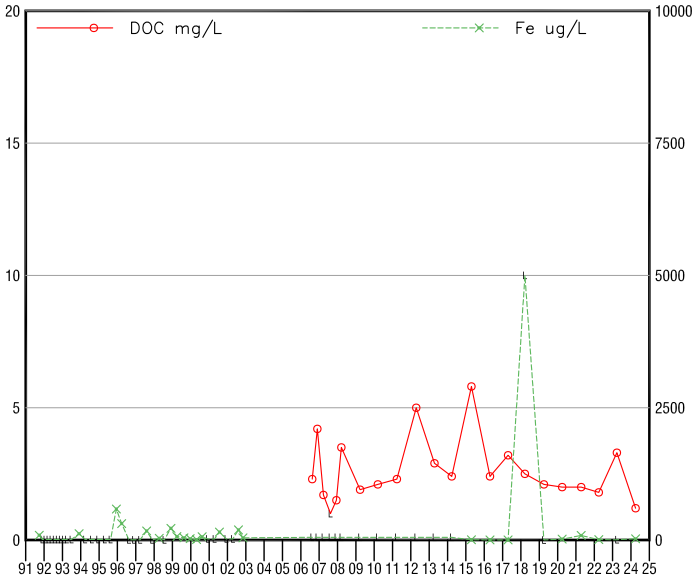
Stand Pipe Piezometer
Screen 181.9 - 181.2 masl

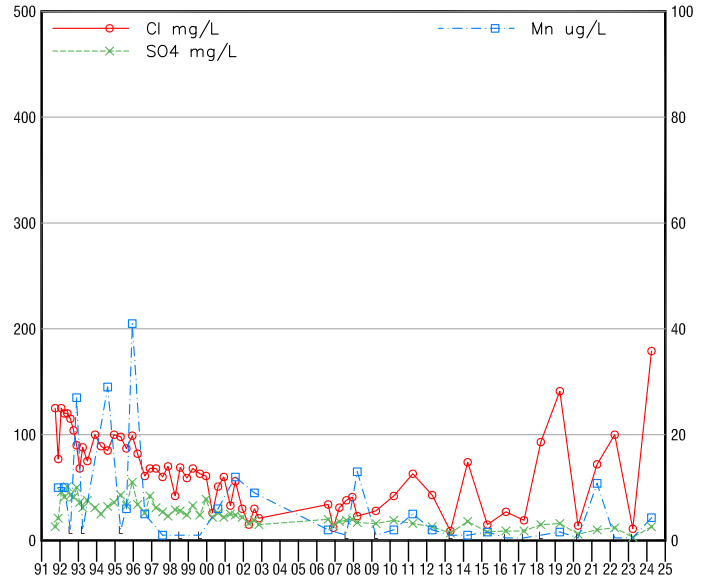


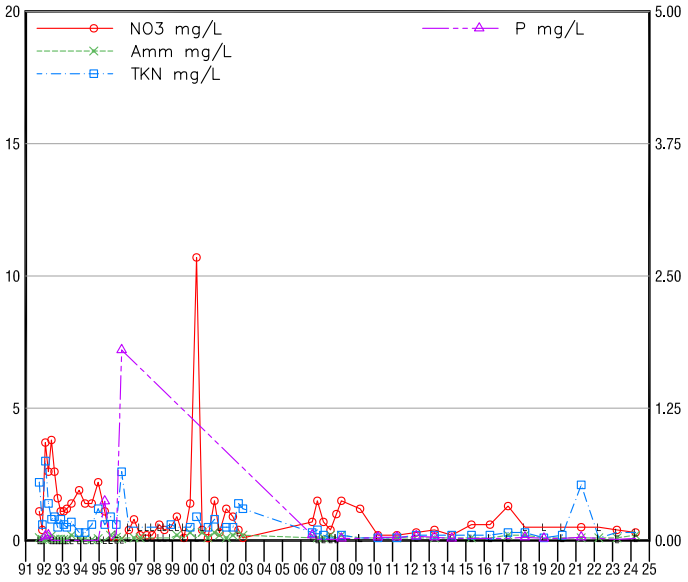
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
14-Aug-00	HGW2748	196	469	184	8.3	22	26	26	28.7	32	3.85		0.09	<0.06	<0.1		0.6
08-Dec-00	HGW2749	196	466	195	8.2	17	25	27	31.2	31	3.76		0.05	<0.06	0.2		4.4
18-Apr-01	HGW2750	205	429	186	8.2	15	23	26	29.3	28	3.77		0.08	<0.06	0.2		0.3
30-Jul-01	HGW2751	200	446	168	8.1	19	24	25	26.0	34	2.54		0.05	<0.06	0.2		-1.1
10-Dec-01	HGW2752	208	362	168	8.1	23	23	22	27.4	35	2.03		0.06	<0.06	<0.1		-3.7
18-Apr-02	HGW2753	213	469	175	8.2	20	22	25	27.4	38	2		<0.05	<0.06	0.1		-0.8
08-Aug-02	HGW2754	218	486	178	8.2	19	21	26	27.6	38	2.76		0.07	<0.06	1.1		0.1
04-Nov-02	HGW2755	207	475	180	7.9	18	21	26	28.3	37	2.61		0.2	<0.06	0.1		1.7
15-Aug-06	37691	219	466	147		23	25	21	22.8	27	2.25	2.4	0.3	<0.05	0.1		-14.2
27-Nov-06	39744	194	454	159		33	25	22	25.6	37	1.92	0.9	0.08	<0.05	0.1		-5.0
26-Mar-07	41935	196	445	169		20	24	24	26.7	34	1.99	<1	0.1	<0.05	<0.1		-0.9
13-Aug-07	44445	193	410	173		21	24	26	26.4	38	1.86	<1	0.06	<0.05	0.2		2.3
10-Dec-07	46639	189	458	168		22	24	24	26.2	35	2.09	1	0.08	<0.05	<0.1		0.2
18-Mar-08	48239	195	445	156		21	22	22	24.6	32	2.47	2.3	<0.05	<0.1	0.1	168	-3.9
24-Mar-09	54689	188	458	156	8.0	21	23	23	24.0	34	1.93	1.4	<0.05	<0.1	0.1	242	-1.8
15-Mar-10	61257	182	487	160	8.1	23	25	25	23.9	36	2.07	1.8	0.07	<0.05	<0.1	286	0.0
28-Mar-11	67213	203	461	154	8.0	22	20	24	23.0	34	1.77	2.8	0.1	<0.05	0.1	274	-5.2
17-Apr-12	74041	196	491	148	7.9	26	19	23	22.0	37	2	2.2	0.05	<0.05	<0.1	250	-4.4
15-Apr-13	81583	211	497	161	8.0	25	19	25	24.3	44	1.86	<1	<0.05	<0.05	0.1	290	-1.2
25-Mar-14	88677	176	494	162	7.9	25	20	24	25.0	41	2	<1	<0.05	<0.05	<0.1	280	4.3
22-Apr-15	96515	203	499	148	8.2	29	20	21	23.0	39	1.8	1.6	<0.05	<0.05	<0.1	280	-5.7
24-Apr-16	103866	185	503	155	8.2	34	18	22	24.0	48	2	<1	0.07	<0.05	0.1	260	1.8
19-Apr-17	112408	187	507	138	8.2	36	17	20	21.5	51	1.8	1	0.08	<0.05	0.2	240	-1.1
21-Mar-18	120954	196	509	151	8.2	34	18	21	23.8	56	1.9	1.5	<0.5	<0.5	0.1	270	2.2
03-Apr-19	130816	225	546	134	8.3	35	11	20	20.4	54	2.3	**5.6**	<0.5	<0.5	2.9	290	-4.0
02-Apr-20	139978	179	527	155	8.1	39	19	26	22.0	47	1.9	1.1	<0.5	<0.5	0.3	290	1.6
15-Apr-21	149267	182	533	170	8.1	40	20	25	26.0	46	2.2	1.3	<0.5	<0.5	0.1	270	2.5
31-Mar-22	159430	181	533	193	8.2	42	18	28	29.6	52	2.4	1.6	<0.5	<0.5	0.1	280	8.7
28-Mar-23	169183	189	525	166	8.2	45	18	27	23.9	40	1.9	1.9	0.8	<0.05	0.1	240	-3.6
02-Apr-24	179749	183	520	169	7.6	48	17	25	25.7	46	2.4	<1	0.5	<0.05	0.2	300	1.6
TOTAL SAMPLES		49	49	49	43	49	49	49	49	49	49	22	49	49	49	17	
AVERAGE 2024																	

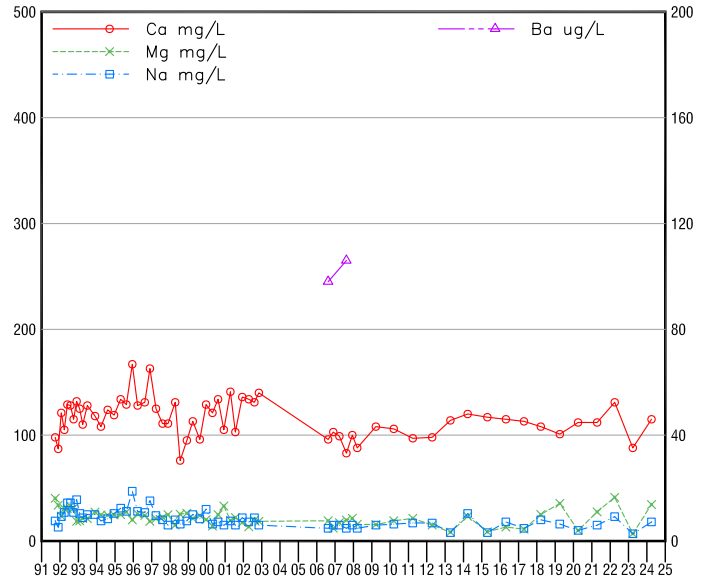
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



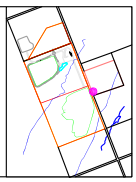








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-61-III

Shallow Overburden

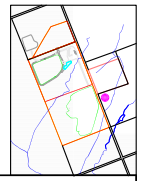
Screen 194.7 - 190.1 masl

CA008825 24 Mar 25	wsp	F324018

BH-61-III

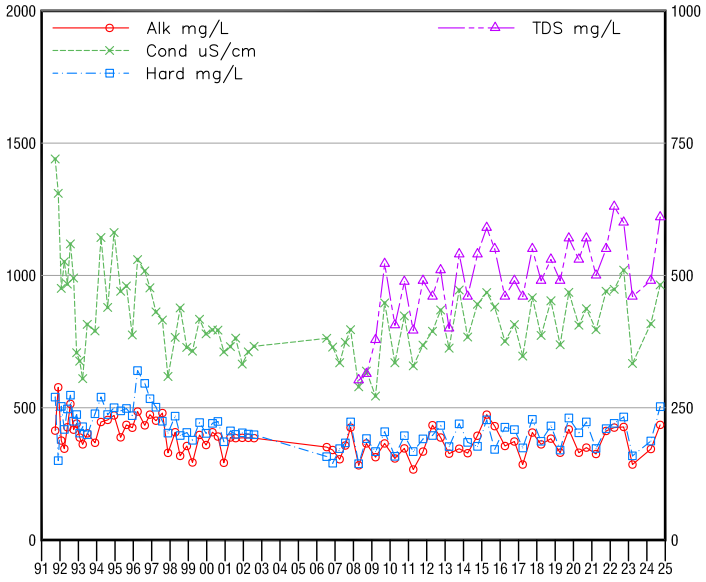
Shallow Overburden

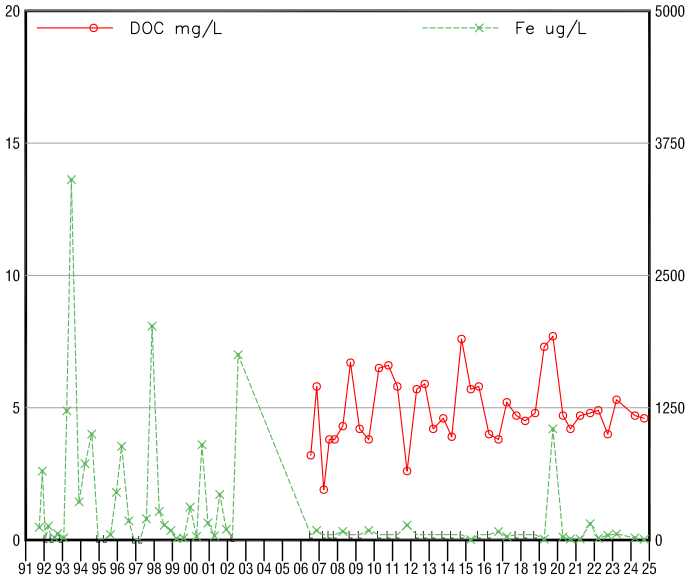
Monitoring Well
Screen 194.7 - 190.1 masl

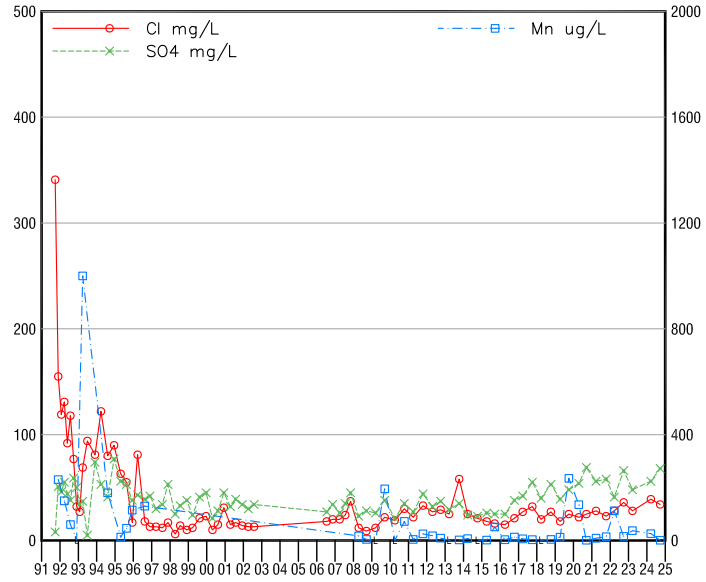


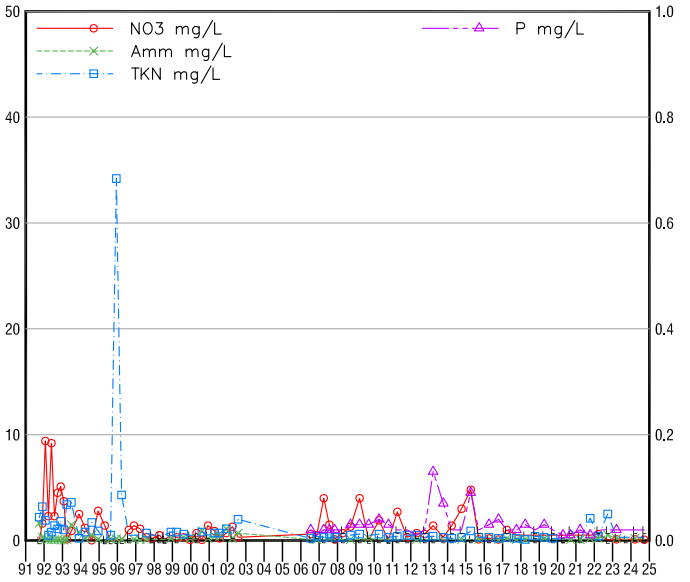
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
14-Aug-00	HGW2787	352	807	437	8.1	51	26	134	24.9	18	2.36		0.4	<0.06	0.3		3.1
08-Dec-00	HGW2788	284	723	398	7.7	60	22	105	33.0	15	2.45		0.09	<0.06	0.1		5.2
18-Apr-01	HGW2789	375	744	432	7.9	33	25	141	19.4	19	1.47		1.5	<0.06	0.3		2.4
26-Jul-01	HGW2790	314	711	349	7.8	56	24	103	22.2	15	1.6		0.3	<0.06	0.2		-4.3
10-Dec-01	HGW2791	356	662	411	7.8	30	22	136	17.4	22	0.88		1.2	<0.06	0.1		3.8
18-Apr-02	HGW2792	382	712	390	8.0	15	16	134	13.4	18	0.53		0.9	<0.06	0.2		0.9
08-Aug-02	HGW2793	381	768	408	7.9	30	19	131	19.6	22	1.11		0.4	<0.06	<0.3		1.5
04-Nov-02	HGW2794	373	741	426	7.7	21	15	140	18.6	15	1.18		0.1	<0.06	0.2		4.9
15-Aug-06	37692	302	677	319		34	20	96	19.1	12	1.59	2.3	0.7	<0.05	<0.1		-3.5
27-Nov-06	39745	344	670	307		12	14	103	12.0	15	0.74	4.2	1.5	<0.05	0.1		-5.6
26-Mar-07	41936	311	671	318		31	18	99	17.4	15	0.82	1.7	0.7	<0.05	0.1		-3.5
13-Aug-07	44446	285	584	289		38	19	83	19.8	12	1.24	<1	0.4	<0.05	0.2		-6.4
10-Dec-07	46640	295	708	338		41	20	100	21.4	15	1.25	1.5	1.0	<0.05	<0.1		-0.8
18-Mar-08	48240	295	609	285		23	17	88	15.8	12	1.01	3.5	1.5	<0.1	0.2	264	-5.5
24-Mar-09	54690	301	668	334	7.5	28	16	108	15.5	15	0.76	1.9	1.2	<0.1	<0.1	348	0.8
15-Mar-10	61258	294	765	343	7.8	42	19	106	19.1	16	0.94	2.1	0.2	<0.05	<0.1	488	0.7
28-Mar-11	67214	300	732	331	7.5	63	16	97	21.4	17	0.93	2.3	0.2	<0.05	0.1	442	-4.7
17-Apr-12	74042	306	734	307	7.5	43	13	98	15.1	17	0.82	5	0.3	<0.05	<0.1	390	-5.0
15-Apr-13	81584	327	631	319	7.5	9	7	114	8.4	7.9	0.28	2.9	0.4	<0.05	0.1	380	-1.6
25-Mar-14	88678	254	801	395	7.7	74	18	120	23.2	26	1.1	2.4	0.2	<0.05	<0.1	450	9.0
22-Apr-15	96516	326	666	329	7.4	15	8	117	8.8	7.9	<0.5	**5.8**	0.6	<0.05	0.1	380	-1.8
24-Apr-16	103867	311	663	342	7.6	27	9	115	13.2	18	0.6	2.4	0.6	<0.05	<0.1	370	2.7
19-Apr-17	112409	327	680	328	7.4	19	9	113	11.2	12	<0.5	3.2	1.3	<0.05	0.2	390	-1.9
21-Mar-18	120955	279	811	373	7.5	93	15	108	25.0	20	1.2	2.5	<0.5	<0.5	0.2	450	-0.8
03-Apr-19	130817	252	940	398	7.8	141	16	101	35.5	16	1.4	2.1	<0.5	<0.5	<0.1	540	-3.5
02-Apr-20	139979	292	565	320	7.5	14	6	112	9.9	10	<0.5	2	<0.5	<0.5	<0.1	340	3.8
15-Apr-21	149268	278	788	393	7.5	72	10	112	27.5	15	1.2	2	0.5	<0.5	0.1	350	4.3
31-Mar-22	159431	278	899	497	7.5	100	12	131	41.3	23	1.7	1.8	<0.5	<0.5	0.1	520	12.2
28-Mar-23	169184	270	519	247	7.6	11	3	88	6.9	6.8	<0.5	3.3	0.4	<0.05	0.1	280	-5.0
02-Apr-24	179750	246	976	429	7.2	179	13	115	34.5	18	1.6	1.2	0.3	<0.05	0.2	730	3.2
TOTAL SAMPLES		61	61	61	55	61	61	61	61	61	61	22	61	61	61	17	
AVERAGE 2024																	

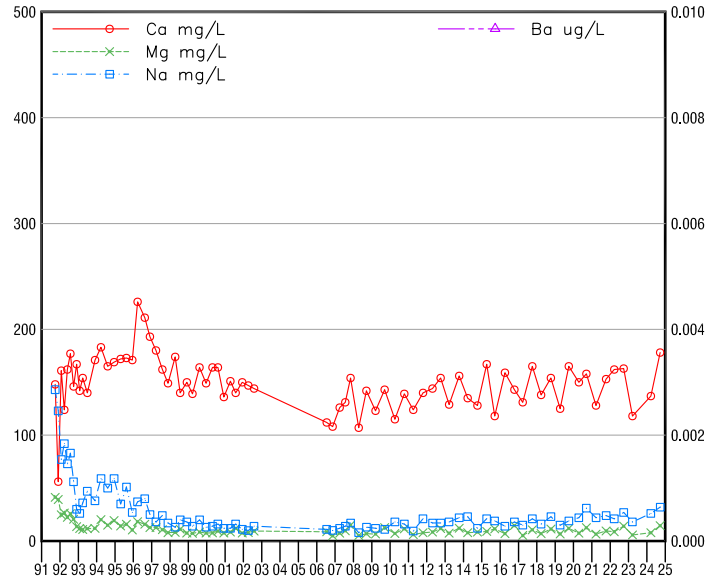
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



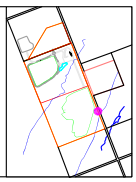








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-62-II

Shallow Overburden

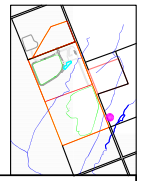
Screen 190.7 - 186.9 masl

CA008825 24 Mar 25	wsp	F324019

BH-62-II

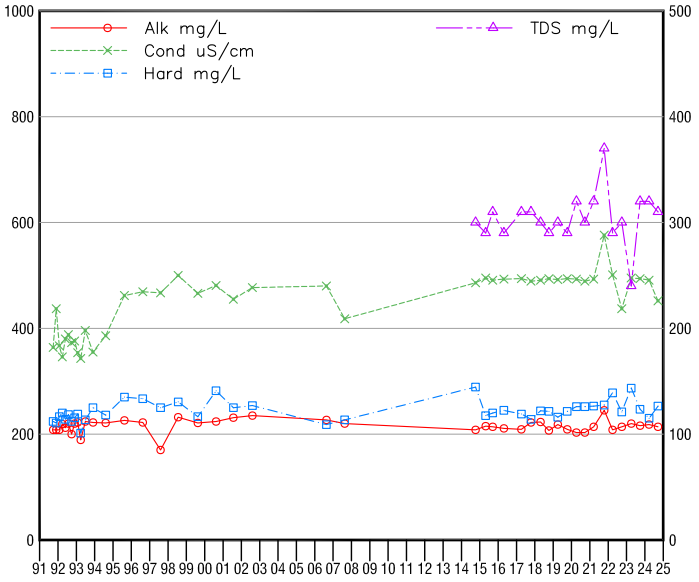
Shallow Overburden

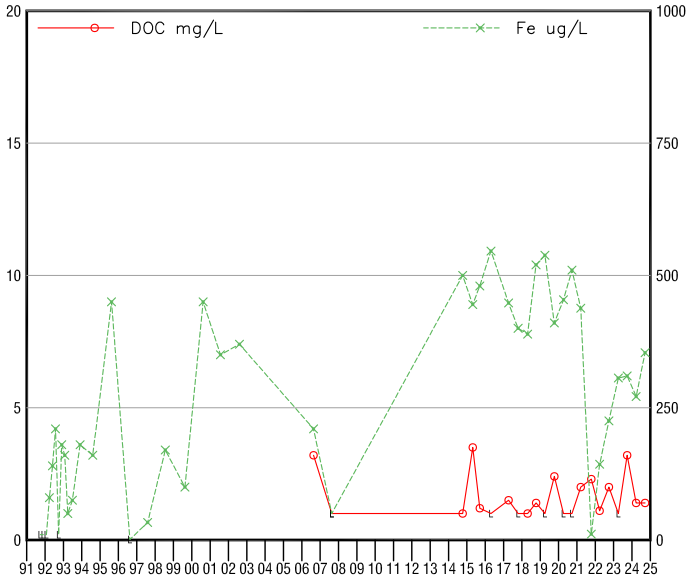
Monitoring Well
Screen 190.7 - 186.9 masl

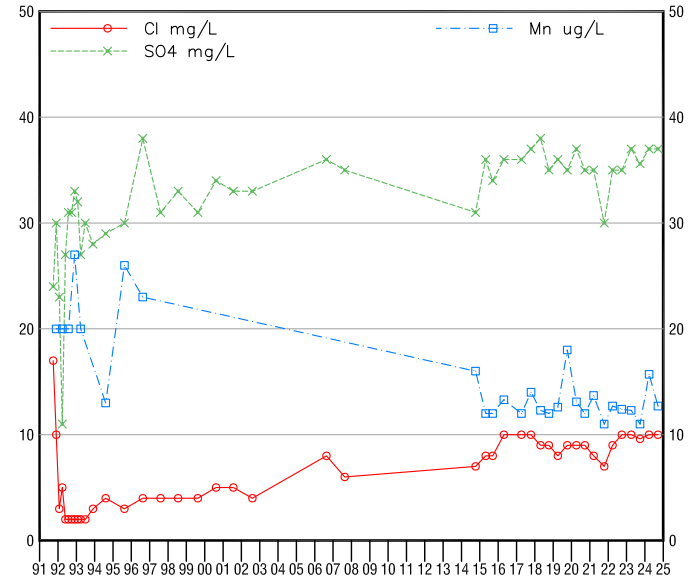


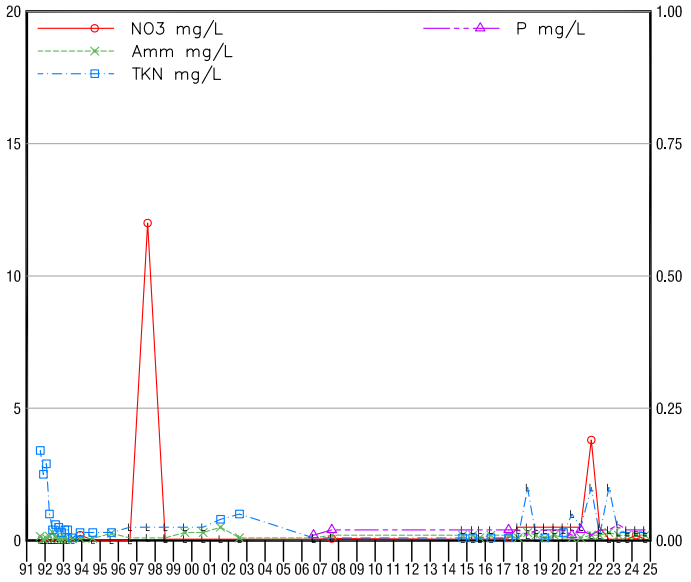
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
06-Apr-10	61745	308	670	316	7.5	19	21	115	7.1	18	1.25	**6.5**	1.9	<0.05	<0.1	406	-1.0
12-Oct-10	64598	346	847	394	7.5	30	35	139	11.5	16	1.42	**6.6**	<0.05	<0.05	<0.1	488	0.7
06-Apr-11	67367	266	658	334	7.7	22	27	124	6.0	9.4	0.64	**5.8**	2.7	<0.05	<0.1	396	3.1
18-Oct-11	71022	334	736	382	7.4	33	44	140	7.8	21	1.23	2.6	0.3	<0.05	<0.1	490	0.2
25-Apr-12	74225	434	789	395	7.5	27	32	144	8.5	17	1.11	**5.7**	0.7	<0.05	0.1	460	-7.9
03-Oct-12	77703	387	869	433	7.4	29	37	154	11.8	17	1.44	**5.9**	0.6	<0.05	<0.1	510	0.3
20-Mar-13	81111	326	725	353	7.6	25	29	129	7.4	18	0.73	4.2	1.4	<0.05	<0.1	400	-0.5
08-Oct-13	85584	345	945	439	7.5	58	35	156	12.1	22	1.4	4.6	0.3	<0.05	<0.1	540	2.6
25-Mar-14	88680	328	767	369	7.5	25	24	135	7.8	23	0.6	3.9	1.4	<0.05	<0.1	460	3.4
07-Oct-14	92842	394	891	354	7.4	21	23	128	8.4	12	1.2	**7.6**	3.0	<0.05	0.1	540	-8.9
08-Apr-15	96185	474	935	454	7.6	18	26	167	9.0	21	0.7	**5.7**	4.8	<0.05	<0.1	590	-4.2
14-Sep-15	99615	430	880	342	7.3	16	25	118	11.5	19	1.2	**5.8**	0.1	<0.05	0.1	550	-10.8
05-Apr-16	103417	355	751	426	7.7	15	25	159	7.0	14	<0.5	4	0.2	<0.05	<0.1	460	6.3
11-Oct-16	108024	372	814	417	7.7	21	38	143	14.6	18	1.4	3.8	0.09	<0.05	0.1	490	1.7
27-Mar-17	111814	285	695	348	7.5	27	42	131	5.2	15	<0.5	**5.2**	1.0	<0.05	0.2	460	1.5
03-Oct-17	116858	406	916	456	7.4	32	55	165	10.6	21	1	4.7	<0.5	<0.5	0.1	550	-0.4
26-Mar-18	121018	361	773	373	7.3	20	40	138	7.0	16	<0.5	4.5	<0.5	<0.5	0.1	490	-2.5
09-Oct-18	126930	383	904	431	7.3	27	53	154	11.3	23	1.1	4.8	<0.5	<0.5	<0.1	530	0.7
09-Apr-19	130970	330	738	340	7.6	18	39	125	6.7	15	<0.5	**7.3**	<0.5	<0.5	0.2	490	-2.8
30-Sep-19	135557	418	936	461	7.3	25	48	165	11.9	19	1.1	**7.7**	<0.5	<0.5	<0.1	570	0.3
16-Apr-20	140290	330	812	405	7.7	22	54	150	7.4	22	<0.5	4.7	<0.5	<0.5	<0.1	530	4.0
13-Sep-20	144110	349	874	446	7.3	25	69	158	12.6	31	1.1	4.2	<0.5	<0.5	0.1	570	6.3
25-Mar-21	148774	325	795	346	7.4	28	56	128	6.5	22	<0.5	4.7	<0.5	<0.5	0.1	500	-3.5
12-Oct-21	154587	412	940	421	7.3	23	58	153	9.5	24	0.8	4.8	<0.5	<0.5	0.2	550	-2.9
22-Mar-22	159168	425	947	441	7.1	28	41	162	8.8	21	0.5	4.9	0.6	<0.5	0.2	630	-2.2
26-Sep-22	164644	427	1020	465	7.3	36	66	163	14.0	27	1.2	4	<0.05	<0.05	0.5	600	-1.8
20-Mar-23	168878	285	667	318	7.5	28	48	118	5.7	18	<0.5	**5.3**	0.1	<0.05	0.2	460	-2.2
19-Sep-23	174348				7.2										<0.1		
20-Mar-24	179422	344	817	374	7.6	39	56	137	7.8	26	<0.5	4.7	0.1	<0.05	0.2	490	1.6
23-Sep-24	184722	435	964	504	7.0	34	68	178	14.5	32	1.4	4.6	0.08	<0.05	<0.1	610	3.3
TOTAL SAMPLES		76	76	76	71	76	76	76	76	76	76	38	76	76	77	33	
AVERAGE 2024		390	891	439	7.3	37	62	158	11.2	29	0.7	4.7	0.1	<0.05	0.1	550	

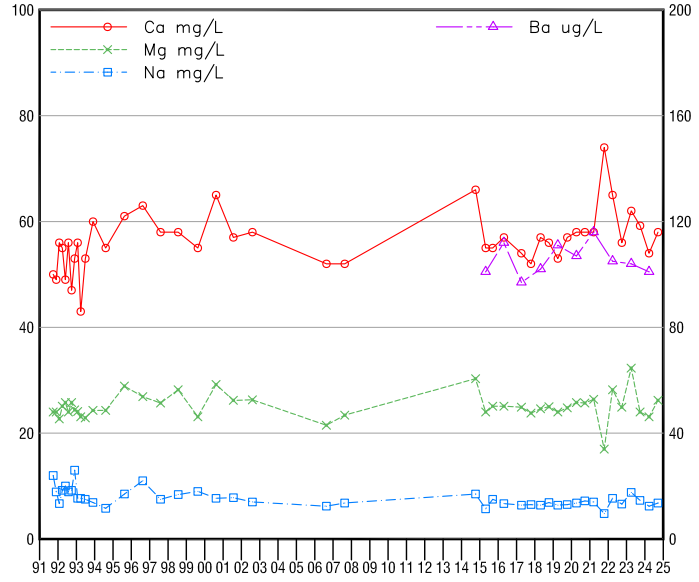
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-63-II

Overburden Formation

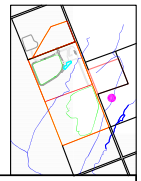
Screen 176.5 - 175.8 masl

CA008825 24 Mar 25	wsp	F324020

BH-63-II

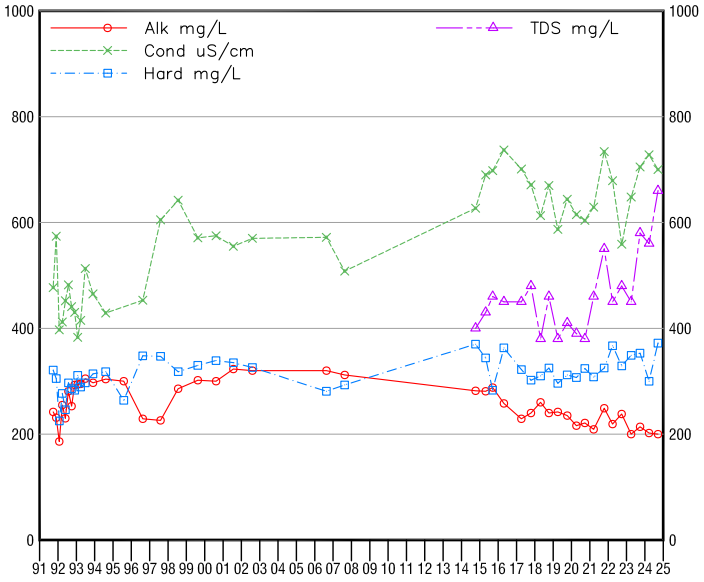
Overburden Formation

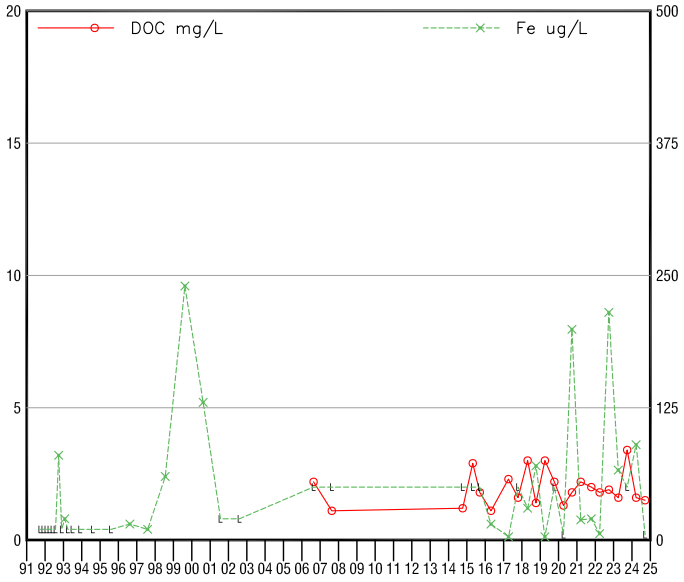
Stand Pipe Piezometer
Screen 176.5 - 175.8 masl

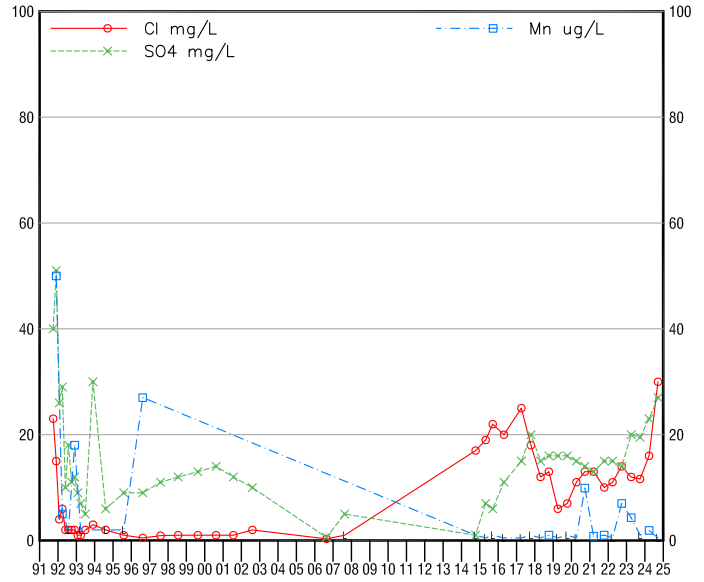


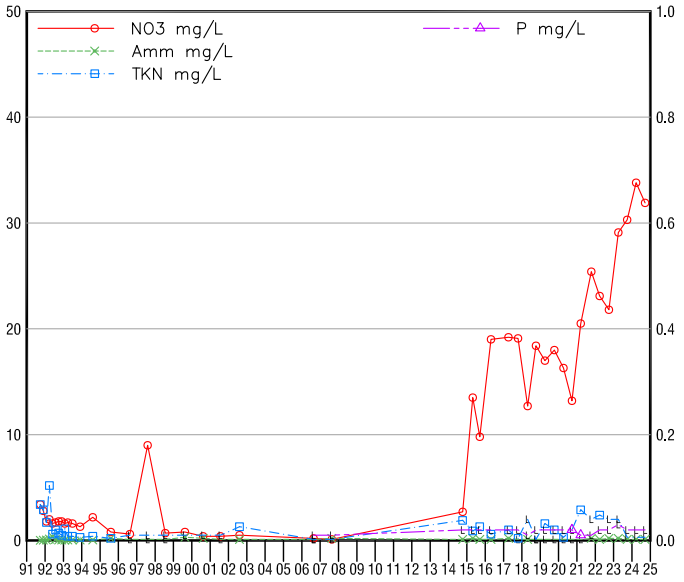
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
17-Aug-95	HGW2893	226	462	270	7.8	3	30	61	28.9	8.5	2.1		<0.01	<0.03	0.27		5.7
16-Aug-96	HGW2894	222	469	267	8.2	4	38	63	26.9	11	2.3		<0.005	<0.006	<0.1		4.5
05-Aug-97	HGW2895	170	467	250	7.8	4	31	58	25.7	7.5	1.62		**12.0**	<0.006	<0.1		3.4
23-Jul-98	HGW2896	232	500	261	8.1	4	33	58	28.2	8.4	2.28		<0.05	<0.06	<0.1		2.1
17-Aug-99	HGW2897	221	466	233	8.1	4	31	55	23.1	9.0	2.53		<0.05	<0.06	0.3		-0.5
14-Aug-00	HGW2898	224	481	282	8.2	5	34	65	29.2	7.7	3.22		<0.05	<0.06	0.3		6.7
26-Jul-01	HGW2899	231	455	250	7.8	5	33	57	26.2	7.8	2.07		<0.05	<0.06	0.5		0.0
08-Aug-02	HGW2900	235	477	254	8.1	4	33	58	26.3	7.0	1.84		<0.05	<0.06	0.1		-0.4
21-Aug-06	37830	227	480	218		8	36	52	21.5	6.2	1.65	3.2	<0.05	<0.05	<0.1		-8.3
20-Aug-07	44593	220	418	227		6	35	52	23.4	6.8	2.05	<1	0.07	<0.05	0.2		-4.0
08-Oct-14	92866	208	486	289	8.0	7	31	66	30.3	8.5	2.4	1	<0.05	<0.05	0.2	300	11.1
27-Apr-15	96617	215	495	235	7.9	8	36	55	24.0	5.7	1.9	3.5	<0.05	<0.05	0.2	290	-2.3
14-Sep-15	99620	214	491	240	7.8	8	34	55	25.1	7.5	1.9	1.2	<0.05	<0.05	0.1	310	-0.2
24-Apr-16	103848	211	493	245	7.9	10	36	57	25.1	6.7	2	<1	<0.05	<0.05	0.2	290	0.3
09-Apr-17	112160	209	494	238	7.9	10	36	54	24.9	6.4	2.1	1.5	0.1	<0.05	0.2	310	-0.7
17-Oct-17	117247	222	489	228	8.0	10	37	52	23.8	6.5	2	<1	<0.5	<0.5	0.1	310	-5.4
25-Apr-18	121904	223	491	244	7.8	9	38	57	24.6	6.4	2	1	<0.5	<0.5	0.3	300	-2.4
09-Oct-18	126927	207	494	243	7.9	9	35	56	25.0	6.9	2.1	1.4	<0.5	<0.5	0.2	290	1.4
03-Apr-19	130813	218	492	232	8.0	8	36	53	24.0	6.4	2	<1	<0.5	<0.5	0.1	300	-3.1
08-Oct-19	135882	209	494	243	7.8	9	35	57	24.8	6.5	1.9	2.4	<0.5	<0.5	0.2	290	0.7
08-Apr-20	140093	203	493	252	7.9	9	37	58	25.8	6.8	2.1	<1	<0.5	<0.5	<0.1	320	3.1
23-Sep-20	144448	203	489	252	7.8	9	35	58	25.7	7.2	2.2	<1	<0.5	<0.5	0.1	300	3.7
17-Mar-21	148591	214	493	253	7.9	8	35	58	26.4	7.0	2.1	2	<0.5	<0.5	0.1	320	1.8
13-Oct-21	154615	245	576	255	7.8	7	30	74	17.0	4.8	1.7	2.3	3.8	<0.5	0.2	370	-5.5
29-Mar-22	159329	208	501	278	7.7	9	35	65	28.2	7.7	2.4	1.1	<0.5	<0.5	0.2	290	7.6
28-Sep-22	164704	214	437	242	8.0	10	35	56	24.9	6.6	2	2	<0.05	<0.05	0.3	300	-0.9
04-Apr-23	169373	220	495	287	7.7	10	37	62	32.3	8.8	1.5	<1	<0.05	<0.05	0.2	240	6.5
27-Sep-23	2023A033	216	494	247	7.7	9.6	35.6	59.2	24	7.3	2.2	3.2	<0.05	<0.05	0.2	320	1.5
25-Mar-24	179555	218	491	230	7.8	10	37	54	23.1	6.2	1.8	1.4	0.2	<0.05	0.2	320	3.0
18-Sep-24	184588	214	452	253	7.6	10	37	58	26.2	6.8	2.1	1.4	<0.05	<0.05	0.2	310	2.7
TOTAL SAMPLES		43	43	43	41	43	43	43	43	43	43	22	43	43	43	20	
AVERAGE 2024		216	472	242	7.7	10	37	56	24.7	6.5	2.0	1.4	0.1	<0.05	0.2	315	

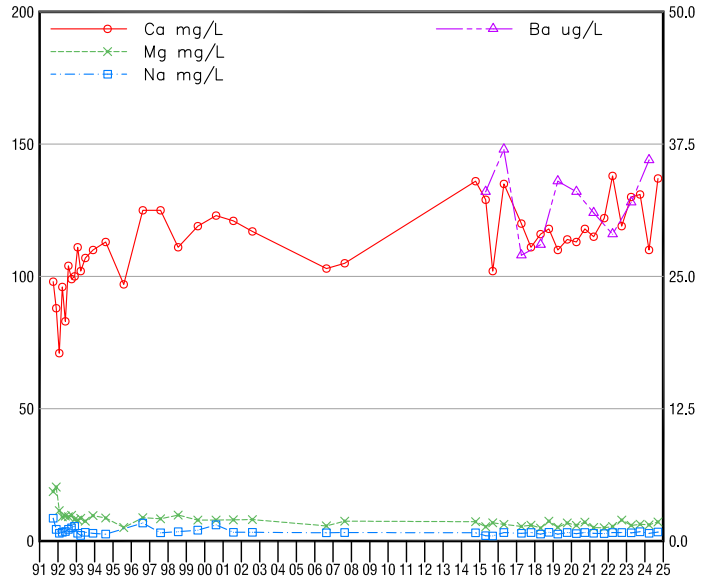
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-63-III

Shallow Overburden

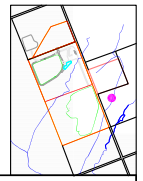
Screen 191.6 - 187.0 masl

CA008825 24 Mar 25	wsp	F324021

BH-63-III

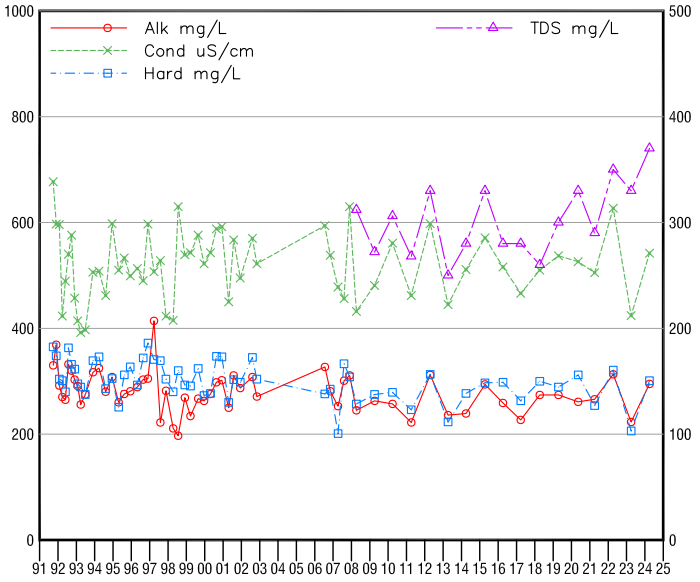
Shallow Overburden

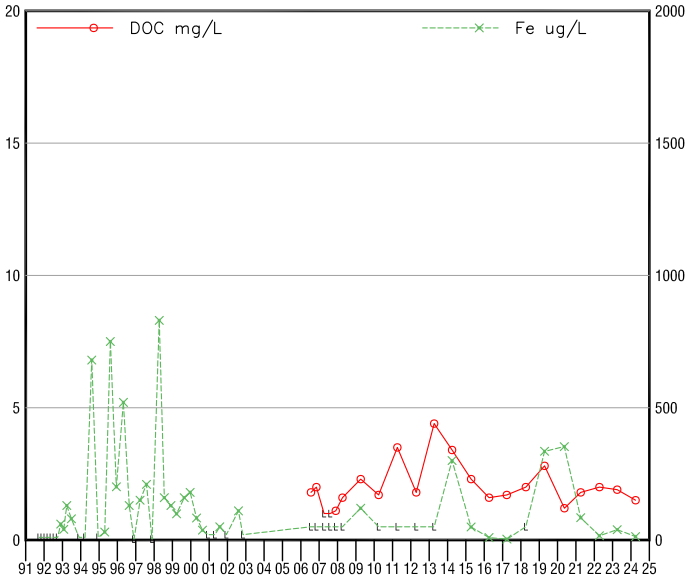
Monitoring Well
Screen 191.6 - 187.0 masl

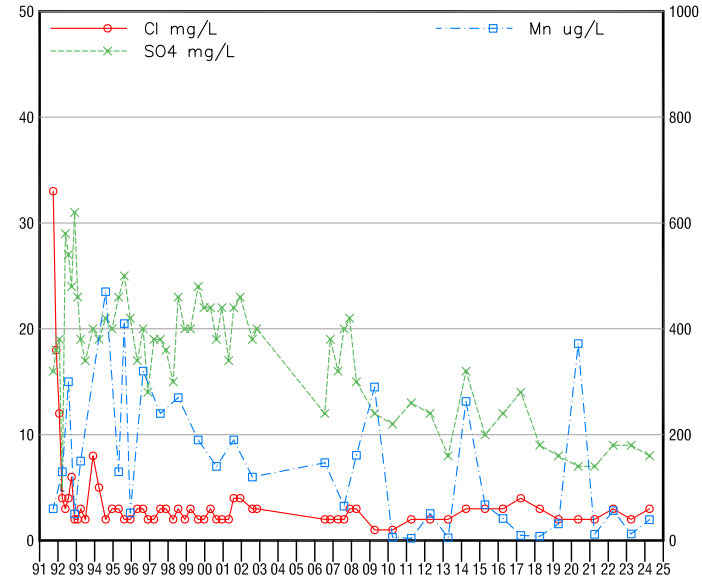


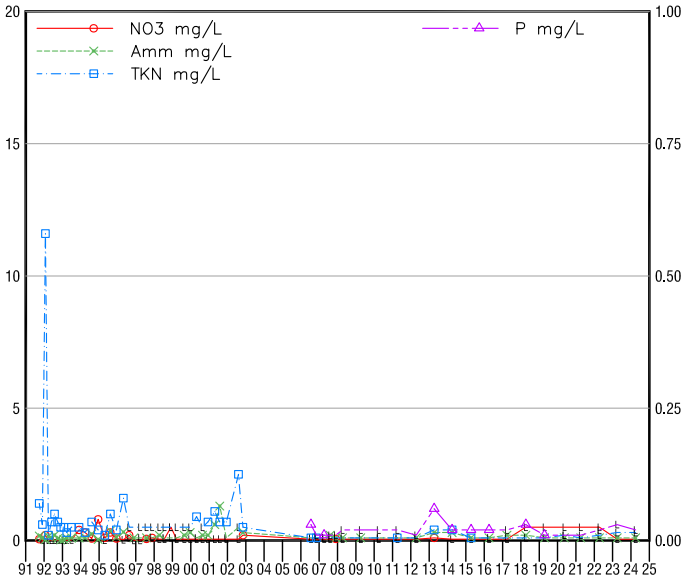
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
03-Aug-95	HGW2914	300		264		1	9	97	5.1				0.8	<0.01	0.19		
16-Aug-96	HGW2915	229	453	348	7.8	0.5	9	125	8.8	6.8	<0.8		0.6	<0.006	<0.1		20.2
05-Aug-97	HGW2916	226	605	347	7.5	0.9	11	125	8.4	3.1	<0.8		9.0	<0.006	<0.1		13.2
23-Jul-98	HGW2917	286	642	318	7.7	1	12	111	9.8	3.5	<0.8		0.7	<0.06	<0.1		3.7
17-Aug-99	HGW2918	302	571	330	7.9	1	13	119	7.9	4.1	0.86		0.8	<0.06	0.3		3.2
14-Aug-00	HGW2919	300	575	339	8.2	1	14	123	7.9	6.1	0.42		0.4	<0.06	0.2		5.4
26-Jul-01	HGW2920	323	555	335	7.9	1	12	121	8.0	3.3	0.59		0.4	<0.06	<0.1		0.6
08-Aug-02	HGW2921	320	570	326	8.0	2	10	117	8.1	3.3	0.48		0.5	<0.06	0.1		−0.2
21-Aug-06	37831	320	572	281		0.3	0.6	103	5.7	3.1	<0.5	2.2	0.2	<0.05	<0.1		−5.6
20-Aug-07	44594	312	508	293		<1	5	105	7.5	3.2	<0.5	1.1	0.1	<0.05	0.2		−2.7
08-Oct-14	92867	282	627	370	7.7	17	1	136	7.3	3.1	0.6	1.2	2.7	<0.05	0.1	400	8.7
27-Apr-15	96618	281	690	344	7.6	19	7	129	5.4	2.0	<0.5	2.9	**13.5**	<0.05	0.2	430	−2.0
14-Sep-15	99622	288	698	283	7.5	22	6	102	6.9	1.9	<0.5	1.8	9.8	<0.05	0.1	460	−11.2
24-Apr-16	103849	258	737	363	7.7	20	11	135	6.3	3.2	<0.5	1.1	**19.0**	<0.05	0.1	450	0.7
09-Apr-17	112161	229	701	322	7.7	25	15	120	5.5	2.9	<0.5	2.3	**19.2**	<0.05	0.2	450	−2.8
17-Oct-17	117248	240	671	302	7.8	18	20	111	6.0	3.2	<0.5	1.6	**19.1**	<0.5	<0.1	480	−7.0
25-Apr-18	121905	260	613	310	7.7	12	15	116	4.9	2.6	<0.5	3	**12.7**	<0.5	0.1	380	−3.3
09-Oct-18	126929	240	670	325	7.7	13	16	118	7.5	3.3	0.6	1.4	**18.4**	<0.5	<0.1	460	−1.1
03-Apr-19	130814	242	587	296	7.8	6	16	110	5.2	2.6	<0.5	3	**17.0**	<0.5	<0.1	380	−4.3
08-Oct-19	135883	235	644	312	7.6	7	16	114	6.8	3.2	<0.5	2.2	**18.0**	<0.5	<0.1	410	−1.1
08-Apr-20	140094	216	615	307	7.7	11	15	113	5.9	2.8	<0.5	1.3	**16.3**	<0.5	<0.1	390	1.2
23-Sep-20	144450	221	604	324	7.6	13	14	118	7.1	3.2	0.6	1.8	**13.2**	<0.5	<0.1	380	4.7
17-Mar-21	148592	209	629	308	7.8	13	13	115	5.1	2.9	<0.5	2.2	**20.5**	<0.5	<0.1	460	0.1
13-Oct-21	154616	249	734	325	7.7	10	15	122	5.0	2.8	<0.5	2	**25.4**	<0.5	0.2	550	−5.3
29-Mar-22	159330	219	679	367	7.6	11	15	138	5.5	3.2	<0.5	1.8	**23.1**	<0.5	0.1	450	6.1
28-Sep-22	164705	238	559	329	7.9	14	14	119	7.9	3.2	0.7	1.9	**21.8**	<0.05	0.2	480	−1.7
04-Apr-23	169375	200	648	349	7.6	12	20	130	5.9	3.1	<0.5	1.6	**29.1**	<0.05	0.2	450	2.2
27-Sep-23	2023A035	214	705	353	7.6	11.6	19.5	131	6.32	3.5	0.6	3.4	**30.3**	<0.05	0.1	580	1.5
25-Mar-24	179556	202	728	300	7.7	16	23	110	6.1	2.9	<0.5	1.6	**33.8**	<0.05	0.1	560	8.3
18-Sep-24	184589	200	700	372	7.5	30	27	137	7.2	3.4	0.6	1.5	**31.9**	<0.05	0.1	660	0.5
TOTAL SAMPLES		43	42	43	40	43	43	43	43	42	42	22	43	43	43	20	
AVERAGE 2024		201	714	336	7.6	23	25	124	6.7	3.2	<0.5	1.6	32.85	<0.05	0.1	610	

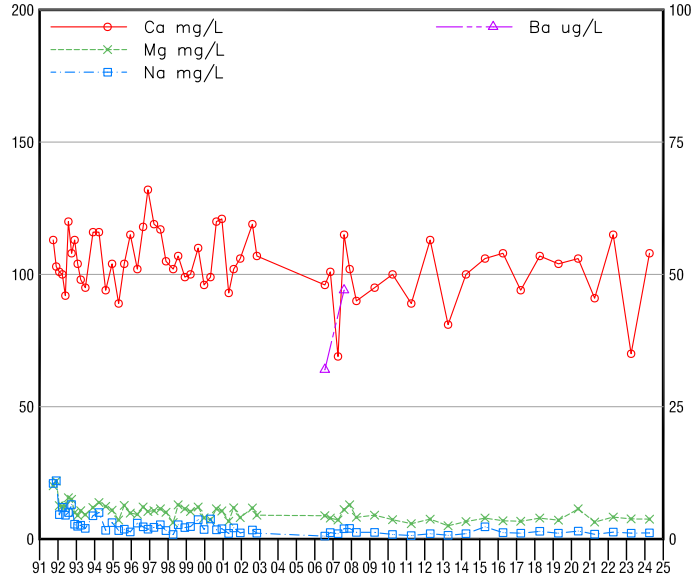
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
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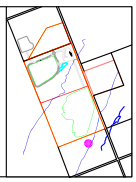
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-64-II

Shallow Overburden

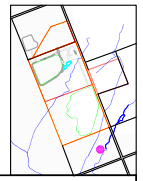
Screen 188.9 - 185.8 masl

CA008825 24 Mar 25	wsp	F324022

BH-64-II

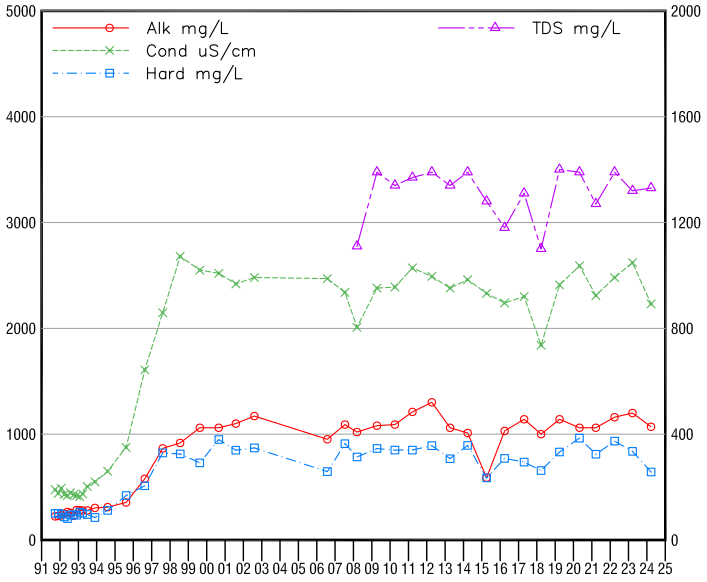
Shallow Overburden

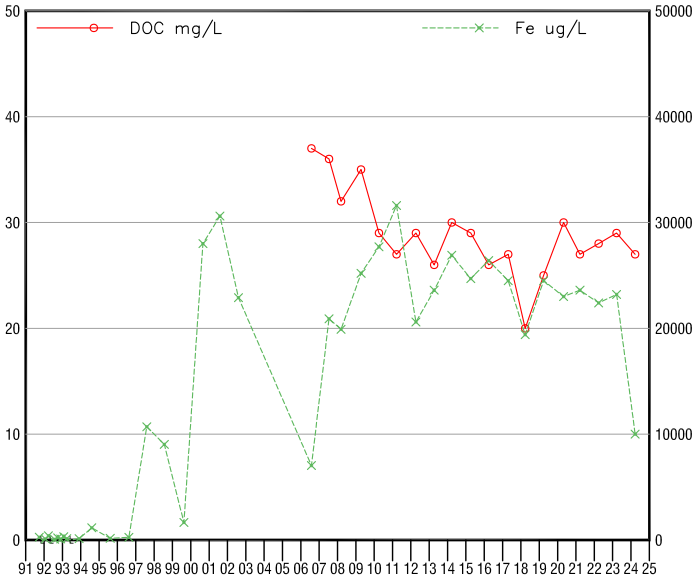
Stand Pipe Piezometer
Screen 188.9 - 185.8 masl

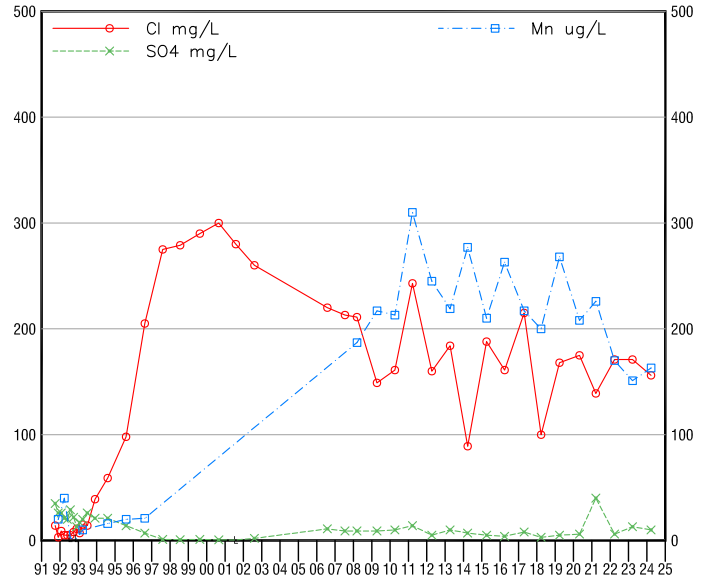


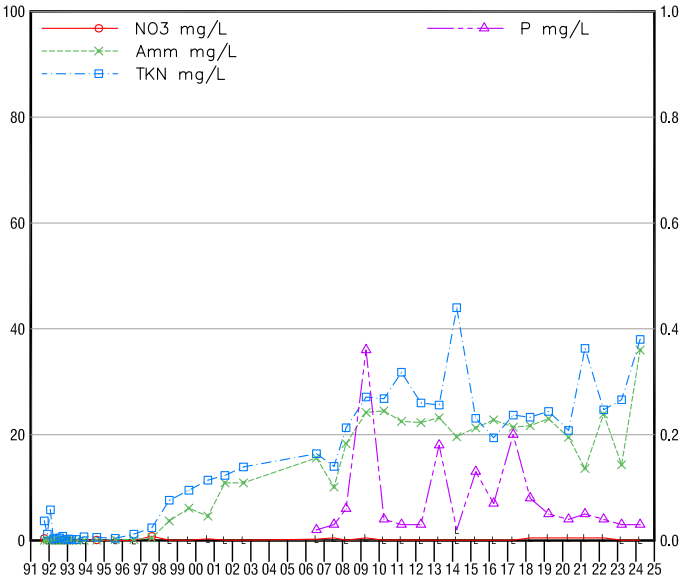
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
25-Apr-00	HGW2974	276	543	277	7.8	3	22	99	7.3	7.6	<0.8		<0.05	<0.06	<0.1		-1.5
22-Aug-00	HGW2975	298	588	347	7.7	2	19	120	11.4	3.5	0.57		<0.05	<0.06	0.2		5.1
08-Dec-00	HGW2976	302	592	346	7.7	2	22	121	10.6	3.9	0.79		<0.05	<0.06	0.2		4.1
23-Apr-01	HGW2977	250	450	260	8.0	2	17	93	6.7	2.1	0.34		<0.05	<0.06	0.6		-0.7
01-Aug-01	HGW2978	311	567	303	7.8	4	22	102	11.8	4.2	0.87		<0.05	<0.06	1.3		-3.3
10-Dec-01	HGW2979	287	495	298	7.9	4	23	106	8.1	2.3	0.24		<0.05	<0.06	<0.1		-2.1
08-Aug-02	HGW2980	308	570	345	8.0	3	19	119	11.7	3.4	0.8		<0.05	<0.06	<0.5		3.3
04-Nov-02	HGW2981	271	522	304	7.9	3	20	107	9.0	2.2	0.46		0.2	<0.06	0.3		2.3
20-Jul-06	37161	327	594	276		2	12	96	8.8	1.1	<0.5	1.8	<0.05	<0.05	<0.1		-10.4
06-Nov-06	39351	281	538	285		2	19	101	7.9	2.4	<0.5	2	<0.05	<0.05	<0.1		-2.3
10-Apr-07	42240	253	478	201		2	16	69	7.2	2.0	<0.5	<1	<0.05	<0.05	<0.1		-14.1
07-Aug-07	44328	301	456	333		2	20	115	11.1	3.9	0.8	<1	<0.05	<0.05	0.2		2.6
26-Nov-07	46387	311	630	308		3	21	102	12.9	4.0	0.98	1.1	0.06	<0.1	0.1		-3.0
09-Apr-08	48638	245	432	257		3	15	90	8.2	2.5	<0.5	1.6	<0.05	<0.1	0.1	312	-0.4
06-Apr-09	54901	263	481	275	7.5	1	12	95	9.0	2.5	0.51	2.3	<0.05	<0.1	0.1	272	0.8
29-Mar-10	61624	257	561	279	7.4	1	11	100	7.3	1.7	<0.5	1.7	<0.05	<0.05	<0.1	306	2.2
06-Apr-11	67369	222	462	246	7.7	2	13	89	5.8	1.3	<0.5	3.5	<0.05	<0.05	<0.1	268	2.1
18-Apr-12	74087	312	598	313	7.4	2	12	113	7.5	2.0	<0.5	1.8	<0.05	<0.05	0.1	330	-1.3
09-Apr-13	81506	236	445	223	7.5	2	8	81	5.0	1.4	0.51	4.4	0.1	<0.05	0.3	250	-4.0
01-Apr-14	88814	239	511	277	7.4	3	16	100	6.6	2.0	<0.5	3.4	<0.05	<0.05	0.3	280	4.2
14-Apr-15	96324	294	571	297	7.7	3	10	106	7.9	4.6	<0.5	2.3	<0.05	<0.05	0.1	330	-0.1
07-Apr-16	103505	259	516	298	7.3	3	12	108	6.9	2.4	<0.5	1.6	<0.05	<0.05	0.1	280	5.0
27-Mar-17	111808	227	466	263	7.5	4	14	94	6.7	2.2	<0.5	1.7	<0.05	<0.05	0.2	280	3.9
09-Apr-18	121426	274	510	300	7.5	3	9	107	7.9	2.9	<0.5	2	<0.5	<0.5	0.2	260	3.4
16-Apr-19	131147	274	537	289	7.6	2	8	104	7.1	2.2	<0.5	2.8	<0.5	<0.5	0.1	300	1.6
14-May-20	140895	261	526	312	7.7	2	7	106	11.4	3.0	0.6	1.2	<0.5	<0.5	0.1	330	8.2
06-Apr-21	149002	266	505	254	7.5	2	7	91	6.4	1.8	<0.5	1.8	<0.5	<0.5	0.1	290	-3.4
12-Apr-22	159789	313	627	321	7.2	3	9	115	8.3	2.6	<0.5	2	<0.5	<0.5	0.1	350	0.1
03-Apr-23	169325	223	424	206	7.5	2	9	70	7.6	2.2	<0.5	1.9	<0.05	<0.05	0.1	330	-5.4
02-Apr-24	179741	295	542	301	6.9	3	8	108	7.5	2.3	<0.5	1.5	<0.05	<0.05	0.1	370	1.5
TOTAL SAMPLES		60	60	60	54	60	60	60	60	60	60	22	60	60	60	17	
AVERAGE 2024																	

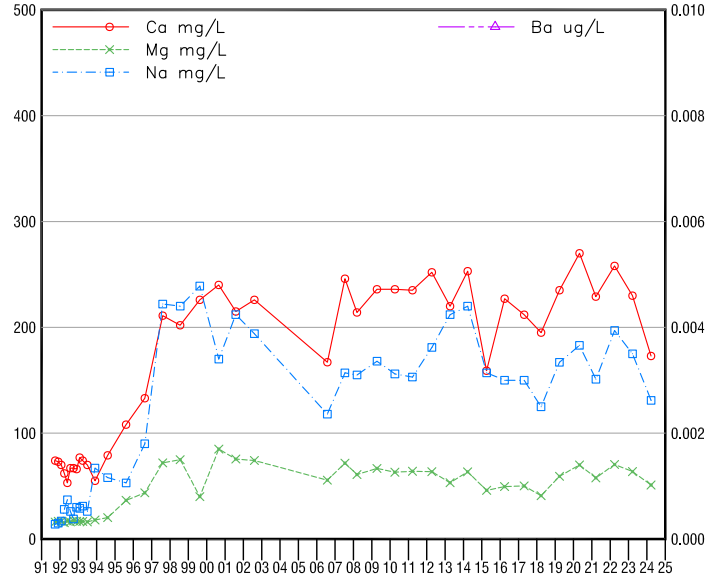
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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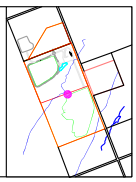


CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-66-II

Overburden Formation

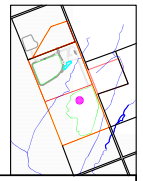
Screen 190.9 - 190.1 masl

CA008825 24 Mar 25	wsp	F324023

BH-66-II

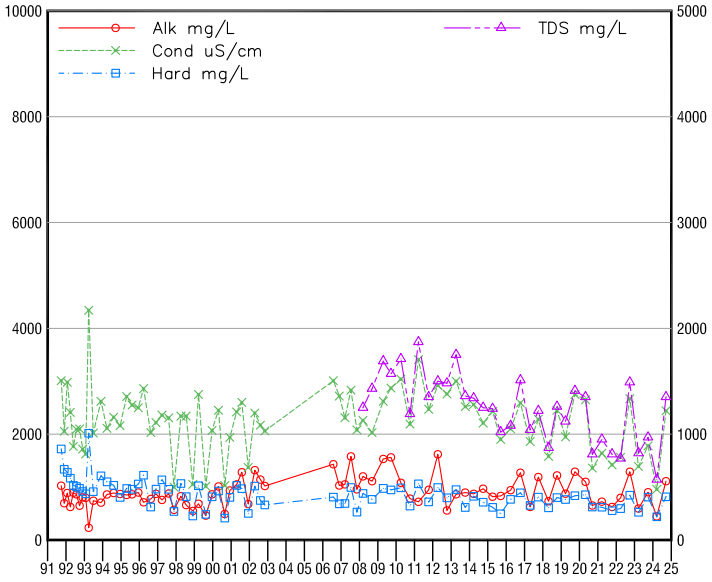
Overburden Formation

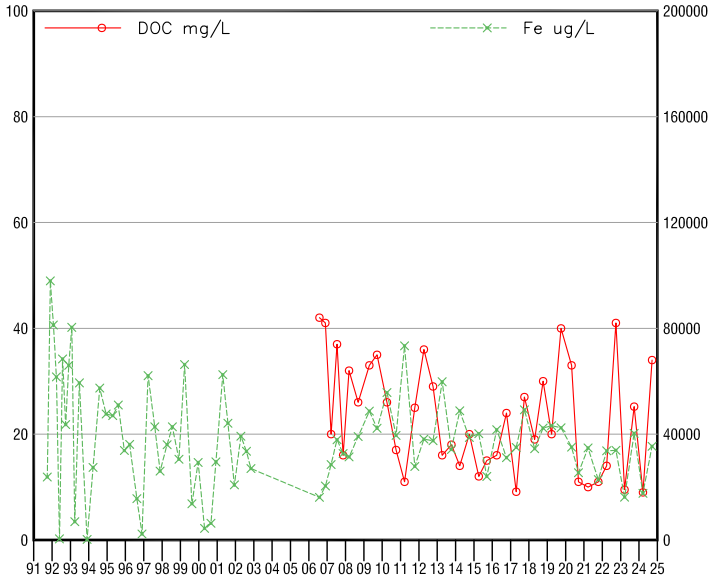
Stand Pipe Piezometer
Screen 190.9 - 190.1 masl

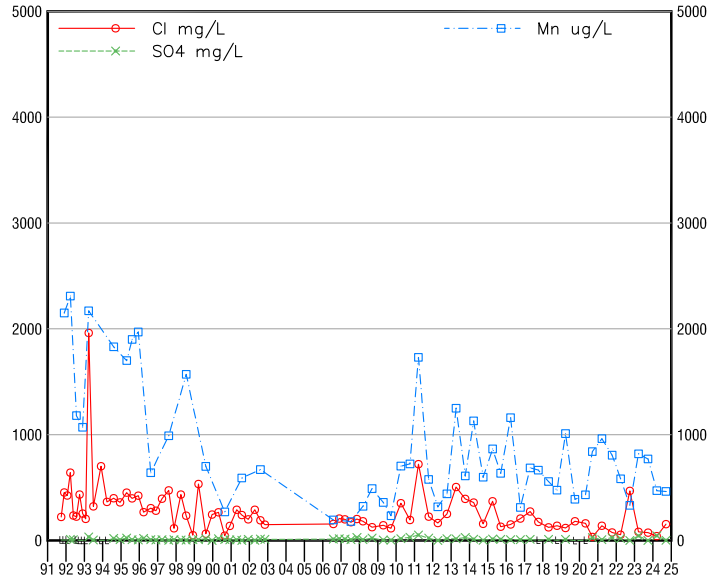


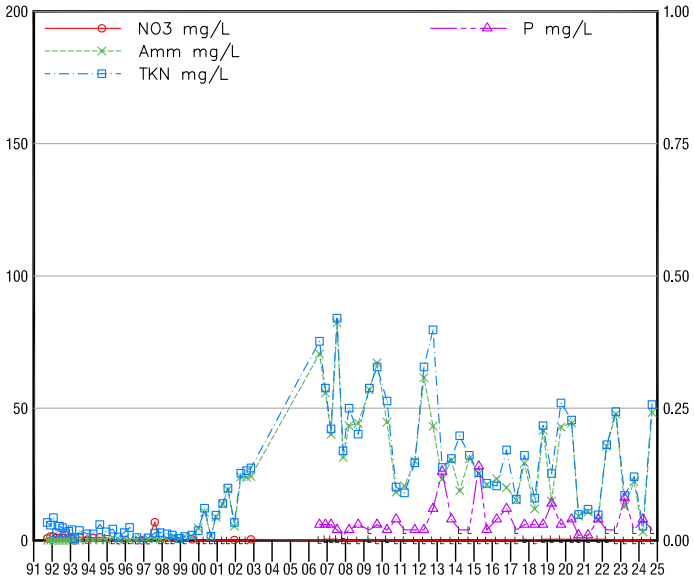
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW3050	278	505	241	7.4	14	26	70	16.2	26	2.08		<0.01	<0.001	0.04		-3.7
28-Nov-93	HGW3051	303	550	212	7.5	39	21	55	18.0	67	3.16		<0.01	<0.001	0.04		-2.4
08-Aug-94	HGW3052	310	649	280	7.7	59	21	79	20.2	58	2.97		0.1	<0.001	0.02		-0.4
11-Aug-95	HGW3053	354	875	420	7.6	98	14	108	36.5	53	2		<0.01	<0.03	0.19		3.0
16-Aug-96	HGW3054	578	1607	512	7.6	205	7	133	43.6	90	1.29		<0.005	<0.006	0.2		-10.4
08-Aug-97	HGW3055	865	2147	823	7.1	**275**	1	211	72.0	**222**	6.21		0.8	0.18	0.5		3.0
23-Jul-98	HGW3056	917	2680	813	7.6	**279**	0.8	202	75.0	**220**	13.2		<0.05	<0.06	3.7		1.0
17-Aug-99	HGW3057	1060	2550	729	7.1	**290**	1	226	40.1	**239**	23.0		<0.05	0.06	6.1		-6.0
29-Aug-00	HGW3058	1060	2520	949	7.3	**300**	0.6	240	85.0	170	24.0		<0.3	<0.3	4.6		-2.3
03-Aug-01	HGW3059	1100	2420	848	7.1	**280**	<0.5	215	75.5	**212**	17.9		<0.05	<0.06	10.9		-2.4
08-Aug-02	HGW3060	1170	2480	870	7.0	**260**	2	226	74.2	194	19.5		<0.05	<0.06	10.9		-4.8
31-Jul-06	37412	952	2470	646		220	11	167	55.6	118	21.6	**37**	<0.25	<0.25	15.6		-12.1
16-Jul-07	43943	1090	2340	910		213	9	246	71.7	157	26.9	**36**	<0.5	<0.5	10.1		-1.5
12-Mar-08	48144	1020	2010	785		211	9	214	60.9	155	27.1	**32**	<0.05	<0.05	18.3	1110	-2.7
15-Apr-09	55050	1080	2380	864	6.9	149	9	236	66.7	168	31.0	**35**	<0.5	<1	24.2	1390	3.8
06-Apr-10	61747	1090	2390	849	6.7	161	10	236	63.1	156	32.1	**29**	<0.05	<0.05	24.5	1340	1.4
21-Mar-11	67073	1210	2570	850	6.8	243	14	235	64.0	153	28.4	**27**	<0.1	<0.1	22.5	1370	-7.2
11-Apr-12	73928	1300	2490	891	6.8	160	5	252	63.6	181	31.2	**29**	<0.05	<0.05	22.3	1390	-3.0
09-Apr-13	81508	1060	2380	768	6.7	184	10	220	53.2	**212**	27.7	**26**	<0.05	<0.05	23.2	1340	2.2
24-Mar-14	88628	1010	2460	893	6.7	89	7	253	63.5	**220**	29.6	**30**	<0.05	<0.05	19.6	1390	14.5
07-Apr-15	96144	589	2330	586	6.8	188	5	159	46.0	157	26.0	**29**	<0.05	<0.05	21.3	1280	11.5
29-Mar-16	103225	1030	2240	771	7.1	161	4	227	49.5	150	26.3	**26**	<0.05	<0.05	22.8	1180	-0.1
23-Apr-17	112539	1140	2300	736	6.8	215	8	212	50.1	150	24.8	**27**	<0.05	<0.05	21.4	1310	-8.9
26-Mar-18	121014	1000	1840	656	6.7	100	3	195	41.0	125	24.7	**20**	<0.5	<0.5	21.7	1100	-3.3
28-Mar-19	130677	1140	2410	831	6.8	168	5	235	59.2	167	25.4	**25**	<0.5	<0.5	23	1400	-1.1
29-Apr-20	140551	1060	2590	962	6.8	175	6	270	70.0	183	21.8	**30**	<0.5	<0.5	19.5	1390	6.6
22-Mar-21	148688	1060	2310	810	6.7	139	40	229	57.8	151	33.6	**27**	<0.5	<0.5	13.6	1270	-1.0
29-Mar-22	159337	1160	2480	934	6.6	171	6	258	70.4	197	27.5	**28**	<0.5	<0.5	23.9	1390	4.0
21-Mar-23	168981	1200	2620	837	6.7	171	13	230	63.7	175	26.2	**29**	<0.05	<0.05	14.3	1320	-4.0
25-Mar-24	179562	1070	2230	642	6.8	156	10	173	51.0	131	31.1	**27**	<0.05	<0.05	36	1330	7.1
TOTAL SAMPLES		40	40	40	37	40	40	40	40	40	40	19	40	40	40	17	
AVERAGE 2024																	

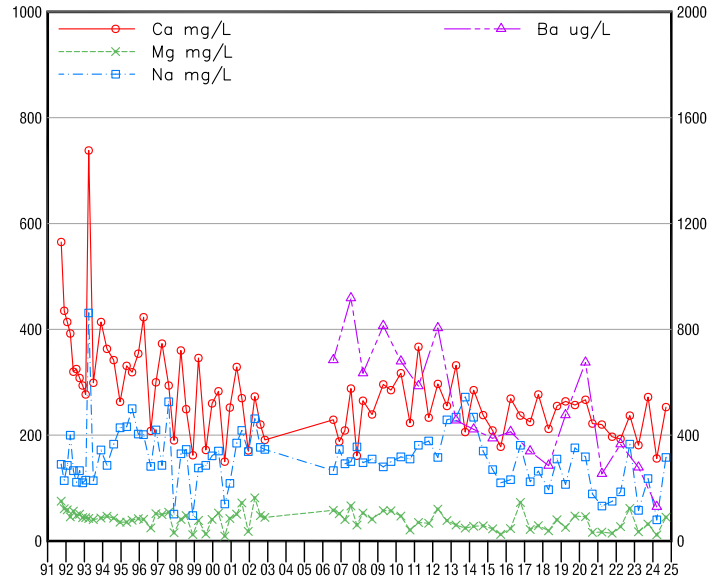
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



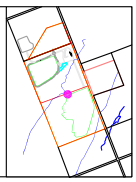








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-66-III

Shallow Overburden

Screen 197.2 - 193.4 masl

CA008825 24 Mar 25	wsp	F324024

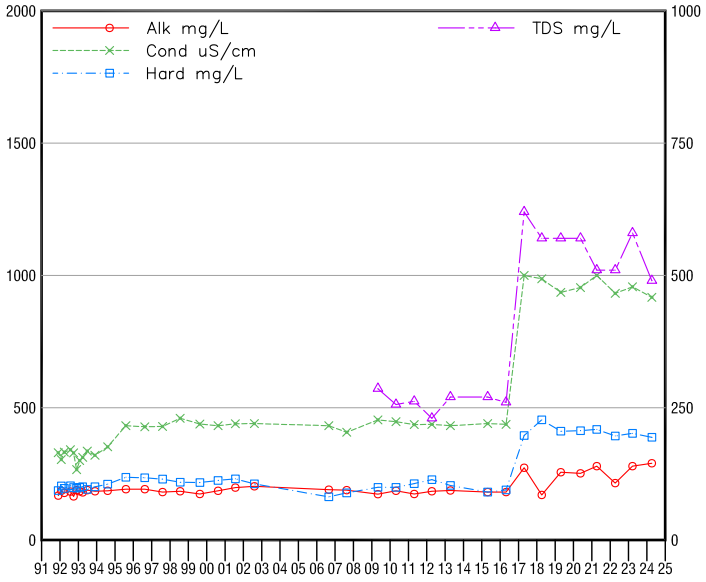
BH-66-III

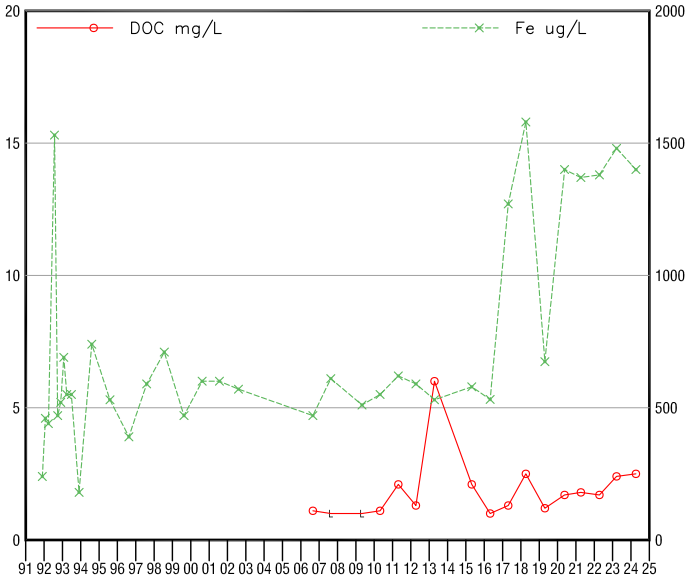
Shallow Overburden

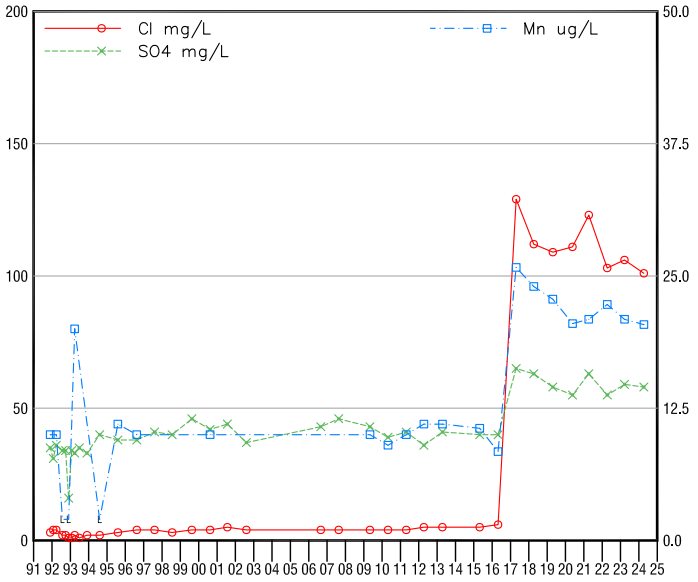
Monitoring Well
Screen 197.2 - 193.4 masl

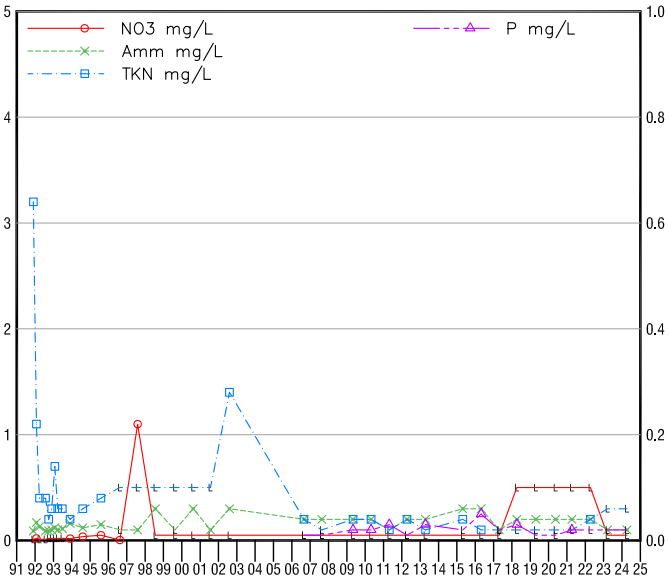
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
06-Apr-10	61742	1080	3040	986	6.6	**352**	17	317	47.1	159	43.0	**26**	<0.5	<0.5	44.7	1710	1.6
04-Oct-10	64478	782	2190	642	7.1	193	31	223	20.7	155	22.4	**17**	<0.05	<0.05	18.3	1190	2.6
21-Mar-11	67074	722	3410	1061	6.6	**722**	52	367	35.1	181	23.2	**11**	<0.25	<0.25	20.6	1870	-3.0
11-Oct-11	70804	948	2470	719	6.9	226	22	233	33.4	189	35.7	**25**	<0.05	<0.05	30	1350	1.7
11-Apr-12	73930	1620	2920	990	6.8	165	0.6	297	60.2	158	58.4	**36**	<0.05	<0.05	61.5	1500	-4.4
09-Oct-12	77777	558	2760	796	6.8	**251**	17	255	38.6	**229**	45.0	**29**	<0.05	<0.05	43.2	1480	25.7
09-Apr-13	81509	862	3000	953	6.5	**505**	15	332	30.2	**234**	22.2	**16**	<0.05	<0.05	23.2	1750	2.8
09-Oct-13	85639	895	2520	615	6.7	**393**	28	206	24.4	**272**	27.8	**18**	<0.05	<0.05	30.4	1360	-2.3
24-Mar-14	88632	873	2560	826	6.6	**358**	12	285	27.7	**234**	19.9	**14**	<0.05	<0.05	18.8	1340	4.3
01-Oct-14	92764	968	2210	713	6.8	157	1	238	28.8	170	30.4	**20**	<0.05	<0.05	31	1250	4.5
07-Apr-15	96142	817	2430	617	6.8	**371**	13	209	23.0	135	21.2	**12**	<0.05	<0.05	25.3	1240	-10.4
14-Sep-15	99614	833	1900	496	6.6	130	11	178	12.5	110	12.3	**15**	<0.05	<0.05	21.1	1020	-8.3
29-Mar-16	103220	940	2100	768	7.0	152	7	269	23.5	116	17.1	**16**	<0.05	<0.05	23.3	1080	1.6
11-Oct-16	108018	1270	2590	892	7.0	207	7	237	72.9	181	37.6	**24**	<0.05	<0.05	20	1510	-3.6
23-Apr-17	112540	625	1860	652	6.8	**274**	11	225	21.8	112	17.7	**9.1**	<0.05	<0.05	15.3	1040	0.6
03-Oct-17	116851	1190	2280	811	6.8	176	<2	277	29.0	132	28.9	**27**	<0.5	<0.5	29.2	1220	-4.0
25-Apr-18	121896	732	1580	609	6.6	124	11	212	19.3	97	11.7	**19**	<0.05	<0.05	12	870	1.1
09-Oct-18	126922	1220	2450	801	6.6	139	<2	255	40.0	155	36.8	**30**	<0.5	<0.5	41.6	1260	-0.2
28-Mar-19	130675	876	1950	765	6.7	118	10	264	25.7	107	16.9	**20**	<0.5	<0.5	14.9	1120	4.4
01-Oct-19	135647	1290	2750	836	6.6	181	<0.2	257	47.2	176	42.4	**40**	<0.5	<0.5	42.9	1410	-1.4
29-Apr-20	140547	1100	2650	855	6.8	162	<2	267	45.8	159	32.1	**33**	<0.5	<0.5	44.4	1350	4.9
13-Sep-20	144107	651	1360	622	6.6	34	27	222	16.4	89	10.1	**11**	<0.5	<0.5	9.2	810	11.0
22-Mar-21	148690	724	1640	619	6.7	139	8	220	17.0	66	7.9	**10**	<0.5	<0.5	10.8	950	-3.0
12-Oct-21	154586	623	1420	552	6.6	75	27	197	14.7	75	9.5	**11**	<0.5	<0.5	8.1	810	2.6
29-Mar-22	159335	796	1560	594	6.8	55	18	193	27.2	93	23.4	**14**	<0.5	<0.5	35.6	770	6.4
28-Sep-22	164701	1290	2670	846	6.9	**469**	0.5	237	61.7	183	38.9	**41**	<0.05	<0.05	47.7	1490	-12.3
21-Mar-23	168976	595	1390	524	6.8	82	44	181	17.6	58	13.4	**9.5**	<0.05	<0.05	12.8	820	-1.0
26-Sep-23	2023A026	902	1780	811	6.7	73.7	0.5	272	31.9	118	20.7	**25.2**	<0.05	<0.05	22.2	970	9.2
19-Mar-24	179372	445	957	437	6.8	41	45	156	11.6	40	3.8	**9**	<0.05	<0.05	3.3	570	0.6
17-Sep-24	184551	1110	2440	817	6.7	154	2	253	44.9	158	37.5	**34**	<0.05	<0.05	48.4	1350	1.5
TOTAL SAMPLES		78	78	78	72	78	78	78	78	78	78	39	78	78	78	34	
AVERAGE 2024		778	1699	627	6.8	98	24	205	28.3	99	20.7	22	<0.05	<0.05	25.9	960	

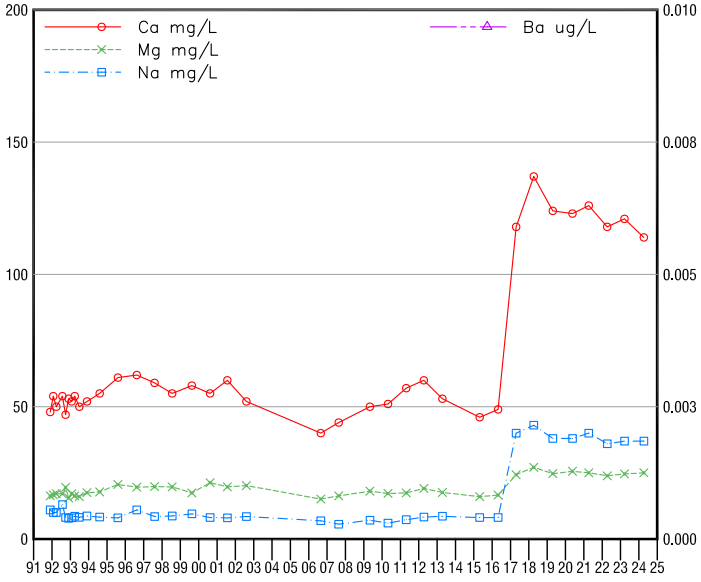
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



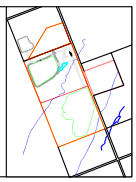








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-70-II

Overburden Formation

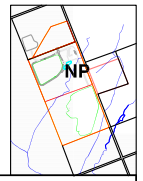
Screen 181.2 - 180.4 masl

CA008825 24 Mar 25	wsp	F324025

BH-70-II

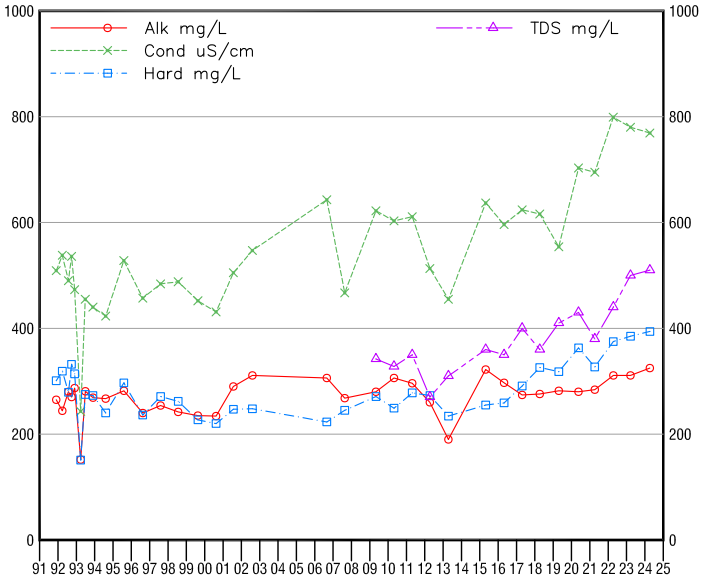
Overburden Formation

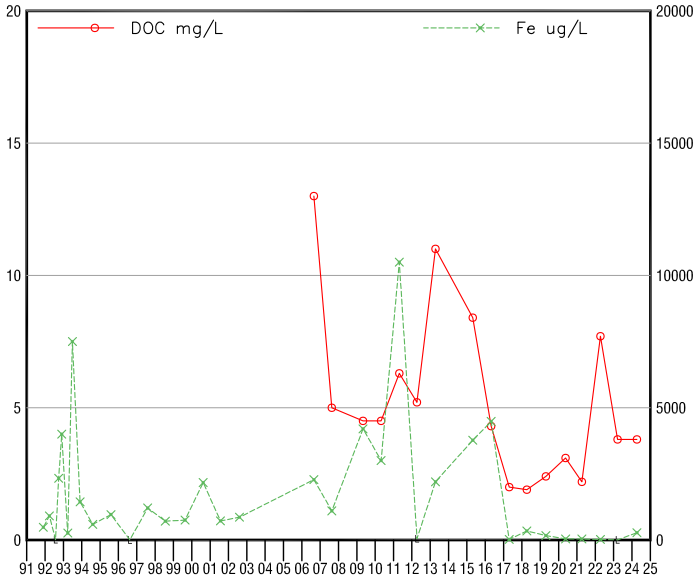
Stand Pipe Piezometer
Screen 181.2 - 180.4 masl

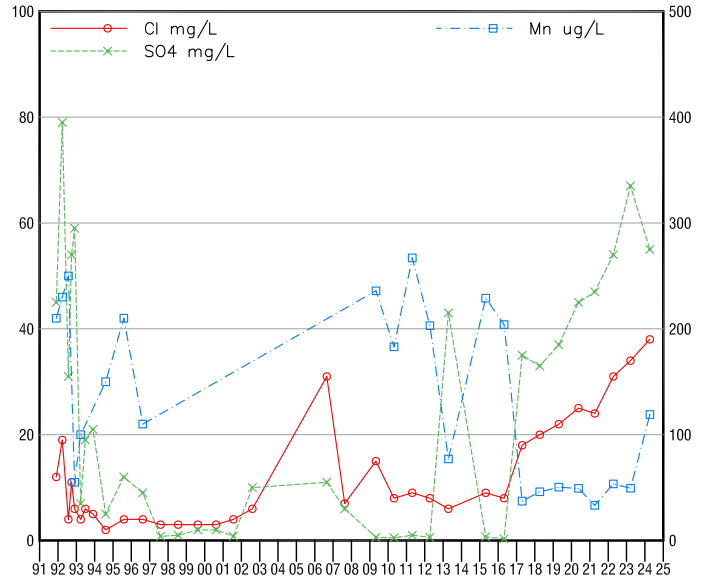


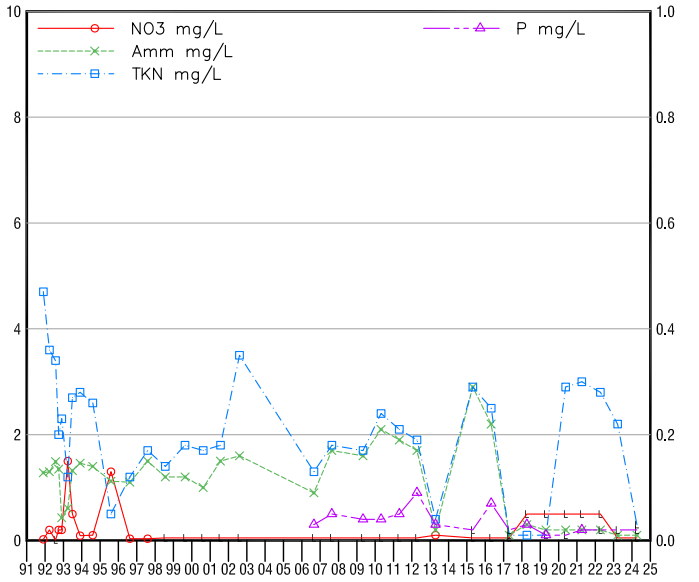
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jan-93	HGW3119	184	300	199	7.8	1	34	52	17.1	8.0	1.58		<0.02	<0.001	0.12		-0.3
28-Mar-93	HGW3120	180	312	201	7.7	2	33	54	16.3	8.6	1.11		<0.02	<0.001	0.1		1.3
28-Jun-93	HGW3121	188	336	191	7.4	1	35	50	16.0	8.2	1.43		<0.02	<0.001	0.11		-3.4
28-Nov-93	HGW3122	184	320	201	7.8	2	33	52	17.5	8.7	2.29		0.018	<0.001	0.16		0.6
08-Aug-94	HGW3123	186	352	211	7.9	2	40	55	17.8	8.3	1.7		0.036	0.001	0.12		0.4
05-Aug-95	HGW3124	192	432	237	7.7	3	38	61	20.6	8.0	1.4		0.05	<0.01	0.15		4.4
16-Aug-96	HGW3125	192	428	235	8.1	4	38	62	19.6	11	3.22		0.005	<0.006	<0.1		5.1
06-Aug-97	HGW3126	181	429	230	8.0	4	41	59	19.8	8.5	2.18		1.1	<0.006	0.1		4.1
23-Jul-98	HGW3127	184	460	218	8.3	3	40	55	19.7	8.7	1.73		<0.05	<0.06	0.3		2.4
19-Aug-99	HGW3128	174	438	217	8.3	4	46	58	17.4	9.5	1.94		<0.05	<0.06	<0.1		2.9
15-Aug-00	HGW3129	186	432	225	8.2	4	42	55	21.3	8.1	2		<0.05	<0.06	0.3		2.5
26-Jul-01	HGW3130	198	439	231	8.0	5	44	60	19.7	8.0	1.55		<0.05	<0.06	0.1		0.2
08-Aug-02	HGW3131	203	440	212	8.1	4	37	52	20.2	8.5	1.36		<0.05	<0.06	0.3		-2.8
29-Aug-06	37989	190	432	163		4	43	40	15.1	6.9	1.32	1.1	<0.05	<0.05	0.2		-14.1
21-Aug-07	44622	188	407	178		4	46	44	16.3	5.6	1.49	<1	<0.05	<0.05	0.2		-11.0
04-May-09	55531	173	454	199	7.7	4	43	50	18.1	7.1	1.21	<1	<0.05	<0.1	0.2	286	-1.4
28-Apr-10	62148	186	447	199	7.9	4	39	51	17.2	6.0	1.44	1.1	<0.05	<0.05	0.2	256	-3.9
26-Apr-11	67650	174	436	213	7.8	4	41	57	17.4	7.3	1.52	2.1	<0.05	<0.05	<0.1	262	2.0
12-Apr-12	73951	184	437	228	7.8	5	36	60	19.1	8.3	1.55	1.3	<0.05	<0.05	0.2	230	4.6
16-Apr-13	81638	187	432	206	8.0	5	41	53	17.6	8.6	1.46	**6**	<0.05	<0.05	0.2	270	-1.7
28-Apr-15	96633	181	440	181	8.1	5	40	46	16.0	8.1	1.4	2.1	<0.05	<0.05	0.3	270	-6.5
28-Apr-16	103947	181	437	189	7.8	6	40	49	16.6	8.1	1.4	1	<0.05	<0.05	0.3	260	-4.6
23-Apr-17	112534	273	1000	395	7.6	129	65	118	24.3	40	2.3	1.3	<0.05	<0.05	0.1	620	-3.5
09-Apr-18	121420	170	987	454	7.5	112	63	137	27.1	43	2.5	2.5	<0.5	<0.5	0.2	570	16.9
23-Apr-19	131254	256	936	411	7.5	109	58	124	24.7	38	2.4	1.2	<0.5	<0.5	0.2	570	3.0
20-May-20	141023	252	954	413	7.7	111	55	123	25.6	38	2.3	1.7	<0.5	<0.5	0.2	570	3.6
08-Apr-21	149082	279	1000	418	7.5	123	63	126	25.0	40	2.4	1.8	<0.5	<0.5	0.2	510	-0.8
12-Apr-22	159791	215	932	393	7.4	103	55	118	23.9	36	2.2	1.7	<0.5	<0.5	0.2	510	6.6
21-Mar-23	168978	279	957	403	7.4	106	59	121	24.6	37	2.4	2.4	<0.05	<0.05	0.1	580	0.1
10-Apr-24	179982	290	917	388	7.2	101	58	114	25.0	37	2.4	2.5	<0.05	<0.05	0.1	490	1.0
TOTAL SAMPLES		36	36	36	34	36	36	36	36	36	36	17	36	36	36	15	
AVERAGE 2024																	

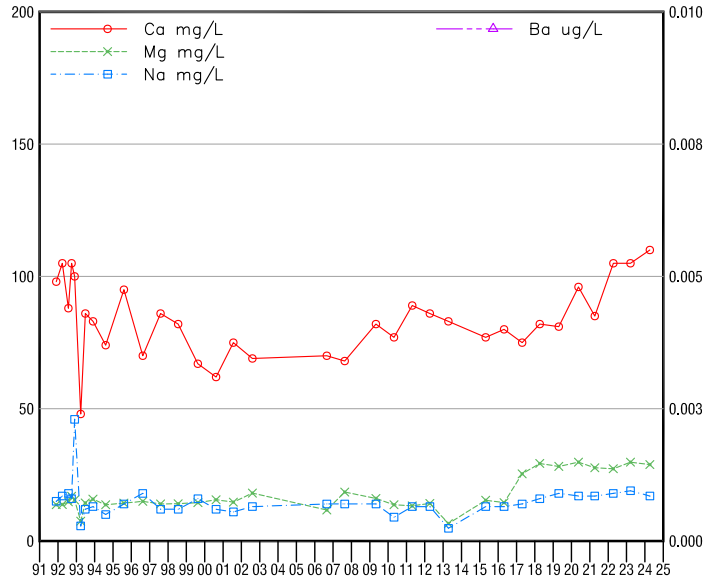
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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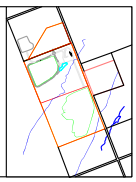
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-70-III

Shallow Overburden

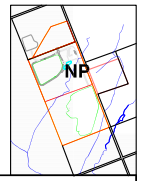
Screen 194.0 - 189.4 masl

CA008825 24 Mar 25	wsp	F324026

BH-70-III

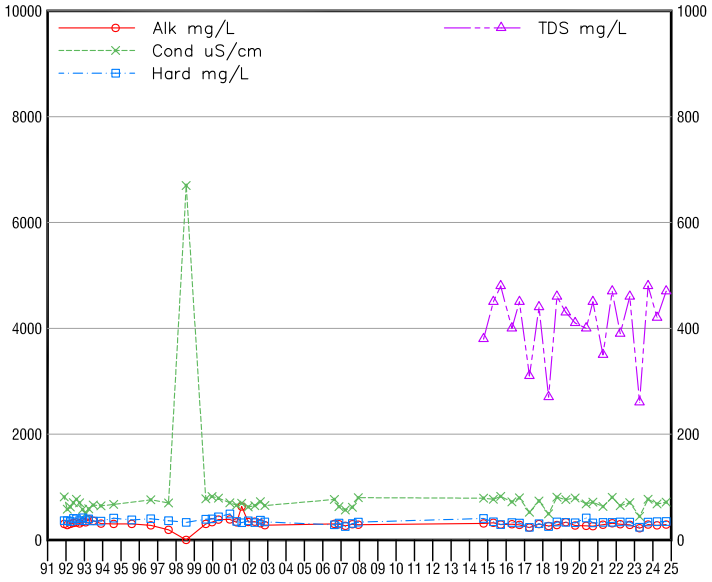
Shallow Overburden

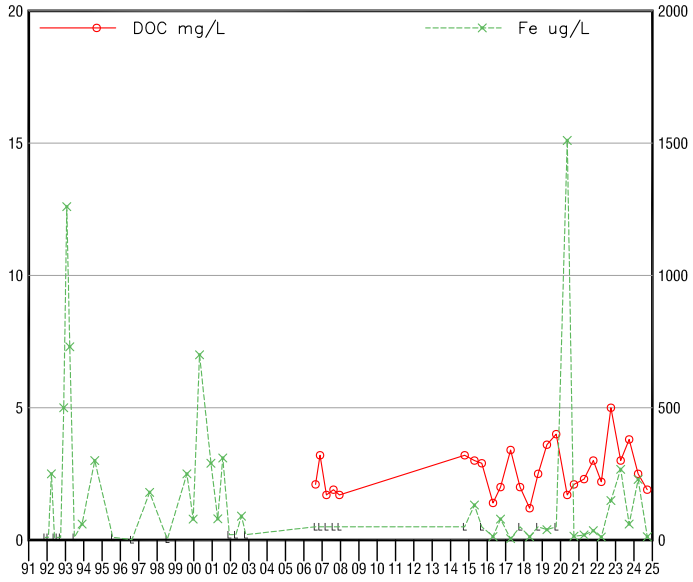
Monitoring Well
Screen 194.0 - 189.4 masl

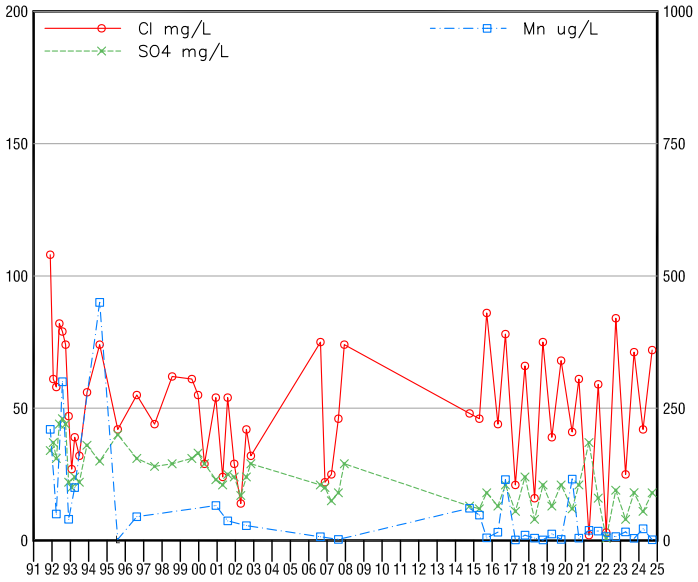


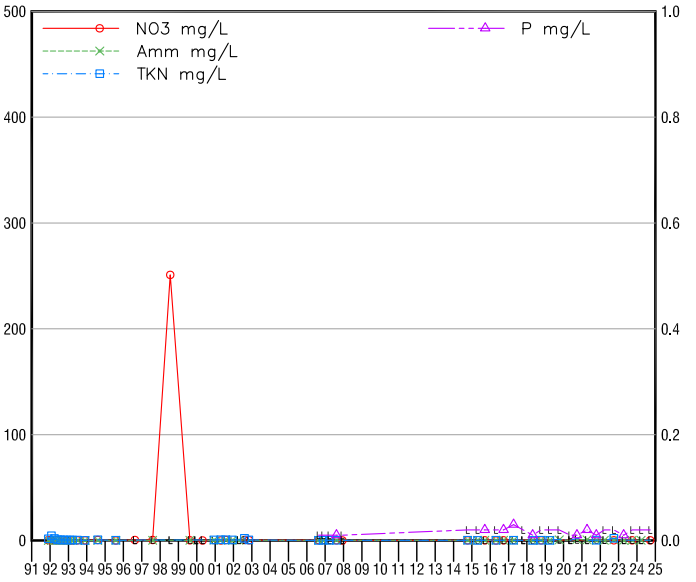
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-92	HGW3136	287	473	314	7.2	6	59	100	15.5	46	2.35		0.2	<0.001	0.43		8.6
28-Mar-93	HGW3137	152	243	151	7.5	4	7	48	7.5	5.7	0.92		1.5	0.012	0.61		-0.9
28-Jun-93	HGW3138	281	455	275	7.0	6	19	86	14.4	12	2.14		0.5	0.002	1.32		1.7
28-Nov-93	HGW3139	269	440	273	7.3	5	21	83	15.8	13	1.15		0.09	<0.001	1.46		2.1
08-Aug-94	HGW3140	267	423	240	7.6	2	5	74	13.7	10	1.7		0.1	0.004	1.4		-0.9
05-Aug-95	HGW3141	282	528	297	7.2	4	12	95	14.3	14	0.9		1.3	<0.01	1.12		4.4
16-Aug-96	HGW3142	240	457	236	8.2	4	9	70	15.0	18	<0.8		0.033	0.021	1.1		4.5
06-Aug-97	HGW3143	254	484	271	7.8	3	0.8	86	14.0	12	1.19		0.033	<0.006	1.5		8.5
23-Jul-98	HGW3144	242	488	262	8.2	3	1	82	14.1	12	1.04		<0.05	<0.06	1.2		8.7
19-Aug-99	HGW3145	235	452	227	8.4	3	2	67	14.5	16	1.68		<0.05	<0.06	1.2		5.3
15-Aug-00	HGW3146	234	431	220	8.1	3	2	62	15.6	12	1.63		<0.05	<0.06	1		3.1
26-Jul-01	HGW3147	290	505	247	8.1	4	0.8	75	14.7	11	1.04		<0.05	<0.06	1.5		-3.2
08-Aug-02	HGW3148	311	547	248	8.0	6	10	69	18.1	13	1.02		<0.05	<0.06	1.6		-7.4
29-Aug-06	37985	306	643	223		31	11	70	11.7	14	1.7	**13**	<0.05	<0.05	0.9		-15.9
21-Aug-07	44603	268	467	245		7	6	68	18.5	14	1.76	5	<0.05	<0.05	1.7		0.4
04-May-09	55532	280	622	271	7.5	15	0.6	82	16.1	14	1.02	4.5	<0.05	<0.1	1.6	342	2.4
28-Apr-10	62149	306	603	249	7.4	8	0.5	77	13.7	9.0	1.04	4.5	<0.05	<0.05	2.1	328	-5.9
26-Apr-11	67651	296	611	278	7.5	9	1	89	13.3	13	1.08	**6.3**	<0.05	<0.05	1.9	350	3.3
12-Apr-12	73952	260	513	273	7.4	8	0.6	86	14.2	13	1.03	**5.2**	<0.05	<0.05	1.7	270	6.3
16-Apr-13	81639	190	455	234	7.8	6	43	83	6.6	4.8	1.19	**11**	0.1	<0.05	0.2	310	1.6
28-Apr-15	96634	322	637	255	7.7	9	0.7	77	15.4	13	1.1	**8.4**	<0.05	<0.05	2.9	360	-5.3
28-Apr-16	103948	297	596	259	7.3	8	0.3	80	14.5	13	1	4.3	<0.05	<0.05	2.2	350	-0.8
23-Apr-17	112535	274	624	291	7.6	18	35	75	25.4	14	1.7	2	<0.05	<0.05	0.1	400	-1.7
09-Apr-18	121421	276	616	326	7.6	20	33	82	29.3	16	1.8	1.9	<0.5	<0.5	0.3	360	3.9
23-Apr-19	131255	282	554	318	7.6	22	37	81	28.2	18	1.6	2.4	<0.5	<0.5	0.2	410	1.2
20-May-20	141024	280	703	363	7.7	25	45	96	29.8	17	1.5	3.1	<0.5	<0.5	0.2	430	5.4
08-Apr-21	149083	284	695	327	7.6	24	47	85	27.7	17	1.5	2.2	<0.5	<0.5	0.2	380	0.0
12-Apr-22	159793	311	799	375	7.4	31	54	105	27.3	18	1.2	**7.7**	<0.5	<0.5	0.2	440	0.8
21-Mar-23	168979	311	780	385	7.5	34	67	105	29.8	19	1.4	3.8	<0.05	<0.05	0.1	500	0.1
10-Apr-24	179983	325	769	394	7.2	38	55	110	28.9	17	1.3	3.8	<0.05	<0.05	0.1	510	1.0
TOTAL SAMPLES		34	34	34	32	34	34	34	34	34	34	17	34	34	34	15	
AVERAGE 2024																	

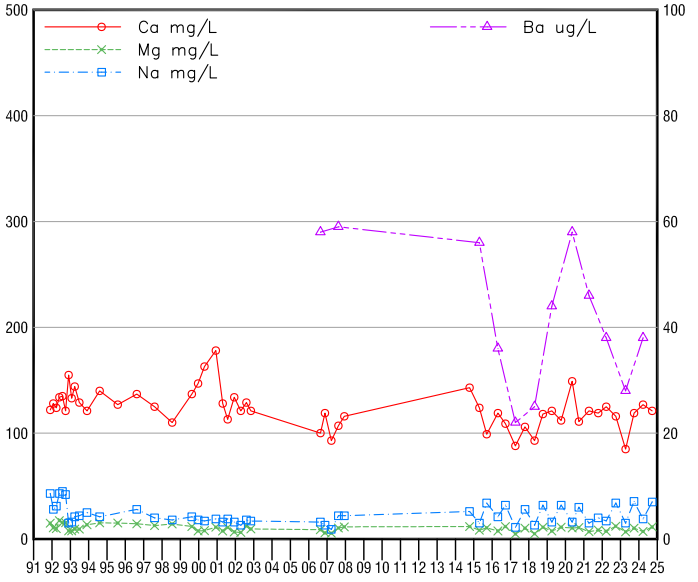
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



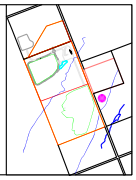








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-75-II

Shallow Overburden

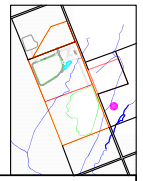
Screen 190.0 - 186.2 masl

CA008825 24 Mar 25	wsp	F324027

BH-75-II

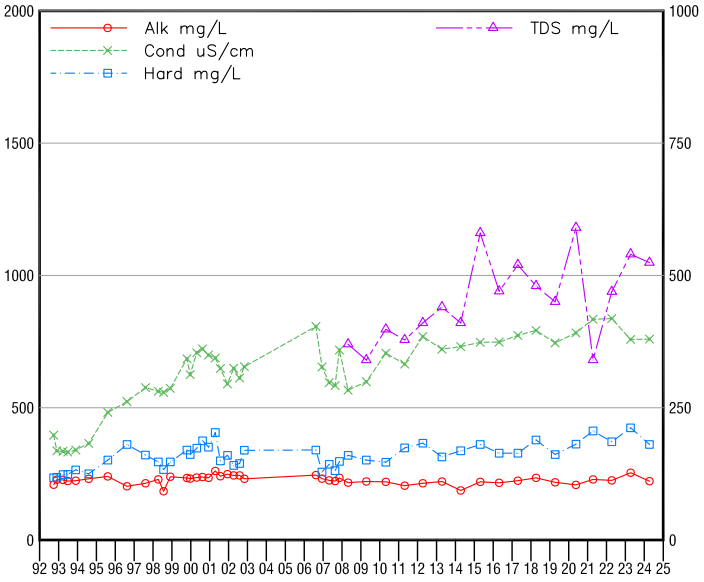
Shallow Overburden

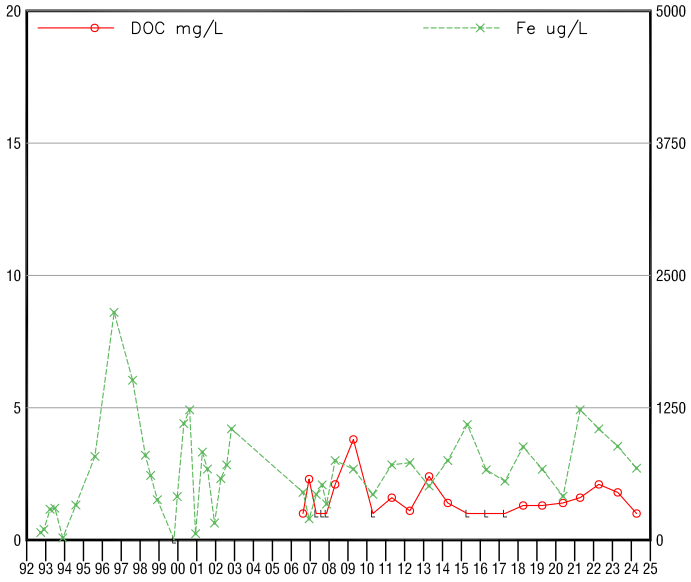
Monitoring Well
Screen 190.0 - 186.2 masl

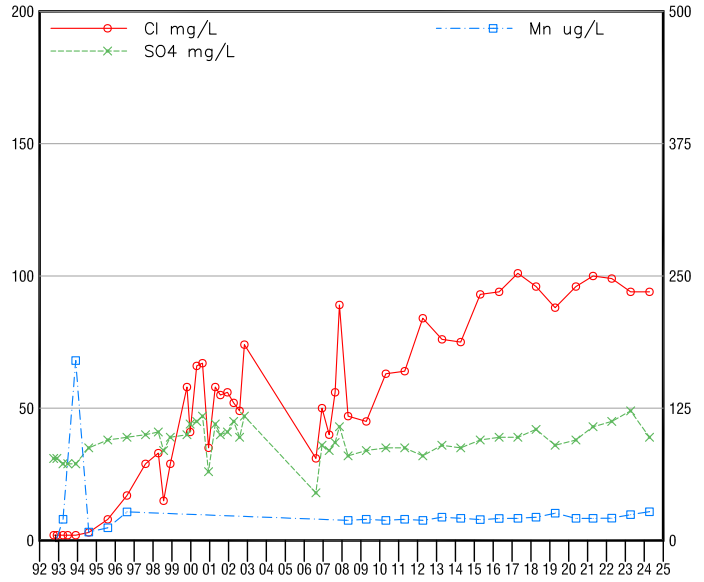


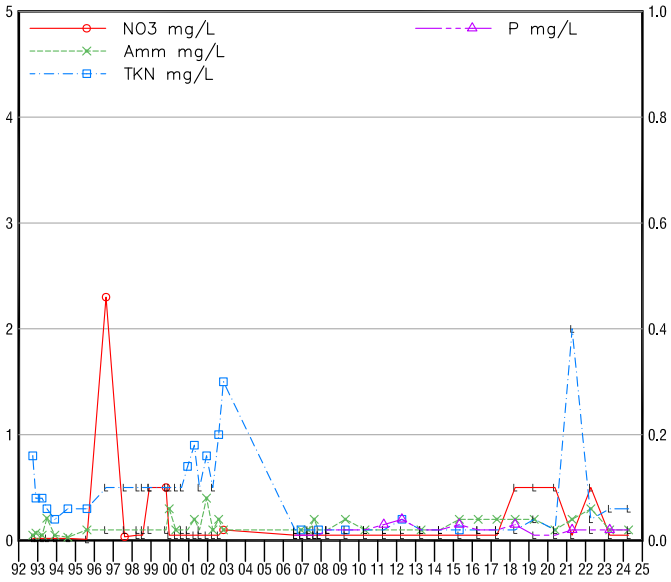
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
10-Dec-01	HGW3475	340	625	362	7.8	29	24	134	6.7	16	0.14		<0.05	<0.06	0.1		-1.1
18-Apr-02	HGW3476	346	649	328	7.9	14	17	121	6.2	13	0.08		<0.05	<0.06	0.1		-3.7
08-Aug-02	HGW3477	316	724	373	8.0	42	24	129	12.3	18	0.84		0.4	<0.06	<0.6		1.4
04-Nov-02	HGW3478	280	650	341	7.7	32	29	121	9.5	17	0.53		0.3	<0.06	<0.1		3.0
21-Aug-06	37826	304	766	286		75	21	100	8.8	16	0.75	2.1	0.3	<0.05	0.1		-14.8
21-Nov-06	39653	298	630	321		22	20	119	5.8	13	<0.5	3.2	<0.05	<0.05	0.1		0.1
26-Mar-07	41938	268	568	253		25	15	93	5.4	9.1	<0.5	1.7	<0.05	<0.05	<0.1		-7.7
14-Aug-07	44472	298	619	310		46	18	107	10.4	22	0.97	1.9	0.2	<0.05	0.2		-2.9
10-Dec-07	46644	288	799	337		74	29	116	11.5	22	0.92	1.7	0.08	<0.05	<0.1		-4.4
08-Oct-14	92869	312	790	406	7.6	48	13	143	11.8	26	0.9	3.2	0.1	<0.05	0.1	380	8.2
22-Apr-15	96521	326	770	344	7.4	46	12	124	8.3	15	<0.5	3	<0.05	<0.05	0.1	450	-3.6
14-Sep-15	99618	291	824	291	7.5	86	18	99	10.6	34	0.9	2.9	0.2	<0.05	0.1	480	-8.2
24-Apr-16	103850	298	720	328	7.7	44	13	119	7.6	21	<0.5	1.4	0.08	<0.05	0.1	400	0.3
22-Sep-16	107587	286	796	321	7.4	78	21	109	11.8	32	1.2	2	0.2	<0.05	0.1	450	-3.4
09-Apr-17	112158	233	524	239	7.7	21	11	88	4.8	11	<0.5	3.4	<0.05	<0.05	0.2	310	-2.0
17-Oct-17	117244	299	737	307	7.8	66	24	106	10.2	28	1.1	2	<0.5	<0.05	<0.1	440	-6.1
25-Apr-18	121902	263	495	253	7.5	16	8	93	5.0	13	<0.5	1.2	<0.05	<0.05	0.1	270	-2.2
09-Oct-18	126925	282	808	340	7.5	75	21	118	11.1	32	1.2	2.5	0.1	<0.05	0.2	460	0.4
03-Apr-19	130811	338	764	333	7.5	39	13	121	7.5	16	<0.5	3.6	<0.5	<0.5	0.1	430	-4.8
07-Oct-19	135828	274	794	326	7.5	68	21	112	11.2	32	1.1	4	<0.5	<0.5	0.6	410	0.7
13-May-20	140868	266	682	415	7.6	41	12	149	10.4	16	0.7	1.7	<0.5	<0.5	<0.1	400	14.8
23-Sep-20	144446	261	714	322	7.5	61	21	111	10.8	30	1.2	2.1	<0.5	<0.5	0.9	450	3.0
13-Apr-21	149228	287	632	331	7.4	2	37	121	6.9	15	<0.5	2.3	<0.5	<0.5	0.6	350	5.3
13-Oct-21	154613	315	805	332	7.5	59	16	119	8.4	20	0.6	3	<0.5	<0.5	0.2	470	-4.8
22-Mar-22	159174	297	649	342	7.3	3	0.8	125	7.3	17	<0.5	2.2	<0.5	<0.5	0.2	390	11.3
28-Sep-22	164702	286	705	339	7.6	84	19	116	12.1	34	1.2	5	0.1	<0.05	0.6	460	-0.9
11-Apr-23	169535	221	446	240	7.5	25	8	85	6.8	15	<0.5	3	<0.05	<0.05	0.1	260	1.7
27-Sep-23	2023A031	291	770	339	7.5	71.2	18.1	119	10.2	35.5	1.2	3.8	0.12	<0.05	0.1	480	2.2
25-Mar-24	179553	275	681	346	7.5	42	11	127	7.1	19	<0.5	2.5	<0.05	<0.05	0.2	420	7.1
23-Sep-24	184724	290	714	349	7.3	72	18	121	11.4	35	1.2	1.9	0.1	<0.05	<0.1	470	3.3
TOTAL SAMPLES		52	51	52	46	52	52	52	52	51	51	26	52	52	52	21	
AVERAGE 2024		283	698	348	7.4	57	15	124	9.3	27	0.6	2.2	0.1	<0.05	0.1	445	

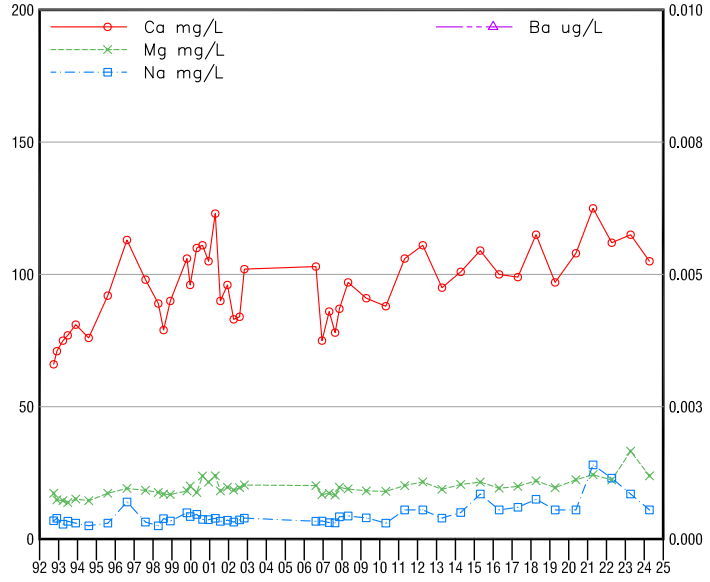
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



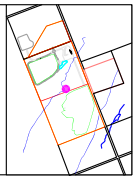








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-77-I

Shallow Overburden

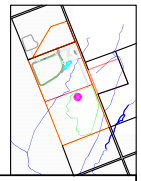
Screen 193.0 - 190.0 masl

CA008825 24 Mar 25	wsp	F324028

BH-77-I

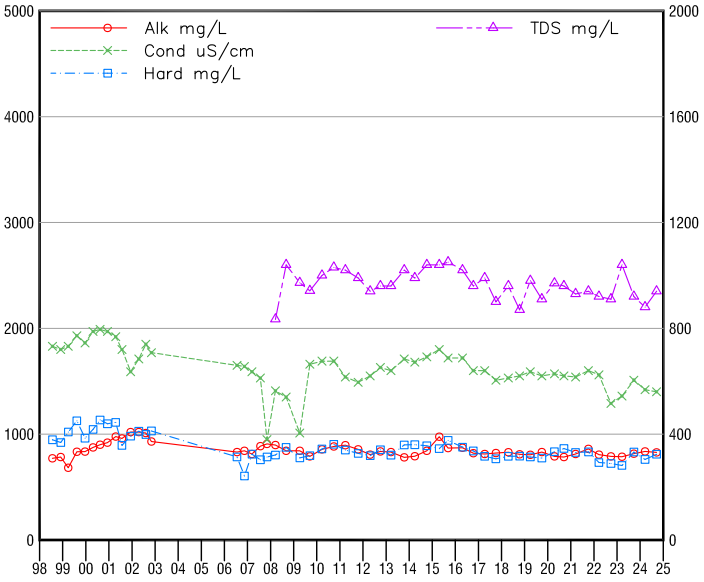
Shallow Overburden

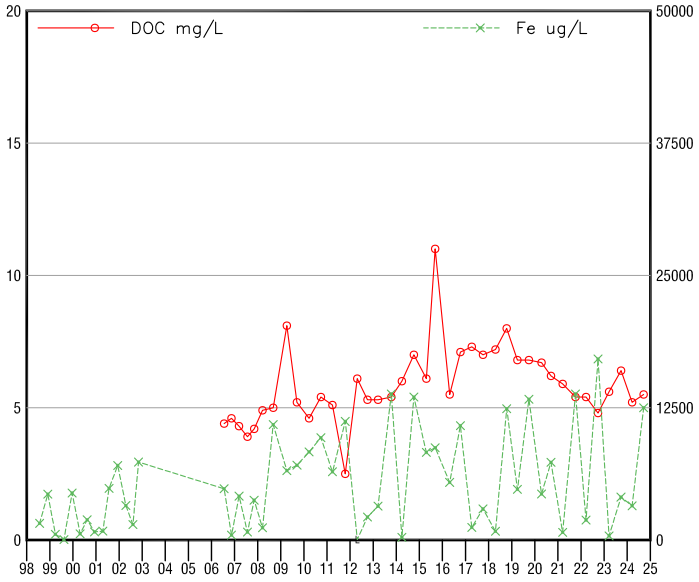
Monitoring Well
Screen 193.0 - 190.0 masl

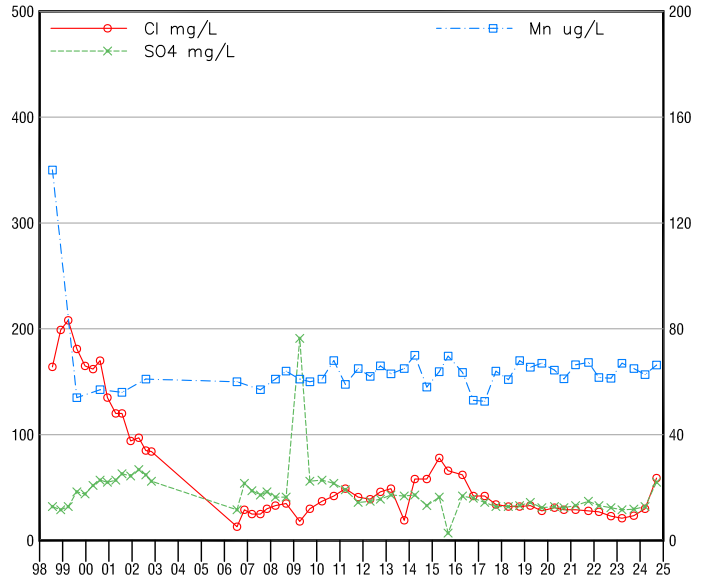


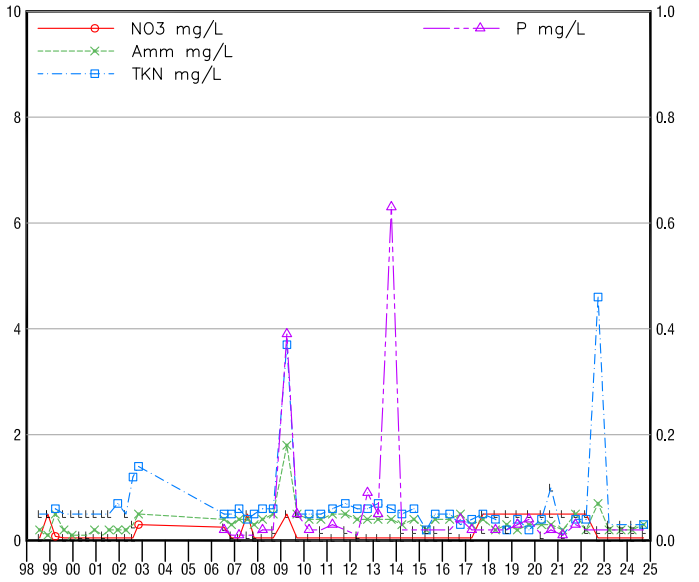
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
15-Aug-00	HGW3544	238	722	375	8.1	67	47	111	23.8	7.4	2.01		<0.05	<0.06	<0.1		1.9
08-Dec-00	HGW3545	235	699	351	7.8	35	26	105	21.5	7.3	2.19		<0.05	<0.06	<0.1		8.5
18-Apr-01	HGW3546	261	688	406	8.0	58	44	123	23.9	7.8	2.29		<0.05	<0.06	0.2		4.8
26-Jul-01	HGW3547	241	648	299	8.1	55	40	90	18.2	6.7	1.52		<0.05	<0.06	<0.1		-6.5
10-Dec-01	HGW3548	249	590	320	7.8	56	41	96	19.6	7.1	1.47		<0.05	<0.06	0.4		-4.4
10-Apr-02	HGW3549	244	649	282	8.0	52	45	83	18.5	6.4	1.22		<0.05	<0.06	0.1		-9.8
01-Aug-02	HGW3550	244	612	289	8.0	49	39	84	19.4	7.2	1.45		<0.05	<0.06	0.2		-6.8
01-Nov-02	HGW3551	231	655	339	7.8	74	47	102	20.4	7.9	1.48		0.1	<0.06	0.1		-3.3
15-Aug-06	37702	245	807	340		31	18	103	20.2	6.7	1.59	1	<0.05	<0.05	<0.1		7.6
11-Dec-06	40004	232	654	257		50	36	75	16.8	6.8	1.42	2.3	<0.05	<0.05	0.1		-10.6
30-Apr-07	42584	225	595	286		40	34	86	17.3	6.2	1.35	<1	<0.05	<0.05	0.1		-2.2
21-Aug-07	44604	223	584	262		56	37	78	16.6	6.1	1.65	<1	<0.05	<0.05	0.2		-9.8
13-Nov-07	46160	235	718	297		89	43	87	19.5	8.4	1.84	<1	<0.05	<0.1	<0.1		-11.9
29-Apr-08	49016	217	566	320		47	32	97	18.9	8.7	1.44	2.1	<0.05	<0.1	<0.1	370	3.9
15-Apr-09	55048	221	598	302	7.6	45	34	91	18.2	8.0	1.4	3.8	<0.05	<0.1	0.2	340	0.6
28-Apr-10	62150	220	706	294	7.7	63	35	88	18.0	6.0	1.41	<1	<0.05	<0.05	0.1	398	-5.3
27-Apr-11	67672	205	665	348	7.7	64	35	106	20.2	11	1.64	1.6	<0.05	<0.05	<0.1	378	6.1
12-Apr-12	73953	214	769	366	7.5	84	32	111	21.6	11	1.7	1.1	<0.05	<0.05	<0.1	410	3.7
16-Apr-13	81640	221	721	314	7.7	76	36	95	18.8	7.9	1.41	2.4	<0.05	<0.05	0.1	440	-4.4
14-Apr-14	89065	187	731	337	7.6	75	35	101	20.6	10	1.5	1.4	<0.05	<0.05	<0.1	410	4.7
27-Apr-15	96624	220	747	361	7.8	93	38	109	21.5	17	1.5	<1	<0.05	<0.05	0.2	580	1.3
26-Apr-16	103891	216	748	328	8.0	94	39	100	19.2	11	1.5	<1	<0.05	<0.05	0.2	470	-4.6
23-Apr-17	112536	224	773	328	7.7	101	39	99	19.9	12	1.5	<1	<0.05	<0.05	0.2	520	-6.6
09-Apr-18	121427	235	792	378	7.6	96	42	115	22.0	15	1.7	1.3	<0.5	<0.5	0.2	480	0.0
14-Apr-19	131084	218	745	323	7.6	88	36	97	19.4	11	1.6	1.3	<0.5	<0.5	0.2	450	-3.9
20-May-20	141025	208	783	362	7.8	96	38	108	22.4	11	1.7	1.4	<0.5	<0.5	0.1	590	1.0
15-Apr-21	149269	229	834	412	7.6	100	43	125	24.3	28	1.9	1.6	<0.05	<0.05	0.2	340	7.1
12-Apr-22	159795	225	837	371	7.6	99	45	112	22.3	23	1.6	2.1	<0.5	<0.5	0.3	469	1.8
11-Apr-23	169538	254	758	424	7.4	94	49	115	33.2	17	1.6	1.8	<0.05	<0.05	0.1	540	2.9
10-Apr-24	179984	222	759	361	7.3	94	39	105	23.9	11	1.6	1	<0.05	<0.05	0.1	524	0.1
TOTAL SAMPLES		45	45	45	39	45	45	45	45	45	45	22	45	45	45	17	
AVERAGE 2024																	

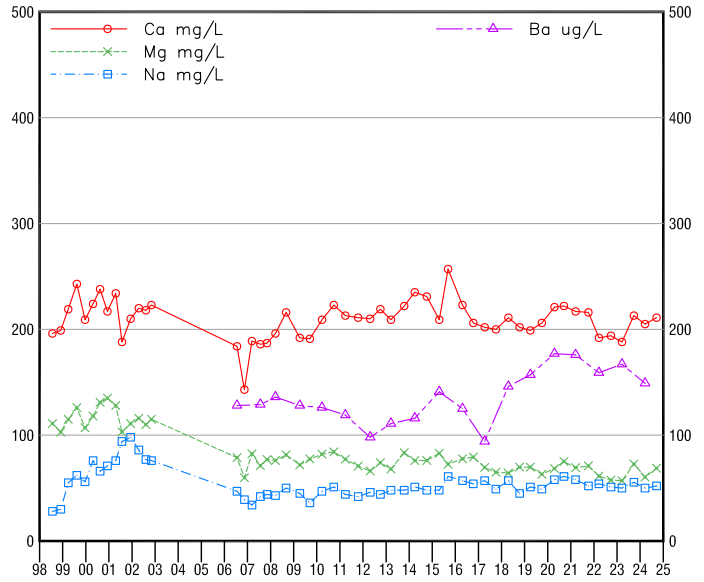
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-81-II

Overburden Formation

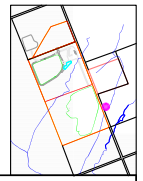
Screen 191.4 - 189.8 masl

CA008825 24 Mar 25	wsp	F324029

BH-81-II

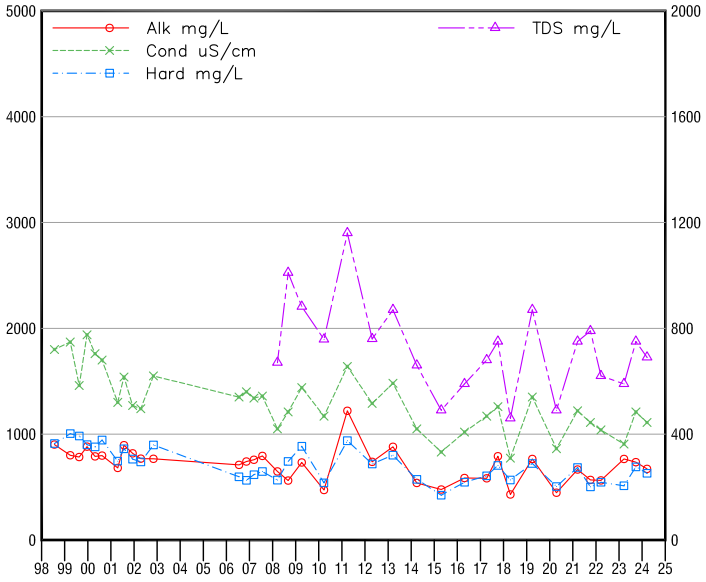
Overburden Formation

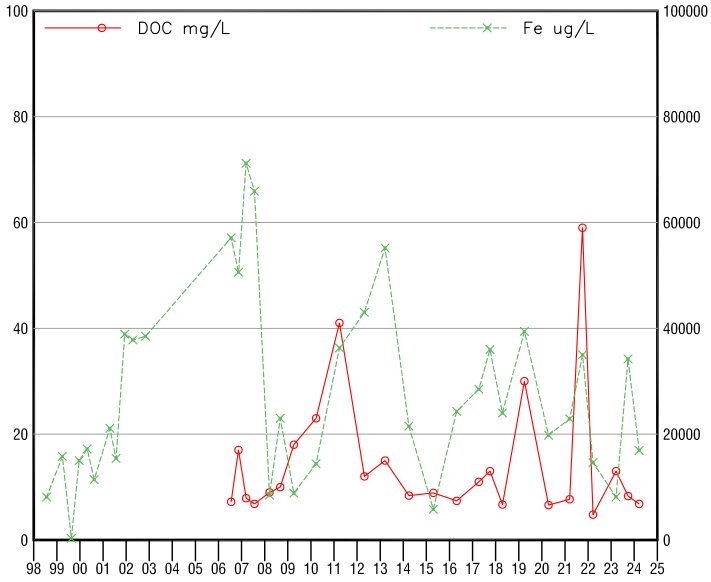
Stand Pipe Piezometer
Screen 191.4 - 189.8 masl

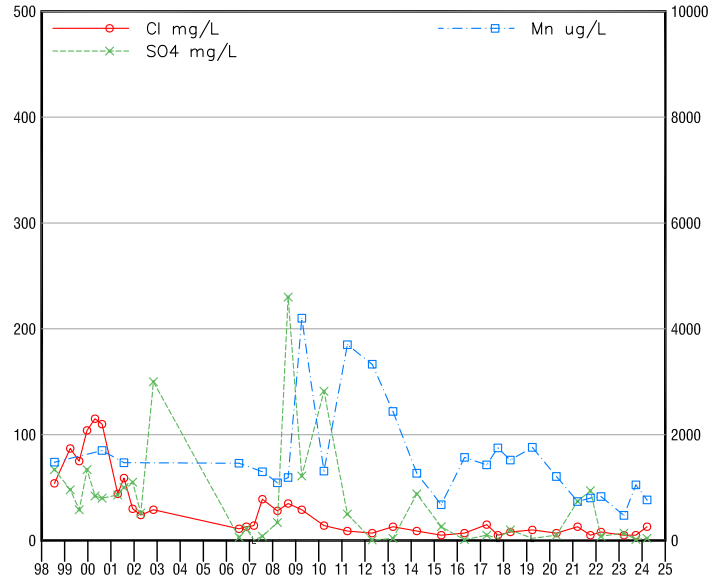


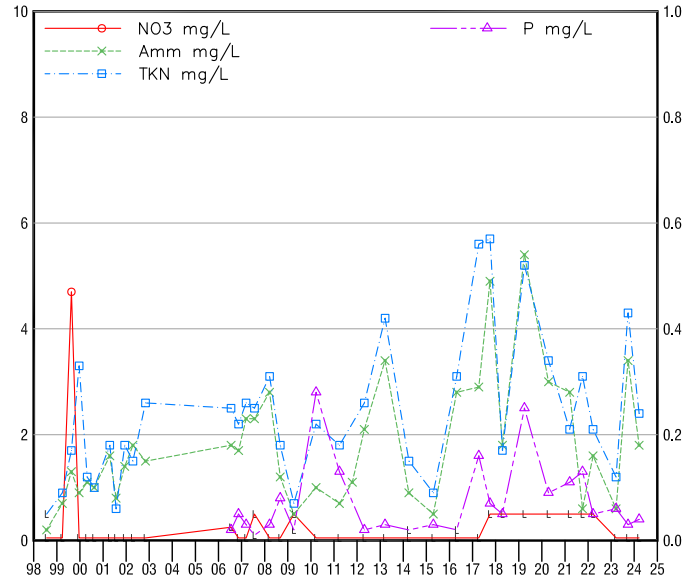
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61545	857	1690	860	7.3	37	57	209	82.0	47	5.62	4.6	<0.05	<0.05	0.4	1000	0.9
27-Sep-10	64386	884	1690	904	6.8	42	54	223	84.2	51	5.92	**5.4**	<0.05	<0.05	0.4	1030	2.0
29-Mar-11	67235	896	1540	850	6.8	49	48	213	77.2	44	5.33	**5.1**	<0.05	<0.05	0.5	1020	-2.5
18-Oct-11	71024	857	1490	818	6.9	41	36	211	70.8	42	6.34	2.5	<0.05	<0.05	0.5	990	-0.7
25-Apr-12	74218	807	1550	797	7.0	39	37	210	66.2	46	6.29	**6.1**	<0.05	<0.05	0.4	940	0.3
03-Oct-12	77705	836	1630	852	6.9	46	39	219	74.0	44	6.13	**5.3**	<0.05	<0.05	0.4	960	0.9
19-Mar-13	81049	831	1600	802	7.0	49	43	209	68.0	48	5.86	**5.3**	<0.05	<0.05	0.4	960	-1.3
15-Oct-13	85689	780	1710	898	6.8	19	42	222	83.4	48	5.3	**5.4**	<0.05	<0.05	0.4	1020	9.8
31-Mar-14	88763	791	1680	900	7.0	58	43	235	76.0	51	5.9	**6**	<0.05	<0.05	0.3	990	5.4
07-Oct-14	92844	842	1730	890	6.9	58	33	231	76.1	48	5.3	**7**	<0.05	<0.05	0.4	1040	3.5
21-Apr-15	96456	976	1800	863	6.7	78	41	209	82.8	48	5.2	**6.1**	<0.05	<0.05	0.2	1040	-6.6
09-Sep-15	99516	868	1720	941	6.8	66	7	257	72.6	61	5.6	**11**	<0.05	<0.05	0.4	1050	6.3
24-Apr-16	103853	872	1720	877	7.0	62	42	223	77.7	57	5.5	**5.5**	<0.05	<0.05	0.4	1020	0.8
11-Oct-16	108020	820	1600	841	7.0	42	40	206	79.3	54	6.6	**7.1**	<0.05	<0.05	0.5	960	3.5
09-Apr-17	112154	813	1600	791	7.0	42	36	202	69.5	57	5.8	**7.3**	<0.05	<0.05	0.3	990	0.8
03-Oct-17	116853	821	1510	767	6.9	34	32	200	65.0	49	5	**7**	<0.5	<0.5	0.4	900	-0.8
18-Apr-18	121705	829	1530	791	7.0	32	32	211	64.2	57	5.5	**7.2**	<0.5	<0.5	0.2	960	0.9
14-Oct-18	127089	809	1550	792	6.8	32	33	202	69.8	45	4.7	**8**	<0.5	<0.5	0.3	870	1.7
01-Apr-19	130700	805	1590	784	6.9	33	36	199	69.8	51	5	**6.8**	<0.5	<0.5	0.2	980	1.2
30-Sep-19	135553	831	1550	774	6.7	28	31	206	63.1	49	4.9	**6.8**	<0.5	<0.5	0.3	910	0.6
16-Apr-20	140286	790	1570	834	7.0	31	32	221	68.4	58	5.2	**6.7**	<0.5	<0.5	0.3	970	5.8
13-Sep-20	144109	784	1550	864	6.7	29	31	222	75.1	61	5.3	**6.2**	<0.5	<0.5	0.3	960	8.5
16-Mar-21	148557	812	1540	827	7.0	29	33	217	69.3	58	5.3	**5.9**	<0.5	<0.5	0.2	930	4.1
06-Oct-21	154480	861	1600	832	6.8	28	37	216	71.0	52	4.8	**5.4**	<0.5	<0.5	0.5	940	2.0
21-Mar-22	159046	806	1560	732	6.8	27	33	192	61.4	54	4.8	**5.4**	<0.5	<0.5	0.2	920	-1.1
27-Sep-22	164663	790	1290	722	6.8	23	31	194	57.6	51	4.8	4.8	<0.05	<0.05	0.7	910	1.0
20-Mar-23	168872	786	1360	704	6.9	21	29	188	57.0	50	4.8	**5.6**	<0.05	<0.05	0.2	1040	-1.5
25-Sep-23	2023A016	816	1510	831	6.8	23.4	29.6	213	72.7	55.5	5.4	**6.4**	<0.05	<0.05	0.2	920	6.1
19-Mar-24	179374	837	1420	761	6.9	30	32	205	60.4	50	4.5	**5.2**	<0.05	<0.05	0.2	880	0.3
17-Sep-24	184548	827	1400	810	6.6	59	55	211	68.8	52	4.8	**5.5**	<0.05	<0.05	0.3	940	0.3
TOTAL SAMPLES		53	53	53	47	53	53	53	53	53	53	39	53	53	53	34	
AVERAGE 2024		832	1410	786	6.8	45	44	208	64.6	51	4.7	5.35	<0.05	<0.05	0.3	910	

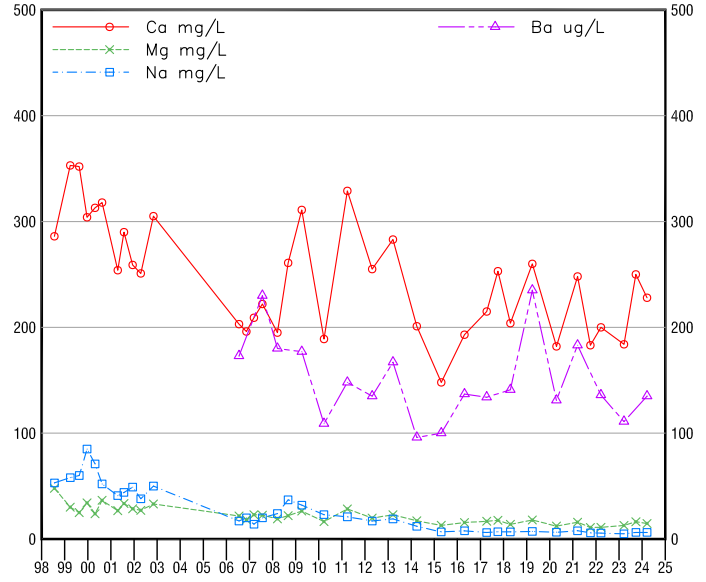
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



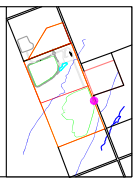








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-81-III

Shallow Overburden

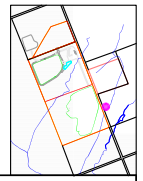
Screen 197.8 - 193.2 masl

CA008825 24 Mar 25	wsp	F324030

BH-81-III

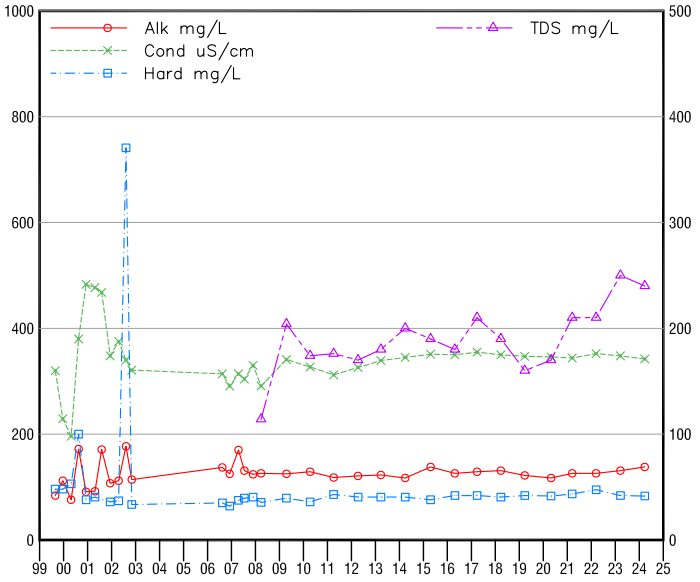
Shallow Overburden

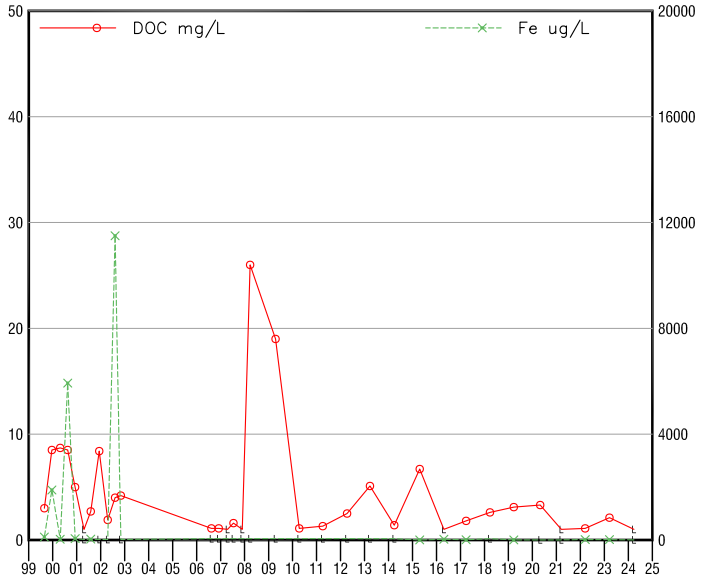
Monitoring Well
Screen 197.8 - 193.2 masl

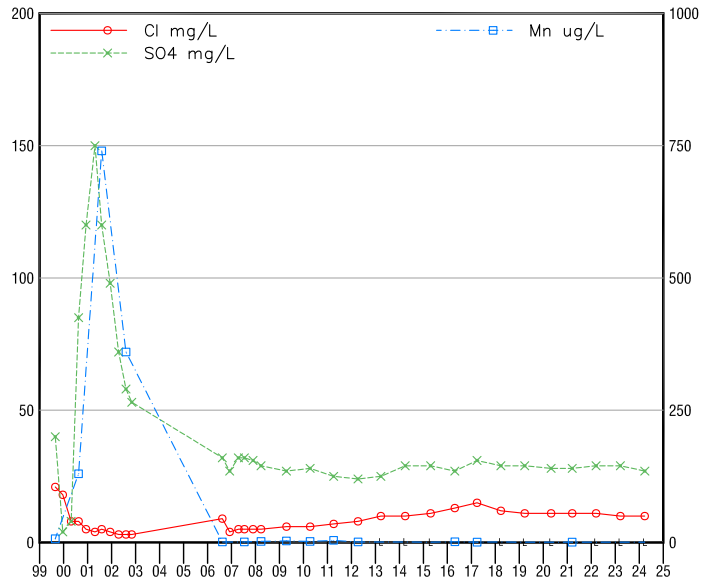


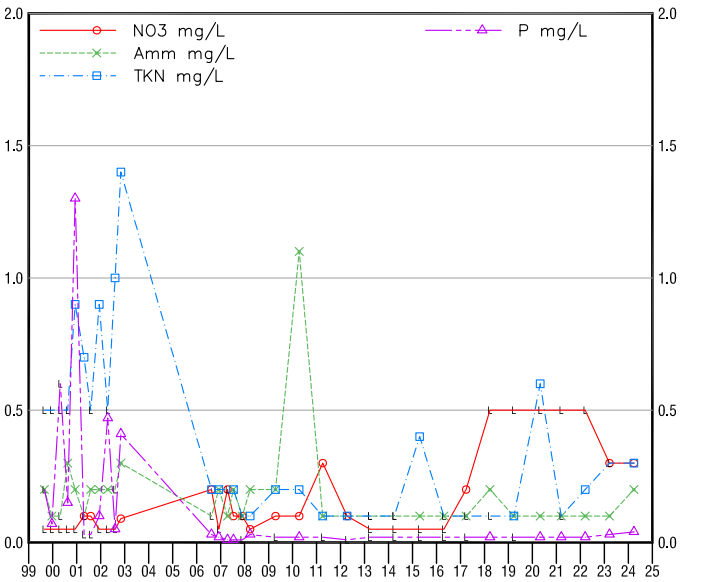
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
26-Jul-01	HGW3758	895	1540	862	7.2	59	50	290	33.5	44	3.24		<0.05	<0.06	0.8		-1.8
10-Dec-01	HGW3759	819	1270	764	7.1	30	55	259	28.6	49	2.96		<0.05	<0.06	1.4		1.7
18-Apr-02	HGW3760	768	1240	738	7.2	24	26	251	27.1	38	2.38		<0.05	<0.06	1.8		4.0
04-Nov-02	HGW3761	767	1550	898	7.3	29	150	305	33.1	50	4.09		<0.05	<0.06	1.5		5.9
19-Jul-06	37164	710	1350	597		11	3	203	21.8	17	2.3	**7.2**	<0.25	<0.25	1.8		1.2
14-Nov-06	39486	742	1400	564		13	11	196	18.2	20	2.47	**17**	<0.05	<0.05	1.7		-4.4
13-Mar-07	41667	758	1340	617		14	<0.3	209	23.0	14	2.79	**7.9**	<0.05	<0.05	2.3		0.5
24-Jul-07	44082	794	1360	647		39	4	222	22.5	20	2.9	**6.8**	<0.5	<0.5	2.3		-1.9
18-Mar-08	48234	647	1050	566		28	17	195	19.1	24	2.83	**9**	<0.05	<0.1	2.8	670	-4.2
03-Sep-08	51042	562	1210	742	7.2	35	230	261	22.0	37	2.75	**10**	<0.05	<0.1	1.2	1010	1.3
07-Apr-09	54927	732	1440	885	7.1	29	61	311	26.4	32	3.18	**18**	<0.5	<1	0.5	882	7.7
24-Mar-10	61546	472	1170	540	7.2	14	141	189	16.5	23	1.58	**23**	<0.05	<0.05	1	758	-1.4
29-Mar-11	67236	1220	1640	938	6.7	9	25	329	28.4	21	1.55	**41**	<0.05	<0.05	0.7	1160	-8.8
18-Oct-11	71025														1.1		
25-Apr-12	74219	739	1290	718	6.8	7	0.4	255	19.8	17	2.58	**12**	<0.05	<0.05	2.1	760	5.9
19-Mar-13	81050	880	1480	801	6.7	13	2	283	22.9	19	2.9	**15**	<0.05	<0.05	3.4	870	3.1
31-Mar-14	88764	538	1050	573	6.7	9	44	201	17.2	12	1	**8.4**	<0.05	<0.05	0.9	660	3.7
21-Apr-15	96457	477	831	423	6.8	5	13	148	12.9	6.7	0.7	**8.9**	<0.05	<0.05	0.5	490	-5.0
24-Apr-16	103854	585	1020	546	7.1	7	0.7	193	15.6	7.7	1.6	**7.4**	<0.05	<0.05	2.8	590	1.9
09-Apr-17	112155	583	1170	606	6.6	15	5	215	16.7	6.1	1.8	**11**	<0.05	<0.05	2.9	680	5.7
03-Oct-17	116854	791	1260	704	6.9	5	<2	253	17.6	6.8	2.4	**13**	<0.5	<0.5	4.9	750	0.4
18-Apr-18	121706	430	773	567	6.8	8	10	204	13.9	6.7	1.9	**6.7**	<0.5	<0.05	1.8	460	16.8
01-Apr-19	130701	766	1350	723	6.6	10	<2	260	17.9	7.2	2.3	**30**	<0.5	<0.5	5.4	870	3.2
16-Apr-20	140287	446	863	505	7.0	7	5	182	12.2	6.4	1.9	**6.6**	<0.5	<0.5	3	490	10.4
16-Mar-21	148558	666	1220	685	6.6	13	37	248	15.9	7.8	1.7	**7.7**	<0.5	<0.5	2.8	750	2.2
06-Oct-21	154481	568	1110	502	6.5	5	47	183	10.9	5.8	1.1	**59**	<0.5	<0.5	0.6	790	-3.6
21-Mar-22	159047	563	1040	545	6.6	8	4	200	11.0	5.6	1.2	4.8	<0.5	<0.5	1.6	620	1.0
20-Mar-23	168873	765	906	512	6.7	5	7	184	12.8	4.9	0.9	**13**	<0.05	<0.05	0.6	590	-18.1
25-Sep-23	2023A017	735	1210	691	6.6	5	0.9	250	16.3	6.2	2.2	**8.3**	<0.05	<0.05	3.4	750	0.2
19-Mar-24	179375	672	1110	630	6.6	13	2	228	14.7	6.2	1.3	**6.8**	<0.05	<0.05	1.8	690	1.3
TOTAL SAMPLES		36	36	36	31	36	36	36	36	36	36	25	36	36	37	21	
AVERAGE 2024																	

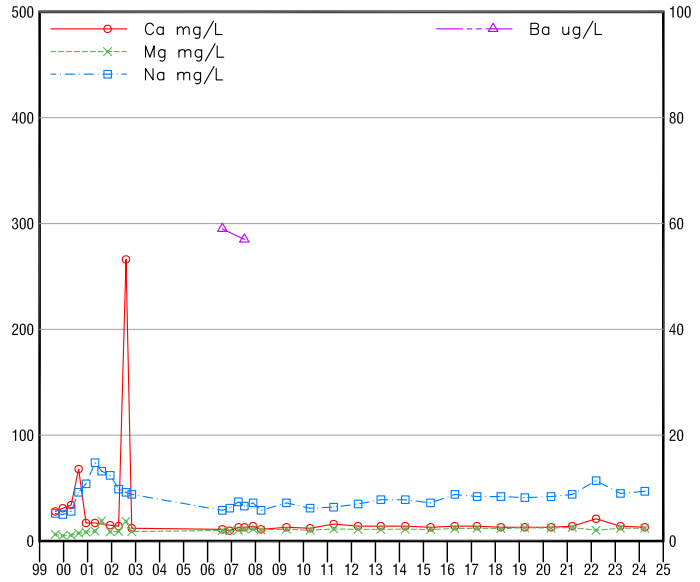
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



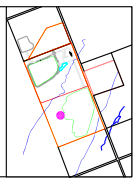








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-101-II

Overburden Formation

Screen 204.1 - 202.5 masl

CA008825 24 Mar 25	wsp	F324031

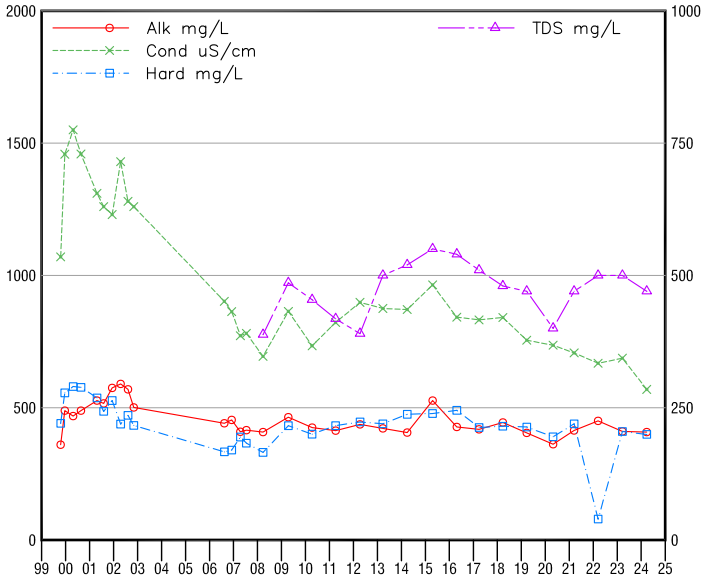
BH-101-II

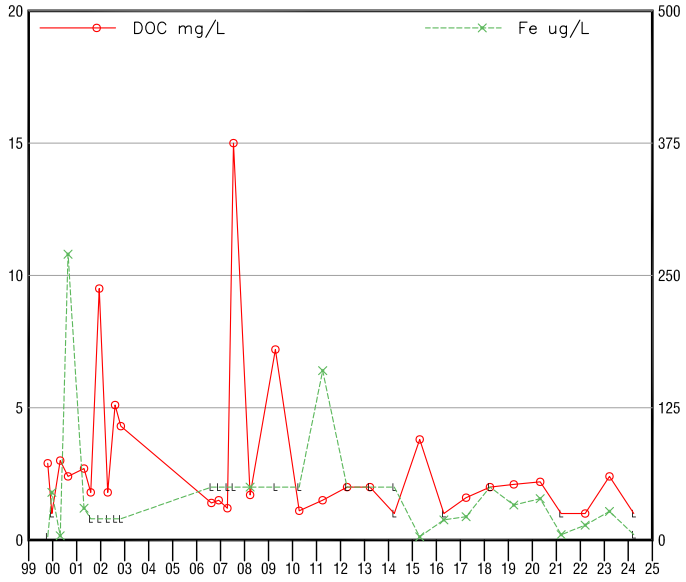
Overburden Formation

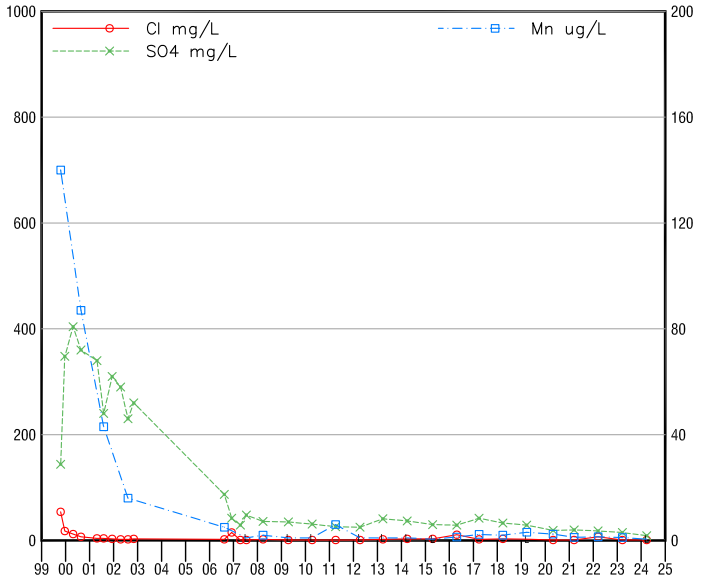
Stand Pipe Piezometer
Screen 204.1 - 202.5 masl

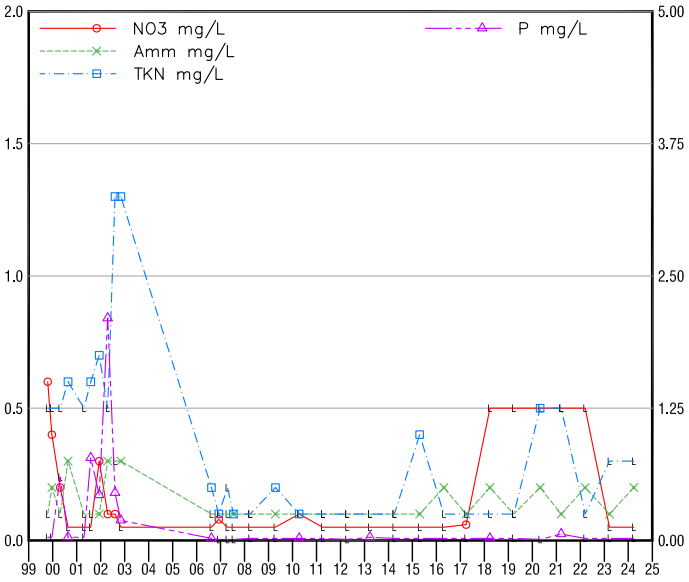
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
16-Aug-00	HGW0048	172	380	200	8.4	8	85	68	7.4	46	8.26	**8.5**	<0.05	<0.06	0.3		8.3
08-Dec-00	HGW0049	91	483	76	8.2	5	120	17	8.4	54	7.35	5	<0.05	<0.06	0.2		-4.3
23-Apr-01	HGW0050	92	477	81	8.2	4	150	17	9.3	74	4.2	<1	0.1	<0.06	<0.1		-1.2
03-Aug-01	HGW0051	171	468		8.2	5	120		19.0	66	5.53	2.7	0.1	<0.06	0.2		
10-Dec-01	HGW0052	107	348	72	7.9	4	98	15	8.7	62	3.46	**8.4**	<0.05	<0.06	0.2		-0.5
18-Apr-02	HGW0053	112	375	74	8.2	3	72	14	9.1	49	2.86	1.9	<0.05	<0.06	0.2		-1.9
08-Aug-02	HGW0054	177	340	741	8.2	3	58	266	18.6	46	4.94	4	<0.05	<0.06	<0.2		56.4
04-Nov-02	HGW0055	114	321	67	7.9	3	53	12	8.9	44	2.76	4.2	0.09	<0.06	0.3		-1.8
15-Aug-06	37695	137	314	70		9	32	11	10.0	29	2.36	1.1	0.2	<0.05	<0.1		-15.3
05-Dec-06	39912	125	291	64		4	27	9.8	9.6	31	2.4	1.1	<0.05	<0.05	0.2		-7.8
16-Apr-07	42339	170	314	75		5	32	13	10.3	37	2.4	<1	0.2	<0.05	0.1		-14.1
16-Jul-07	43919	131	304	79		5	32	13	11.3	33	2.28	1.6	0.1	<0.05	0.2		-5.2
26-Nov-07	46382	124	330	81		5	31	14	11.5	36	2.09	<1	0.1	<0.1	0.1		-0.6
26-Mar-08	48332	126	291	71		5	29	11	10.4	29	1.84	**26**	0.05	<0.1	0.2	114	-8.7
16-Apr-09	55052	125	341	79	8.2	6	27	13	11.2	36	2.07	**19**	0.1	<0.1	0.2	204	-0.7
12-Apr-10	61850	129	327	72	8.3	6	28	12	10.2	31	1.92	1.1	0.1	<0.1	1.1	174	-6.7
05-Apr-11	67318	118	312	86	8.0	7	25	16	11.4	32	1.95	1.3	0.3	<0.05	0.1	176	0.9
11-Apr-12	73920	121	326	81	8.0	8	24	14	11.0	35	1.99	2.5	0.1	<0.05	<0.1	170	0.0
25-Mar-13	81160	123	339	81	8.1	10	25	14	11.0	39	1.98	**5.1**	<0.05	<0.05	<0.1	180	1.8
31-Mar-14	88760	117	345	81	8.0	10	29	14	11.2	39	2	1.4	<0.05	<0.05	<0.1	200	2.2
21-Apr-15	96460	138	351	76	8.1	11	29	13	10.8	36	1.8	**6.7**	<0.05	<0.05	0.1	190	-7.7
24-Apr-16	103857	126	350	84	8.2	13	27	14	11.8	44	1.9	<1	<0.05	<0.05	0.1	180	2.8
29-Mar-17	111925	129	355	84	8.2	15	31	14	12.0	42	1.7	1.8	0.2	<0.05	0.1	210	-0.9
26-Mar-18	121008	131	350	81	8.2	12	29	13	11.8	42	1.6	2.6	<0.5	<0.5	0.2	190	-1.2
25-Mar-19	130610	122	347	84	8.2	11	29	13	12.5	41	1.6	3.1	<0.5	<0.5	0.1	160	2.6
29-Apr-20	140553	117	346	83	8.2	11	28	13	12.3	42	1.5	3.3	<0.5	<0.5	0.1	170	4.3
16-Mar-21	148560	126	344	87	8.2	11	28	14	12.8	44	1.7	<1	<0.5	<0.5	0.1	210	4.2
16-Mar-22	158955	126	352	95	8.2	11	29	21	10.1	57	4.2	1.1	<0.5	<0.5	0.1	210	13.6
21-Mar-23	168983	131	348	84	8.0	10	29	14	12.1	45	1.6	2.1	0.3	<0.05	0.1	250	1.6
26-Mar-24	179601	138	342	83	8.0	10	27	13	12.1	47	1.5	<1	0.3	<0.05	0.2	240	3.3
TOTAL SAMPLES		33	33	32	27	33	33	32	33	33	33	33	33	33	33	17	
AVERAGE 2024																	

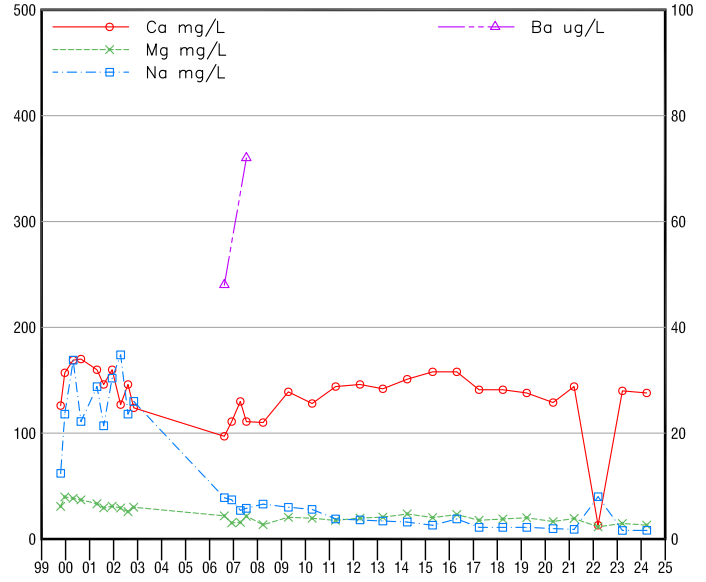
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



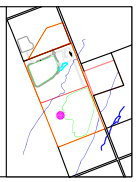








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-101-III

Shallow Overburden

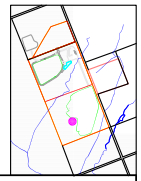
Screen 215.9 - 212.8 masl

CA008825 24 Mar 25	wsp	F324032

BH-101-III

Shallow Overburden

Monitoring Well
Screen 215.9 - 212.8 masl



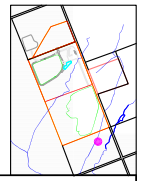
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Dec-99	HGW0057	489	1458	556	7.5	18	348	157	39.8	118	18.4	<1	0.4	0.25	0.2		-2.4
25-Apr-00	HGW0058	468	1550	580	8.0	12	404	169	38.4	169	13.1	3	0.2	<0.06	<0.1		3.1
22-Aug-00	HGW0059	489	1459	577	7.5	7	360	170	37.0	111	13.0	2.4	<0.05	<0.06	0.3		-2.2
23-Apr-01	HGW0060	527	1310	537	7.8	4	340	160	33.3	144	5.03	2.7	<0.05	<0.06	<0.1		-1.8
03-Aug-01	HGW0061	516	1260	486	7.7	4	240	146	29.4	107	4.75	1.8	<0.05	<0.06	<0.1		-3.1
10-Dec-01	HGW0062	575	1230	527	7.7	3	310	160	31.0	152	4.78	**9.5**	0.3	<0.06	0.1		-2.2
18-Apr-02	HGW0063	590	1430	438	7.9	2	290	127	29.3	174	4.28	1.8	0.1	<0.06	0.3		-4.2
08-Aug-02	HGW0064	569	1280	471	7.8	2	230	146	25.9	118	4.24	**5.1**	0.1	<0.06	<0.3		-5.1
04-Nov-02	HGW0065	501	1260	433	7.8	3	260	124	30.0	130	4.65	4.3	<0.05	<0.06	0.3		-3.5
15-Aug-06	37696	441	902	333		2	87	97	21.9	39	3.22	1.4	<0.05	<0.05	<0.1		-11.7
05-Dec-06	39913	454	863	340		15	42	111	15.2	37	2.16	1.5	0.08	<0.05	<0.1		-10.1
16-Apr-07	42340	409	772	389		1	29	130	15.7	27	2.2	1.2	<0.05	<0.05	<0.1		1.0
16-Jul-07	43920	415	781	366		1	48	111	21.5	29	3.2	**15**	<0.05	<0.05	0.1		-3.7
26-Mar-08	48333	408	694	331		2	36	110	13.6	33	1.99	1.7	<0.05	<0.1	<0.1	388	-5.0
16-Apr-09	55053	464	864	432	7.5	0.8	35	139	20.5	30	2.39	**7.2**	<0.05	<0.1	0.1	486	0.0
12-Apr-10	61851	425	734	400	7.3	0.8	31	128	19.6	28	2.51	1.1	<0.1	<0.1	<0.1	454	0.5
05-Apr-11	67319	413	822	432	7.6	1	26	144	17.6	19	2.17	1.5	<0.05	<0.05	<0.1	418	3.8
11-Apr-12	73921	437	898	446	7.4	0.9	25	146	19.8	18	2.44	2	<0.05	<0.05	<0.1	390	2.5
25-Mar-13	81161	422	875	439	7.7	2	41	142	20.6	17	2.52	2	<0.05	<0.05	<0.1	500	1.4
31-Mar-14	88761	406	871	475	7.5	3	37	151	23.7	16	2.6	<1	<0.05	<0.05	<0.1	520	6.7
21-Apr-15	96461	527	964	478	7.2	3	30	158	20.2	13	2.2	3.8	<0.05	<0.05	0.1	550	-4.9
24-Apr-16	103858	427	842	490	7.4	11	29	158	23.1	19	2.6	<1	<0.05	<0.05	0.2	540	6.0
29-Mar-17	111926	418	832	425	7.4	2	42	141	17.7	11	2	1.6	0.06	<0.05	0.1	510	-1.4
26-Mar-18	121009	444	841	430	7.3	3	33	141	18.9	11	2.3	2	<0.5	<0.5	0.2	480	-2.6
25-Mar-19	130611	405	755	427	7.3	<2.5	29	138	20.1	11	2.2	2.1	<0.5	<0.5	<0.1	470	2.1
29-Apr-20	140554	362	736	390	7.5	1	19	129	16.5	9.8	1.9	2.2	<0.5	<0.5	0.2	400	4.0
16-Mar-21	148561	414	707	439	7.5	1	20	144	19.4	9.1	2.3	<1	<0.5	<0.5	0.1	470	2.9
16-Mar-22	158956	450	668	79	7.1	7	18	13	11.5	40	1.6	1	<0.5	<0.5	0.2	500	-47.8
21-Mar-23	168984	410	687	410	7.4	0.8	15	140	14.7	8.1	2	2.4	<0.05	<0.05	0.1	500	0.5
26-Mar-24	179602	408	569	399	7.3	0.9	9	138	13.1	8.2	1.6	<1	<0.05	<0.05	0.2	470	1.8
TOTAL SAMPLES		31	31	31	26	31	31	31	31	31	31	31	31	31	31	17	
AVERAGE 2024																	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-5-VI

Shallow Overburden

Monitoring Well



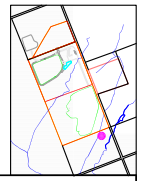
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Jul-06	37166								<50				<1					
06-Nov-06	39349								<50				<1					
10-Apr-07	42239								<50				<1					
09-Apr-08	48636								<50		<1		<1					
09-Sep-08	51170								<50		**70**		<1					
06-Apr-09	54903								<50		2		<1					
29-Mar-10	61622								<50		13		<1					
13-Apr-11	67481								<50		<1		<1					
11-Oct-11	70807								<50		7		<1					
24-Apr-12	74165								<50		1		<1					
08-Apr-13	81447								<50		<1		<1					
01-Apr-14	88809								<50		<1		<1					
01-Oct-14	92763								140		37		<1					
15-Apr-15	96365								12		<0.5		<1					
20-Apr-16	103802								2		<0.5		<1					
27-Mar-17	111811								2		<0.5		<1					
03-Oct-17	116861								**320**		**627**		<1					
26-Mar-18	121021								<50		<1		<1					
01-Apr-19	130707								**706**		**361**		<1					
19-May-20	141000								5		**77.2**		1					
29-Mar-21	148824								8		1.3		<1					
12-Oct-21	154580								12		**64.8**		1					
21-Mar-22	159050								35		**71.3**		<1					
03-Apr-23	169328								<5		<0.5		<1					
25-Sep-23	2023A023								**551**		**253**		<1					
02-Apr-24	179744								8		1.9		<1					
TOTAL SAMPLES		0	0	0	0	0	0	0	26	0	23	0	26	0	0	0	0	0
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-17B

Shallow Overburden

Monitoring Well
Screen 190.2 - 186.6 masl



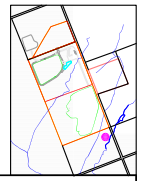
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Nov-96	HGW0418								**580**				32			<10		13
27-Mar-97	HGW0419								110				12			<10		<4
01-Aug-97	HGW0420								**330**				4					
21-Nov-97	HGW0421								**510**				22					
13-Apr-98	HGW0422								220				5					
23-Jul-98	HGW0423								**390**				4					
01-Dec-98	HGW0424								**1160**				2					
30-Mar-99	HGW0425								**1050**				<2					
12-Aug-99	HGW0426								**3030**				3					
20-Dec-99	HGW0427								240				2					
25-Apr-00	HGW0428								234				2					
11-Aug-00	HGW0429								**730**				5					
08-Dec-00	HGW0430								**1770**				<2					
18-Apr-01	HGW0431								160				<2					
30-Jul-01	HGW0432								**770**				2					
10-Dec-01	HGW0433								260				3					
10-Apr-02	HGW0434								<20				2					
01-Aug-02	HGW0435								**1170**				<2					
01-Nov-02	HGW0436								**800**				<2					
19-Jul-06	37168								**780**				<1					
13-Nov-06	39472								**660**				1					
10-Apr-07	42235								**2880**				2					
30-Jul-07	44200								**1030**									
27-Aug-07	44714												<1					
26-Nov-07	46385								**840**				<1					
27-Sep-22	164659								**3220**		**293**		<1					
03-Apr-23	169332	<25	443	<0.5	503	<0.1	0.7	8.7	93	<0.5	**2600**	<0.5	2		4.4	14		<5
25-Sep-23	2023A019								**1150**		**656**		<1					
20-Mar-24	179413	<25	599	<0.5	550	<0.1	0.5	5.1	**403**	<0.5	**1020**	<0.5	<1		6.4	17		<5
17-Sep-24	184550								**4060**		**424**		<1					
TOTAL SAMPLES		2	2	2	2	16	16	16	86	16	19	16	60	0	16	21	14	21
AVERAGE 2024									2232		722		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-18B

Shallow Overburden

Monitoring Well
Screen 188.6 - 186.3 masl



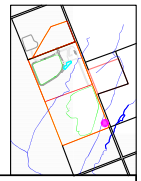
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
06-Apr-09	54906	<20	90	<1	<30	<1	<2	<5	60	<20	**291**	<5	<1		<2	<5		<30
14-Sep-09	57916								**1190**		**176**		<1					
06-Apr-10	61739	<20	64	<1	<30	<1	<2	<5	110	<20	**279**	<5	<1		<2	<5		<30
27-Sep-10	64390								**370**		**234**		<1					
13-Apr-11	67477	<20	85	<1	<30	<1	<2	<5	80	<20	**217**	<5	<1			<5		<30
18-Oct-11	71018								<50		**84**		1					
24-Apr-12	74163	<20	62	<1	<30	0.4	<2	<5	<50	2.5	30	<5	1			<5		<30
03-Oct-12	77702								<50		5		<1					
24-Apr-13	81858	<20	21	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
08-Oct-13	85582								<50		4		<1					
14-Apr-14	89056	<20	74	<1	<30	<1	<2	<5	160	<10	**701**	<5	<1		<2	<5		<30
07-Oct-14	92838								<50		**103**		<1					
15-Apr-15	96369	<25	81	<0.1	18.9	<0.1	<0.5	<0.5	77	<0.5	**226**	<0.5	<1		0.5	<2		1.1
09-Sep-15	99511								110		**225**		3					
05-Apr-16	103410	<25	91	<0.1	21.7	<0.1	<0.5	<0.5	183	<0.5	**247**	<0.5	<1		0.5	<2		1.6
03-Apr-17	112039	74	29	<0.1	9.8	<0.1	<0.5	1.1	80	<0.5	11.2	<0.5	<1		<0.1	<2		0.7
03-Oct-17	116863								<50		50		<1					
25-Apr-18	121900	<25	73	<0.1	20	<0.1	<0.5	<0.5	13	<0.5	43.1	<0.5	<1		0.1	<2		<0.5
14-Oct-18	127085								180		**125**		<1					
09-Apr-19	130962	<25	102	<0.5	51.9	<0.1	<0.5	1.5	68	<0.5	**108**	<0.5	<1		<0.5	3		1.5
07-Oct-19	135824								**390**		**161**		<1					
16-Apr-20	140283	**1690**	193	<0.5	138	<0.1	1.6	3	**1990**	0.8	**318**	<0.5	<1		2.2	8		5.7
13-Sep-20	144106								**392**		**224**		2					
06-Apr-21	149000	<25	96	<0.5	69.5	<0.1	<0.5	1.4	**1140**	<0.5	**237**	<0.5	1		1	4		0.6
12-Oct-21	154582								**1650**		**286**		<1					
06-Apr-22	159595	<25	104	<0.5	48.9	<0.1	<0.5	0.7	**1800**	<0.5	**262**	<0.5	<1		1.3	3		0.8
11-Oct-22	165002								**336**		32.5		<1					
29-Mar-23	169225	<25	128	<0.5	76	<0.1	<0.5	0.7	**486**	<0.5	**175**	<0.5	<1		0.8	5		<5
18-Mar-24	179274	**103**	70	<0.5	45	<0.1	<0.5	0.8	**531**	<0.5	**110**	<0.5	<1		<0.5	<2		<5
23-Sep-24	184718								**2280**		**261**		<1					
TOTAL SAMPLES		19	19	19	19	40	41	39	104	40	55	40	86	0	38	42	23	42
AVERAGE 2024									1406		186		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-19B

Shallow Overburden

Monitoring Well
Screen 190.1 - 186.6 masl



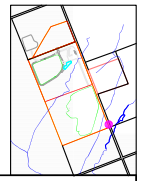
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Aug-07	44756												<1					
26-Nov-07	46383								**16000**				<1					
01-Apr-08	48473								**26200**		**1970**		<1					
16-Mar-09	54431								**9870**		**2490**		1					
29-Mar-10	61627								**47500**		**2350**		<1					
11-Apr-11	67421								**39800**		**1670**		<1					
25-Apr-12	74221								**9140**		**201**		<1					
20-Mar-13	81109								**43900**		**1630**		<1					
25-Mar-14	88673								**45600**		**1530**		2					
07-Oct-14	92840								**23700**		**290**		3					
15-Apr-15	96372	<25	127	<0.1	74.9	<0.1	<0.5	<0.5	**54900**	<0.5	**1550**	<0.5	<1		0.1	2		0.7
09-Sep-15	99513								**24900**		**454**		3					
07-Apr-16	103503	<25	392	<0.1	561	<0.1	0.9	<0.5	**44500**	<0.5	**1140**	<0.5	3		0.8	7		2.4
11-Oct-16	108015								**19600**		**269**		2					
29-Mar-17	111932	<25	127	<0.1	112	<0.1	<0.5	<0.5	**46600**	<0.5	**1020**	<0.5	<1		0.2	2		0.5
03-Oct-17	116857								**26900**		**439**		<1					
18-Apr-18	121703	<25	**2300**	<0.1	162	<0.1	<0.5	<0.5	**17300**	0.8	**516**	<0.5	<1		0.1	10		2
14-Oct-18	127087								**20200**		**297**		<1					
01-Apr-19	130704	<25	**3750**	<0.5	259	<0.1	<0.5	<0.5	**13800**	<0.5	**275**	<0.5	1		<0.5	21		1.6
30-Sep-19	135556								**32600**		**532**		<1					
05-May-20	140694	<25	**1210**	<0.5	193	<0.1	<0.5	<0.5	**22000**	<0.5	**627**	<0.5	<1		<0.5	8		1.4
21-Sep-20	144376								**18000**		**291**		2					
23-Mar-21	148727	<25	**2600**	<0.5	238	<0.1	<0.5	<0.5	**13800**	<0.5	**229**	<0.5	<1		<0.5	18		1.4
12-Oct-21	154584								**14800**		**255**		2					
07-Apr-22	159619	<25	**1970**	<0.5	200	<0.1	<0.5	<0.5	**4480**	<0.5	**174**	<0.5	<1		<0.5	14		1.2
26-Sep-22	164642								**17600**		**233**		<1					
20-Mar-23	168875	<25	**1400**	<0.5	167	<0.1	<0.5	<0.5	**11600**	<0.5	**472**	<0.5	<1		<0.5	12		<5
26-Sep-23	2023A025								**40100**		**662**		1					
20-Mar-24	179417	<25	**2090**	<0.5	296	<0.1	<0.5	<0.5	**19300**	<0.5	**433**	<0.5	<1		<0.5	21		<5
23-Sep-24	184720								**27400**		**263**		<1					
TOTAL SAMPLES		10	10	10	10	27	27	26	109	26	44	27	84	0	27	32	17	31
AVERAGE 2024									23350		348		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-20B

Shallow Overburden

Monitoring Well
Screen 189.4 - 186.9 masl



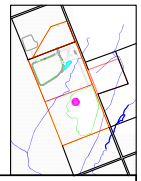
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
09-Sep-08	51172								<50		3		<1					
07-Apr-09	54924	<20	31	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
15-Sep-09	57950								**680**		**124**		12					
06-Apr-10	61740	<20	30	<1	<30	<1	<2	<5	100	<20	15	<5	<1		<2	<5		<30
27-Sep-10	64388								**700**		**63**		<1					
13-Apr-11	67478	30	28	<1	<30	<1	<2	<5	<50	<20	6	<5	<1			<5		<30
18-Oct-11	71019								**330**		30		<1					
25-Apr-12	74216	<20	40	<1	<30	<0.3	<2	<5	<50	<1.5	1	<5	<1			<5		<30
17-Oct-12	78010								<50		37		<1					
20-Mar-13	81114	<20	23	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
08-Oct-13	85583								180		**53**		24					
14-Apr-14	89057	<20	31	<1	<30	<1	<2	<5	<50	<10	2	<5	<1		<2	<5		<30
07-Oct-14	92841								170		44		<1					
15-Apr-15	96370	28	23	<0.1	8.2	<0.1	<0.5	1.5	73	<0.5	4.8	<0.5	<1		<0.1	<2		1.7
19-Apr-16	103709	<25	26	<0.1	8.4	<0.1	<0.5	1	6	<0.5	1	<0.5	1		<0.1	<2		2.6
09-Apr-17	112156	<25	24	<0.1	20.7	<0.1	<0.5	1.3	36	<0.5	4	<0.5	<1		0.1	<2		1.2
03-Oct-17	116859								130		**144**		<1					
25-Apr-18	121897	<25	28	<0.1	10.8	<0.1	<0.5	0.6	10	<0.5	5.8	<0.5	<1		<0.1	<2		0.7
09-Oct-18	126931								50		**210**		<1					
09-Apr-19	130963	<25	27	<0.5	9	<0.1	<0.5	2.2	11	<0.5	7.9	<0.5	<1		<0.5	<2		1.7
07-Oct-19	135825								170		41		<1					
16-Apr-20	140284	<25	28	<0.5	11.1	<0.1	<0.5	0.7	<5	<0.5	4.6	<0.5	<1		<0.5	<2		0.6
21-Sep-20	144377								30		**91.2**		<1					
30-Mar-21	148866	<25	29	<0.5	6.4	<0.1	<0.5	1.2	13	<0.5	1.9	<0.5	1		<0.5	<2		<0.5
12-Oct-21	154585								8		1.4		1					
06-Apr-22	159596	<25	35	<0.5	7.2	<0.1	<0.5	0.7	<5	<0.5	2.5	<0.5	<1		<0.5	<2		<0.5
31-Oct-22	165525								130		**69**		2					
27-Mar-23	169150	<25	22	<0.5	9	<0.1	<0.5	0.6	13	<0.5	1.4	<0.5	<1		<0.5	<2		<5
19-Mar-24	179376	<25	24	<0.5	9	<0.1	<0.5	0.6	6	<0.5	0.8	<0.5	<1		<0.5	<2		<5
23-Sep-24	184721								<5		15.1		<1					
TOTAL SAMPLES		19	19	19	19	41	41	41	111	41	55	41	86	0	37	45	24	44
AVERAGE 2024									<5		8.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-33-II

Overburden Formation

Stand Pipe Piezometer
Screen 187.5 - 186.7 masl



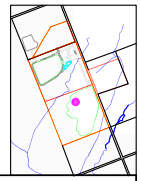
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW1369								<20				<2					
22-Apr-01	HGW1370								<20				<2					
01-Aug-01	HGW1371								<20				13					
10-Dec-01	HGW1372								<20				<2					
10-Apr-02	HGW1373								<20				7					
01-Aug-02	HGW1374								<20				<2					
01-Nov-02	HGW1375								<20				<2					
31-Jul-06	37413								<50				<1					
27-Nov-06	39752								<50				<1					
06-Mar-07	41509								<50				<1					
16-Jul-07	43945								<50									
27-Aug-07	44720												<1					
13-Nov-07	46163								<50				<1					
28-Apr-08	48968								<50		<1		<1		<2			
14-Apr-09	55015								<50		1		2					
12-Apr-10	61844								<50		1		<1					
13-Apr-11	67483								<50		2		<1					
11-Apr-12	73922								<50		2		<1					
09-Apr-13	81500								<50		5		<1					
24-Mar-14	88625								<50		4		<1					
14-Apr-15	96321								19		2.7		<1					
29-Mar-16	103221								13		2.3		1					
29-Mar-17	111927								16		6		<1					
26-Mar-18	121010								<50		8		<1					
16-Apr-19	131142								142		12.9		<1					
29-Apr-20	140548								17		7.7		<1					
08-Apr-21	149079								29		11.7		<1					
11-Apr-22	159718								33		8.8		<1					
22-Mar-23	169031								32		10.7		<1					
25-Mar-24	179563								84		8.2		<1					
TOTAL SAMPLES		0	0	0	0	12	12	12	60	12	29	12	60	0	13	12	11	12
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-33-III

Shallow Overburden

Monitoring Well
Screen 195.8 - 192.8 masl



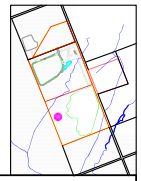
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW1416								<20				<2					
22-Apr-01	HGW1417								<20				2					
01-Aug-01	HGW1418					<5	<20	<5	<20	<2	5	<20	<2		<50	<20	<2	<10
10-Dec-01	HGW1419								30				<2					
18-Apr-02	HGW1420								50				7					
08-Aug-02	HGW1421					<5	<20	<10	260	<0.2	**60**	<20	<2		20	<20	<2	<10
04-Nov-02	HGW1422								<20				<2					
31-Jul-06	37408	<20	102	<1	80	<1	<2	<5	<50	<20	4	<5	<1		<2	<5	<2	<30
27-Nov-06	39753								<50				<1					
06-Mar-07	41510								<50				<1					
16-Jul-07	43911	<20	134	<1	30	<1	<2	<5	<50	<20	<1	<5			<2	<5	<2	<30
27-Aug-07	44721												<1					
13-Nov-07	46164								<50				<1					
12-Mar-08	48145								<50		1		<1		<2			
14-Apr-09	55016								<50		2		1					
12-Apr-10	61845								<50		27		<1					
13-Apr-11	67484								160		17		<1					
11-Apr-12	73923								<50		3		<1					
09-Apr-13	81501								<50		**67**		<1					
24-Mar-14	88626								<50		2		<1					
14-Apr-15	96322								25		11.5		<1					
29-Mar-16	103222								<1		3.2		<1					
29-Mar-17	111928								5		8.5		<1					
26-Mar-18	121012								90		18		<1					
16-Apr-19	131143								**348**		**67**		<1					
29-Apr-20	140549								130		**93.1**		<1					
08-Apr-21	149080								8		11		1					
11-Apr-22	159719								10		29.9		<1					
22-Mar-23	169033								<5		5.6		<1					
25-Mar-24	179564								<5		22.8		<1					
TOTAL SAMPLES		2	2	2	2	24	24	24	67	24	41	24	67	0	25	25	23	26
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-40-II

Shallow Overburden

Monitoring Well
Screen 193.8 - 190.7 masl



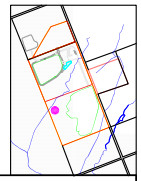
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
16-Aug-00	HGW1580					<5	<20	<5	120	5	50	<20	4		<10	<10	<2	13
08-Dec-00	HGW1581					<5	<20	<5	30	0.4	24	<20	11		<10	<20	<2	<10
22-Apr-01	HGW1582								<20				2					
27-Jul-01	HGW1583					<5	<20	<5	50	<0.2	41	<20	9		<10	<20	<2	<10
10-Dec-01	HGW1584								<20				<2					
18-Apr-02	HGW1585								<20				19					
08-Aug-02	HGW1586					<5	<20	<10	70	0.3	**61**	<20	<2		30	<20	100	<20
04-Nov-02	HGW1587								<20				<2					
15-Aug-06	37688	30	182	<1	30	<1	<2	<5	<50	<20	6	<5	<1		<2	<5	<2	<30
11-Dec-06	39998								<50				<1					
24-Apr-07	42484								<50				<1					
28-Aug-07	44751	**230**	148	<1	40	<1	<2	<5	<50	<20	39	<5	<1		<2	<5	<2	<30
19-Nov-07	46268								<50				<1					
29-Apr-08	49012								<50		34		<1		<2			
14-Apr-09	55012								<50		**57**		2					
12-Apr-10	61846								<50		25		<1					
05-Apr-11	67321								<50		41		<1					
11-Apr-12	73924								<50		28		<1					
09-Apr-13	81502								<50		40		<1					
14-Apr-14	89059								<50		29		<1					
14-Apr-15	96318								6		26.3		<1					
20-Apr-16	103797								<50		31		<1					
09-Apr-17	112149								13		32.7		<1					
09-Apr-18	121422								<50		43		<1					
14-Apr-19	131080								40		26.4		1					
05-May-20	140686								25		37.8		<1					
08-Apr-21	149076								15		27.2		<1					
11-Apr-22	159720								38		33.3		<1					
22-Mar-23	169034								17		30.5		<1					
26-Mar-24	179597								8		36.7		<1					
TOTAL SAMPLES		2	2	2	2	6	6	6	31	6	23	6	31	0	7	6	6	6
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-44-III

Shallow Overburden

Monitoring Well
Screen 195.2 - 192.1 masl



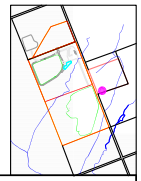
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Aug-00	HGW1716					<5	<20	<5	190	2	4	<20	3		<10	<10	<2	37
08-Dec-00	HGW1717					<5	<20	<5	20	<0.2	3	<20	<2		<10	<20	<2	<10
22-Apr-01	HGW1718								<20				<2					
27-Jul-01	HGW1719					<5	<20	<5	**430**	<0.2	35	<20	<2		40	<20	<2	<10
10-Dec-01	HGW1720								<20				<2					
18-Apr-02	HGW1721								<20				8					
08-Aug-02	HGW1722					<5	<20	<10	180	<0.2	12	<20	<2		20	<20	88	<20
04-Nov-02	HGW1723								<20				<2					
15-Aug-06	37690	30	181	<1	<30	<1	<2	<5	<50	<20	4	<5	<1		<2	<5	<2	<30
11-Dec-06	40000								130				<1					
30-Apr-07	42582								<50				<1					
28-Aug-07	44753	**150**	167	<1	<30	<1	<2	<5	<50	<20	5	<5	<1		<2	<5	<2	<30
19-Nov-07	46270								<50				<1					
22-Apr-08	48849								<50		<1		1					
29-Apr-09	55453								50		7		<1					
14-Apr-10	61890								<50		3		<1					
26-Apr-11	67648								<50		16		<1					
18-Apr-12	74085								<50		<1		<1					
02-Apr-13	81305								<50		<1		<1					
14-Apr-14	89064								<50		<1		<1					
27-Apr-15	96621								6		1.7		<1					
26-Apr-16	103890								95		**334**		1					
23-Apr-17	112543								14		1.6		<1					
17-Apr-18	121641								<50		11		<1					
09-Apr-19	130968								161		46.5		<1					
13-May-20	140871								33		5.6		2					
12-Apr-21	149198								23		6.8		<1					
12-Apr-22	159787								5		1.9		<1					
04-Apr-23	169370								<5		1.2		<1					
04-Apr-24	179819								<5		2.4		<1					
TOTAL SAMPLES		2	2	2	2	15	15	15	49	15	32	15	49	0	15	15	15	15
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-46-II

Overburden Formation

Stand Pipe Piezometer
Screen 187.5 - 186.9 masl



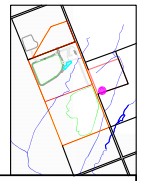
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW1825								80				<2					
08-Aug-94	HGW1826					<1	<3	<2	280	<10	**54**	<20	<2		<10	<10	<40	13
03-Aug-95	HGW1827					<5	<2	<2	<10	0.2	5	<2	1		<1	<2	<2	8
16-Aug-96	HGW1828					0.9	<1	<1	<1	<2	1	<2	<2		<1	<1	<8	<1
01-Aug-97	HGW1829								<3				3					
23-Jul-98	HGW1830								**480**				5					
12-Aug-99	HGW1831								300				2					
15-Aug-00	HGW1832								33				6					
26-Jul-01	HGW1833								**310**				<2					
08-Aug-02	HGW1834								**360**				2					
15-Aug-06	37699								250				<1					
13-Aug-07	44442								240									
29-Aug-07	44839												<1					
18-Mar-08	48237								<50		**60**		1					
09-Mar-09	54305								**320**		28		<1					
15-Mar-10	61254								**480**		32		<1					
21-Mar-11	67066								**610**		39		<1					
16-Apr-12	73999								**540**		32		<1					
03-Apr-13	81361								170		18		<1					
31-Mar-14	88757								**540**		27		<1					
21-Apr-15	96463								245		25		2					
24-Apr-16	103860								200		21.6		<1					
19-Apr-17	112411								221		22.1		<1					
21-Mar-18	120950								90		26		<1					
20-Mar-19	130489								61		19.2		1					
31-Mar-20	139939								**396**		26.9		<1					
25-Mar-21	148776								80		16.1		3					
30-Mar-22	159376								154		22.6		<1					
27-Mar-23	169144								184		21.5		<1					
02-Apr-24	179746								195		19		<1					
TOTAL SAMPLES		0	0	0	0	12	12	12	50	12	29	12	50	0	12	12	11	12
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-46-III

Shallow Overburden

Monitoring Well
Screen 193.6 - 191.5 masl



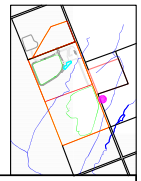
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW1876								<20				<2					
18-Apr-01	HGW1877								<20				<2					
26-Jul-01	HGW1878								160				<2					
10-Dec-01	HGW1879								<20				<2					
10-Apr-02	HGW1880								<20				4			<20		
01-Aug-02	HGW1881								**520**				<2					
01-Nov-02	HGW1882								40				<2					
15-Aug-06	37701								130				<1					
27-Nov-06	39741								<50				<1					
26-Mar-07	41934								<50				<1					
13-Aug-07	44443								240									
29-Aug-07	44840												<1					
04-Dec-07	46508								80				<1					
28-Apr-08	48969								80		18		<1		<2			
09-Mar-09	54306								90		12		<1					
15-Mar-10	61255								<50		11		<1					
21-Mar-11	67067								**770**		**1420**		<1					
16-Apr-12	74000								100		**84**		<1					
03-Apr-13	81362								80		6		<1					
31-Mar-14	88758								270		**110**		<1					
21-Apr-15	96464								63		11.6		2					
24-Apr-16	103861								230		18.8		<1					
19-Apr-17	112413								**377**		28.8		<1					
21-Mar-18	120952								<500		10		<1					
20-Mar-19	130490								83		21.4		2					
31-Mar-20	139941								273		10.3		<1					
25-Mar-21	148777								<5		8.3		2					
30-Mar-22	159377								<5		1.5		<1					
27-Mar-23	169145								11		0.9		<1					
02-Apr-24	179747								14		2		<1					
TOTAL SAMPLES		0	0	0	0	15	15	15	70	15	32	15	70	0	16	21	14	20
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-48

Shallow Overburden

Monitoring Well
Screen 194.1 - 191.1 masl



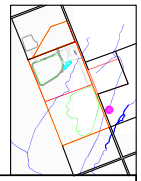
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Jul-06	37171								**17900**				<1					
14-Nov-06	39480								**10200**				<1					
30-Apr-07	42583								**21100**				6					
18-Mar-08	48236								**10800**		**765**		<1					
16-Sep-08	51303								<50		**899**		1					
16-Mar-09	54432								**19400**		**834**		1					
29-Mar-10	61619								**21000**		**1140**		<1					
06-Apr-11	67365								**12500**		**902**		1					
11-Oct-11	70805								**18900**		**1000**		3					
16-Apr-12	73997								**18400**		**1070**		1					
09-Oct-12	77778								**19700**		**874**		<1					
19-Mar-13	81053								**26800**		**1040**		<1					
09-Oct-13	85638								**23200**		**933**		<1					
25-Mar-14	88681								**22000**		**1200**		1					
01-Oct-14	92761								**23500**		**1140**		<1					
26-Mar-15	95964	<25	303	<0.1	12.2	<0.1	<0.5	0.7	**20200**	<0.5	**1280**	<0.5	<1		0.2	7		21.7
14-Sep-15	99616								**27000**		**1080**		<1					
05-Apr-16	103411	<25	238	<0.1	17.6	<0.1	<0.5	1	**50400**	<0.5	**1050**	<0.5	2		2.1	2		10.2
23-Mar-17	111768	<25	298	<0.1	16.1	<0.1	<0.5	<0.5	**32700**	<0.5	**1040**	<0.5	<1		0.1	<2		1
16-Oct-17	117170								**19300**		**840**		2					
25-Apr-18	121895	<25	260	<0.1	15.7	<0.1	<0.5	<0.5	**35000**	<0.5	**908**	<0.5	2		2.9	<2		0.6
03-Apr-19	130809	<25	298	<0.5	13.8	<0.1	<0.5	<0.5	**27800**	<0.5	**991**	<0.5	<1		<0.5	<2		1.6
02-Apr-20	139976	<25	226	<0.5	15.9	<0.1	<0.5	0.7	**37500**	<0.5	**1040**	<0.5	<1		2.2	3		1.4
29-Mar-21	148826	<25	269	<0.5	17.9	<0.1	<0.5	<0.5	**33500**	<0.5	**964**	<0.5	<1		<0.5	<2		0.9
12-Oct-21	154589								**23500**		**697**		1					
31-Mar-22	159433	<25	206	<0.5	12.3	<0.1	<0.5	<0.5	**34200**	<0.5	**680**	<0.5	<1		0.8	<2		0.8
20-Mar-23	168876	<25	113	<0.5	7	<0.1	<0.5	<0.5	**6480**	<0.5	**651**	<0.5	<1		0.6	<2		<5
26-Sep-23	2023A027								**7540**		**380**		<1					
20-Mar-24	179418	<25	183	<0.5	18	<0.1	<0.5	1.4	250	<0.5	**732**	<0.5	<1		12.7	13		<5
09-Oct-24	185176								**23000**		**770**							
TOTAL SAMPLES		10	10	10	10	20	20	20	70	20	37	20	69	0	20	25	9	24
AVERAGE 2024									11625		751							

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-50-II

Overburden Formation

Stand Pipe Piezometer
Screen 186.7 - 186.1 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Aug-94	HGW2375					<1	<3	<2	**500**	<10	42	<20	<2		<10	<10	<40	<10
03-Aug-95	HGW2376					<5	<2	<2	<10	<0.1	<2	<2	<1		<1	<2	<2	<2
16-Aug-96	HGW2377					0.7	<1	<1	<1	<2	30	<2	<2		2	<1	<8	<1
05-Aug-97	HGW2378								38				4					
23-Jul-98	HGW2379								**720**				<2					
19-Aug-99	HGW2380								13				6					
23-Aug-00	HGW2381								**1150**				<2					
08-Dec-00	HGW2382					<5	<20	5	<20	<0.2	**54**	<20	<2		<10	<20	<2	20
01-Aug-01	HGW2383								**1240**				<2					
08-Aug-02	HGW2384								**1050**				<2					
21-Aug-06	37847								110				<1					
14-Aug-07	44476								**870**									
28-Aug-07	44768												<1					
01-Apr-08	48468								**510**		**51**		2					
23-Mar-09	54641								**870**		23		<1					
14-Apr-10	61886								**1500**		31		<1					
21-Mar-11	67070								**1810**		34		<1					
17-Apr-12	74038								**1220**		29		<1					
09-Apr-13	81498								**1860**		38		<1					
01-Apr-14	88811								**600**		18		<1					
22-Apr-15	96518								103		5.6		<1					
24-Apr-16	103863								172		7.4		2					
19-Apr-17	112405								**879**		24.2		<1					
03-Apr-18	121268								220		13		1					
07-Apr-19	130910								**1030**		26.2		<1					
13-May-20	140873								**953**		26.6		1					
06-Apr-21	149006								213		16.1		2					
11-Apr-22	159715								**776**		24.9		<1					
28-Mar-23	169186								**1150**		27.7		<1					
09-Apr-24	179939								**1060**		25.8		<1					

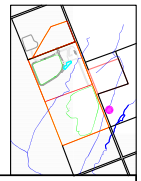
TOTAL SAMPLES	0	0	0	0	13	13	13	51	13	30	13	51	0	13	13	13	13
AVERAGE 2024																	

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-50-III

Shallow Overburden

Monitoring Well
Screen 193.5 - 187.7 masl



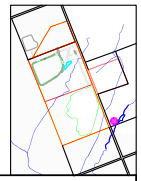
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-01	HGW2428								<20				4					
01-Aug-01	HGW2429					<5	<20	<5	<20		<2	<20	32		<50	<20	<2	<10
10-Dec-01	HGW2430								<20				3					
18-Apr-02	HGW2431								<20				<2					
08-Aug-02	HGW2432					<5	<20	<5	<20	<0.2	<2	<20	<2		20	<20	<2	<10
04-Nov-02	HGW2433								<20				4					
21-Aug-06	37825	20	40	<1	50	<1	<2	<5	<50	<20	**367**	<5	<1		<2	<5	<2	<30
21-Nov-06	39648								<50				<1					
26-Mar-07	41939								<50				<1					
14-Aug-07	44470	100	55	<1	<30	<1	<2	<5	<50	<20	**85**	<5			<2	<5	<2	<30
28-Aug-07	44769												<1					
10-Dec-07	46638								<50				<1					
01-Apr-08	48469								80		<1		1					
23-Mar-09	54643								<50		**96**		2					
14-Apr-10	61887								<50		14		<1					
21-Mar-11	67071								<50		6		<1					
17-Apr-12	74044								<50		<1		<1					
09-Apr-13	81499								<50		<1		<1					
01-Apr-14	88812								<50		<1		1					
22-Apr-15	96519								2		<0.5		<1					
24-Apr-16	103864								3		<0.5		<1					
19-Apr-17	112406								2		<0.5		<1					
16-Oct-17	117171	<10	54	<1	40	<1	<1	<5	<50	3.2	2	<5	1		<2	<5		<20
03-Apr-18	121269								<50		<1		1					
07-Apr-19	130911								<1		1.6		1					
13-May-20	140875								27		18.4		<1					
06-Apr-21	149007								<5		1.8		<1					
11-Apr-22	159716								12		3.5		<1					
28-Mar-23	169188								7		2.1		<1					
09-Apr-24	179940								6		1.6		<1					
TOTAL SAMPLES		3	3	3	3	24	24	24	72	23	41	24	72	0	24	29	23	27
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-52-II

Shallow Overburden

Monitoring Well
Screen 188.0 - 187.2 masl



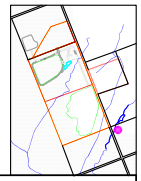
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
19-Aug-99	HGW2543								**1880**				6					
30-May-00	HGW2544								**1120**				<2					
24-Aug-00	HGW2545					5	<20	<5	**1470**	5	**150**	<20	<2		<10	<10	<2	20
08-Dec-00	HGW2546								**1060**				<2					
23-Apr-01	HGW2547								180				14					
03-Aug-01	HGW2548					<5	<20	<5	**720**	<2	30	<20	<2		20	<20	<2	<10
10-Dec-01	HGW2549								200				<2					
18-Apr-02	HGW2550								**1640**				<2					
08-Aug-02	HGW2551					<5	<20	<5	**1940**	<0.2	**150**	<20	<2		10	<20	<2	<10
04-Nov-02	HGW2552								240				<2					
22-Aug-06	37829	<20	86	<1	<30	<1	<2	<5	<50	<20	41	<5	<1		<2	<5	<4	<30
21-Nov-06	39651								<50				<1					
16-Apr-07	42342								120				<1					
07-Aug-07	44327	<20	66	<1	<30	<1	<2	<5	<50	<20	21	<5			<2	<5	3	<30
28-Aug-07	44771												<1					
10-Dec-07	46636								<50				<1					
30-Apr-08	49010								60		**52**		2		<2			
04-May-09	55535								220		**63**		<1					
13-Apr-10	61860								150		**104**		<1					
20-Apr-11	67592								<50		**93**		<1					
16-Apr-12	74004								<50		**65**		<1					
17-Apr-13	81658								120		**91**		<1					
16-Apr-14	89113								70		**78**		1					
08-Apr-15	96183								130		**89.7**		<1					
19-Apr-16	103708								54		**62.1**		8					
03-Apr-17	112041								70		**135**		<1					
09-Apr-18	121418								**590**		**226**		<1					
16-Apr-19	131145								280		**128**		<1					
24-Apr-23	169871								19		**282**		<1					
10-Apr-24	179980								30		**320**		<1					
TOTAL SAMPLES		2	2	2	2	15	15	15	50	15	29	15	50	0	16	15	15	15
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-54-II

Shallow Overburden

Monitoring Well
Screen 194.9 - 189.0 masl



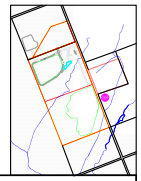
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-May-92	HGW2630								<10				<2					
28-Jul-92	HGW2631					<1	<3	<2	<10	<10	<2	<20	<1		<10	<10	<40	6
28-Sep-92	HGW2632								40				<2					
28-Nov-92	HGW2633					<1	<3	<2	<10	<10	<2	<20	<2		<10	<10	<40	4
28-Jan-93	HGW2634								20				<2					
28-Mar-93	HGW2635					<1	<3	<2	<10	<10	<2	<20	<2		<10	<10	<40	10
28-Jun-93	HGW2636								<10				<2					
28-Nov-93	HGW2637								30				<2					
31-Jul-01	HGW2638								<20				3					
08-Aug-02	HGW2639								**2890**				<2					
22-Aug-06	37834								<50				<1					
07-Aug-07	44331								<50									
28-Aug-07	44798												<1					
15-Apr-08	48713								<50		<1		<1					
11-Mar-09	54364								<50		29		2					
13-Apr-10	61858								<50		3		<1					
13-Apr-11	67486								120		33		<1					
16-Apr-12	74001								<50		9		<1					
15-Apr-13	81581								140		14		<1					
25-Mar-14	88675								130		6		<1					
07-Apr-15	96146								57		6.6		<1					
05-Apr-16	103415								9		1.7		<1					
03-Apr-17	112042								38		5.5		<1					
09-Apr-18	121416								<50		6		<1					
07-Apr-19	130908								39		7.2		2					
05-May-20	140690								56		7.2		<1					
29-Mar-21	148820								16		1.6		<1					
22-Mar-22	159171								82		28.4		<1					
27-Mar-23	169147								8		1		<1					
04-Apr-24	179820								14		2		<1					
TOTAL SAMPLES		0	0	0	0	10	10	10	43	10	27	10	43	0	10	10	9	10
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-61-II

Overburden Formation

Stand Pipe Piezometer
Screen 181.9 - 181.2 masl



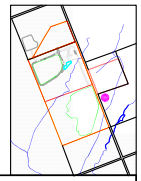
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW2749								<20				<2					
18-Apr-01	HGW2750								<20				<2					
30-Jul-01	HGW2751					<5	<20	<5	<20	<0.2	<2	<20	<2		40	<20	<2	<10
10-Dec-01	HGW2752								<20				<2					
18-Apr-02	HGW2753								<20				4					
08-Aug-02	HGW2754					<5	<20	<5	120	0.8	48	<20	2		<10	<20	<2	<10
04-Nov-02	HGW2755								<20				12					
15-Aug-06	37691	30	87	<1	50	<1	<2	<5	<50	<20	5	15	<1		<2	<5	<2	<30
27-Nov-06	39744								<50				<1					
26-Mar-07	41935								<50				<1					
13-Aug-07	44445	<20	94	<1	40	<1	<2	<5	<50	<20	1	11			<2	<5	<2	<30
29-Aug-07	44834												<1					
10-Dec-07	46639								<50				<1					
18-Mar-08	48239								<50		5		<1					
24-Mar-09	54689								<50		13		1					
15-Mar-10	61257								150		7		<1					
28-Mar-11	67213								120		7		<1					
17-Apr-12	74041								<50		<1		<1					
15-Apr-13	81583								<50		2		<1					
25-Mar-14	88677								<50		<1		<1					
22-Apr-15	96515								5		3.6		1					
24-Apr-16	103866								2		<0.5		<1					
19-Apr-17	112408								3		<0.5		<1					
21-Mar-18	120954								<50		10		<1					
03-Apr-19	130816								39		**85**		<1					
02-Apr-20	139978								84		39.9		<1					
15-Apr-21	149267								<5		<0.5		1					
31-Mar-22	159430								6		1.1		<1					
28-Mar-23	169183								<5		<0.5		<1					
02-Apr-24	179749								<5		<0.5		<1					
TOTAL SAMPLES		2	2	2	2	13	13	13	49	13	30	13	49	0	13	13	13	13
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-61-III

Shallow Overburden

Monitoring Well
Screen 194.7 - 190.1 masl



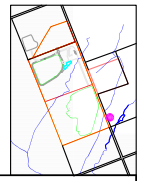
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW2788								<20				<2					
18-Apr-01	HGW2789								<20				<2					
26-Jul-01	HGW2790			<1		<5	<20	<5	150	<0.2	12	<20	2		30	<20	<2	<10
10-Dec-01	HGW2791								<20				<2					
18-Apr-02	HGW2792								<20				3			<20		
08-Aug-02	HGW2793			<1		<5	<20	<5	190	<0.2	9	<20	<2		10	<20	<2	<10
04-Nov-02	HGW2794								40				<2					
15-Aug-06	37692	30	98	<1	<30	<1	<2	<5	<50	<20	2	<5	<1		<2	<5	<2	<30
27-Nov-06	39745								<50				<1					
26-Mar-07	41936								<50				<1					
13-Aug-07	44446	20	106	<1	<30	<1	<2	<5	<50	<20	<1	<5			<2	<5	<2	<30
29-Aug-07	44835												<1					
10-Dec-07	46640								<50				<1					
18-Mar-08	48240								<50		13		1					
24-Mar-09	54690								<50		<1		1					
15-Mar-10	61258								<50		2		<1					
28-Mar-11	67214								<50		5		<1					
17-Apr-12	74042								<50		2		<1					
15-Apr-13	81584								<50		<1		<1					
25-Mar-14	88678								<50		1		<1					
22-Apr-15	96516								4		1.6		<1					
24-Apr-16	103867								2		<0.5		1					
19-Apr-17	112409								1		<0.5		<1					
21-Mar-18	120955								<5000		<1		<1					
03-Apr-19	130817								<1		1.6		1					
02-Apr-20	139979								16		<0.5		<1					
15-Apr-21	149268								85		10.8		2					
31-Mar-22	159431								6		<0.5		<1					
28-Mar-23	169184								<5		<0.5		<1					
02-Apr-24	179750								21		4.3		<1					
TOTAL SAMPLES		2	2	9	2	18	18	18	61	18	35	18	61	0	18	23	18	22
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-62-II

Shallow Overburden

Monitoring Well
Screen 190.7 - 186.9 masl



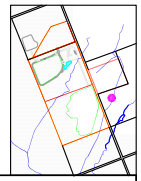
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
15-Sep-09	57952								90		**195**		<1					
06-Apr-10	61745								<50		<1		<1		<2			
12-Oct-10	64598								<50		**72**		<1					
06-Apr-11	67367								<50		4		<1					
18-Oct-11	71022								140		25		<1					
25-Apr-12	74225								<50		18		10					
03-Oct-12	77703								<50		9		<1					
20-Mar-13	81111								<50		<1		<1					
08-Oct-13	85584								<50		2		<1					
25-Mar-14	88680								<50		7		<1					
07-Oct-14	92842								<50		<1		<1					
08-Apr-15	96185								4		1.7		<1					
14-Sep-15	99615								<50		**51**		<1					
05-Apr-16	103417								<50		3.1		2					
11-Oct-16	108024								79		12.8		<1					
27-Mar-17	111814								32		6.1		<1					
03-Oct-17	116858								<50		3		<1					
26-Mar-18	121018								<50		<1		<1					
09-Oct-18	126930								<50		4		<1					
09-Apr-19	130970								8		12.6		<1					
30-Sep-19	135557								**1050**		**235**		<1					
16-Apr-20	140290								28		**135**		<1					
13-Sep-20	144110								9		1		1					
25-Mar-21	148774								9		8.5		<1					
12-Oct-21	154587								153		14.3		2					
22-Mar-22	159168								16		**112**		<1					
26-Sep-22	164644								45		15.3		<1					
20-Mar-23	168878								56		37.2		<1					
20-Mar-24	179422								20		25.9		<1					
23-Sep-24	184722								6		0.8		<1					
TOTAL SAMPLES		0	0	10	0	10	10	10	76	10	43	10	76	0	11	15	10	15
AVERAGE 2024									13		13.4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-63-II

Overburden Formation

Stand Pipe Piezometer
Screen 176.5 - 175.8 masl



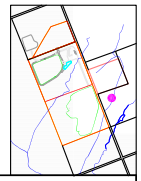
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
16-Aug-96	HGW2894			<0.2		0.9	<1	<1	<1	<2	23	<2	<2		1	<1	<8	<1
05-Aug-97	HGW2895								33				<2					
23-Jul-98	HGW2896								170				<2					
17-Aug-99	HGW2897								100				2					
14-Aug-00	HGW2898								**450**				7					
26-Jul-01	HGW2899								**350**				<2					
08-Aug-02	HGW2900								**370**				<2					
21-Aug-06	37830								210				<1					
20-Aug-07	44593								<50									
29-Aug-07	44837												2					
08-Oct-14	92866								**500**		16		<1					
27-Apr-15	96617	<25	101	<0.1	17.8	<0.1	<0.5	<0.5	**445**	<0.5	12	0.8	<1		1.1	<2		0.9
14-Sep-15	99620								**480**		12		<1					
24-Apr-16	103848	<25	112	<0.1	17.6	<0.1	<0.5	<0.5	**546**	<0.5	13.3	1	<1		1.6	<2		1.5
09-Apr-17	112160	<25	97	0.1	22.6	<0.1	<0.5	<0.5	**448**	<0.5	12	0.9	<1		1.2	<2		<0.5
17-Oct-17	117247								**400**		14		2					
25-Apr-18	121904	<25	102	<0.1	23.1	<0.1	<0.5	<0.5	**389**	<0.5	12.3	0.7	<1		1.6	<2		<0.5
09-Oct-18	126927								**520**		12		<1					
03-Apr-19	130813	<25	111	<0.5	17.3	<0.1	<0.5	<0.5	**538**	<0.5	12.6	0.7	<1		1.2	<2		<0.5
08-Oct-19	135882								**410**		18		<1					
08-Apr-20	140093	<25	107	<0.5	18.5	<0.1	<0.5	<0.5	**454**	<0.5	13.1	0.8	<1		1.5	<2		<0.5
23-Sep-20	144448								**510**		12		1					
17-Mar-21	148591	<25	116	<0.5	17.4	<0.1	<0.5	1	**438**	<0.5	13.7	0.8	<1		1.6	<2		<0.5
13-Oct-21	154615								11		11		1					
29-Mar-22	159329	<25	105	<0.5	17.5	<0.1	<0.5	<0.5	143	<0.5	12.7	0.8	<1		1.3	<2		<0.5
28-Sep-22	164704								225		12.4		<1					
04-Apr-23	169373	<25	104	<0.5	20	<0.1	<0.5	<0.5	**306**	<0.5	12.3	0.7	<1		1.5	<2		<5
27-Sep-23	2023A033								**310**		11		<1					
25-Mar-24	179555	<25	101	<0.5	18	<0.1	<0.5	<0.5	271	<0.5	15.7	0.7	<1		1.8	<2		<5
18-Sep-24	184588								**354**		12.7		<1					
TOTAL SAMPLES		10	10	18	10	18	18	18	43	18	28	18	43	0	18	18	8	18
AVERAGE 2024									313		14.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-63-III

Shallow Overburden

Monitoring Well
Screen 191.6 - 187.0 masl



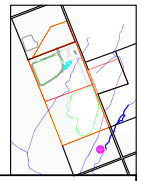
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
16-Aug-96	HGW2915			<0.2		1	<1	5	15	<2	27	<2	2		<1	<1	<8	5
05-Aug-97	HGW2916								10				2					
23-Jul-98	HGW2917								60				<2					
17-Aug-99	HGW2918								240				7					
14-Aug-00	HGW2919								130				6					
26-Jul-01	HGW2920								<20				5					
08-Aug-02	HGW2921								<20				4					
21-Aug-06	37831								<50				<1					
20-Aug-07	44594								<50									
29-Aug-07	44838												<1					
08-Oct-14	92867								<50		<1		<1					
27-Apr-15	96618	<25	33	<0.1	4.1	<0.1	<0.5	1.2	<50	<0.5	<0.5	0.6	<1		<0.1	<2		0.8
14-Sep-15	99622								<50		<1		<1					
24-Apr-16	103849	<25	37	<0.1	4.3	<0.1	1.9	0.6	15	<0.5	<0.5	<0.5	<1		<0.1	<2		2.4
09-Apr-17	112161	<25	27	<0.1	8.2	<0.1	<0.5	1.6	3	<0.5	<0.5	<0.5	<1		<0.1	<2		1.3
17-Oct-17	117248								<50		<1		2					
25-Apr-18	121905	<25	28	<0.1	8.4	<0.1	<0.5	0.6	30	<0.5	<0.5	<0.5	<1		<0.1	<2		0.7
09-Oct-18	126929								70		1		<1					
03-Apr-19	130814	<25	34	<0.5	3.2	<0.1	<0.5	1	3	<0.5	<0.5	<0.5	<1		<0.5	<2		0.7
08-Oct-19	135883								<50		<1		<1					
08-Apr-20	140094	<25	33	<0.5	3.9	<0.1	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<0.5
23-Sep-20	144450								199		9.9		1					
17-Mar-21	148592	<25	31	<0.5	1.7	<0.1	<0.5	2.1	19	<0.5	0.8	<0.5	<1		<0.5	<2		1.2
13-Oct-21	154616								20		1		1					
29-Mar-22	159330	<25	29	<0.5	4.4	<0.1	<0.5	<0.5	6	<0.5	<0.5	<0.5	1		<0.5	<2		<0.5
28-Sep-22	164705								215		7		<1					
04-Apr-23	169375	51	32	<0.5	<5	<0.1	<0.5	0.5	66	<0.5	4.3	<0.5	<1		<0.5	<2		<5
27-Sep-23	2023A035								<50		<1		<1					
25-Mar-24	179556	**118**	36	<0.5	<5	<0.1	<0.5	<0.5	90	<0.5	1.9	<0.5	<1		<0.5	<2		<5
18-Sep-24	184589								<5		<0.5		<1					
TOTAL SAMPLES		10	10	18	10	18	18	18	43	18	28	18	43	0	18	18	8	18
AVERAGE 2024									45		1.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-64-II

Shallow Overburden

Stand Pipe Piezometer
Screen 188.9 - 185.8 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Aug-00	HGW2975			<1		<5	<20	<5	37	4	**140**	<20	6		<10	<10	<2	99
08-Dec-00	HGW2976								<20				<2					
23-Apr-01	HGW2977								<20				<2					
01-Aug-01	HGW2978			<1		<5	<20	<5	50	<2	**190**	<20	<2		<50	<20	<2	<10
10-Dec-01	HGW2979								<20				<2					
08-Aug-02	HGW2980			<1		<5	<20	<5	110	<0.2	**120**	<20	4		20	<20	<2	<10
04-Nov-02	HGW2981								<20				<2					
20-Jul-06	37161	60	32	<1	<30	<1	<2	7	<50	<20	**147**	<5	<1		<2	<5	<2	<30
06-Nov-06	39351								<50				<1					
10-Apr-07	42240								<50				<1					
07-Aug-07	44328	<20	47	<1	<30	<1	<2	<5	<50	<20	**65**	<5			<2	<5	<2	<30
30-Aug-07	44870												<1					
26-Nov-07	46387								<50				<1					
09-Apr-08	48638								<50		**161**		<1					
06-Apr-09	54901								120		**290**		1					
29-Mar-10	61624								<50		6		<1					
06-Apr-11	67369								<50		4		<1					
18-Apr-12	74087								<50		**51**		1					
09-Apr-13	81506								<50		5		<1					
01-Apr-14	88814								300		**263**		<1					
14-Apr-15	96324								49		**67.7**		<1					
07-Apr-16	103505								9		41.7		2					
27-Mar-17	111808								3		9.6		<1					
09-Apr-18	121426								<50		8		<1					
16-Apr-19	131147								**335**		31.5		1					
14-May-20	140895								**353**		**372**		1					
06-Apr-21	149002								84		11.7		3					
12-Apr-22	159789								16		**56.4**		<1					
03-Apr-23	169325								39		12.3		<1					
02-Apr-24	179741								13		39.3		<1					
TOTAL SAMPLES		2	2	18	2	18	18	18	60	18	35	18	60	0	18	22	18	22
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-66-II

Overburden Formation

Stand Pipe Piezometer
Screen 190.9 - 190.1 masl

DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW3051								120				<2					
08-Aug-94	HGW3052			<2		<1	<3	<2	**1150**	<10	16	<10	<2		<10	<10	<40	8
11-Aug-95	HGW3053			<5		<0.5	<2	<2	150	0.9	20	<2	11		<1	6	<2	20
16-Aug-96	HGW3054			<0.2		0.7	<1	<1	250	<2	21	<2	19		<1	6	<8	<1
08-Aug-97	HGW3055								**10700**				24					
23-Jul-98	HGW3056								**9030**				23					
17-Aug-99	HGW3057								**1650**				19					
29-Aug-00	HGW3058								**28000**				23					
03-Aug-01	HGW3059								**30600**				29					
08-Aug-02	HGW3060								**22900**				2					
31-Jul-06	37412								**7030**				1					
16-Jul-07	43943								**20900**									
28-Aug-07	44775												2					
12-Mar-08	48144								**19900**		**187**		2		<2			
15-Apr-09	55050								**25200**		**217**		4					
06-Apr-10	61747								**27700**		**213**		2					
21-Mar-11	67073								**31600**		**310**		3					
11-Apr-12	73928								**20600**		**245**		4					
09-Apr-13	81508								**23600**		**219**		1					
24-Mar-14	88628								**26900**		**277**		2					
07-Apr-15	96144								**24700**		**210**		3					
29-Mar-16	103225								**26400**		**263**		3					
23-Apr-17	112539								**24500**		**217**		1					
26-Mar-18	121014								**19400**		**200**		<1					
28-Mar-19	130677								**24500**		**268**		2					
29-Apr-20	140551								**23000**		**208**		3					
22-Mar-21	148688								**23600**		**226**		2					
29-Mar-22	159337								**22400**		**170**		<1					
21-Mar-23	168981								**23200**		**151**		<1					
25-Mar-24	179562								**10000**		**163**		<1					
TOTAL SAMPLES		0	0	8	0	8	8	8	40	8	25	8	40	0	9	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-66-III

Shallow Overburden

Monitoring Well
Screen 197.2 - 193.4 masl

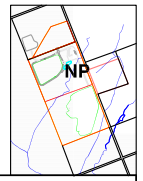
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
06-Apr-10	61742	20	679	<1	2020	<1	<2	<5	**55700**	<20	**703**	<5	3		11	25		<30
04-Oct-10	64478								**39500**		**724**		1					
21-Mar-11	67074	40	585	<1	810	<1	<2	<5	**73400**	<20	**1730**	6	2			30		<30
11-Oct-11	70804								**27800**		**577**		2					
11-Apr-12	73930	<20	805	<1	3420	<0.3	<2	<5	**38100**	6	**318**	<5	6			33		<30
09-Oct-12	77777								**37500**		**441**		3					
09-Apr-13	81509	<20	456	<1	1020	5	<2	<5	**59800**	**20**	**1250**	<5	<1		<2	16		10
09-Oct-13	85639								**34200**		**610**		2					
24-Mar-14	88632	<20	422	<1	1080	4	<2	<5	**48800**	**20**	**1130**	<5	<1		4	17		<30
01-Oct-14	92764								**38700**		**598**		2					
07-Apr-15	96142	20	388	<1	610	5	<2	<5	**40200**	**30**	**865**	<5	<1		8	18		<30
14-Sep-15	99614								**24000**		**635**		1					
29-Mar-16	103220	<25	413	<0.1	1360	<0.1	0.6	<0.5	**41700**	<0.5	**1160**	0.8	3		4.7	12		5.8
11-Oct-16	108018								**31100**		**312**		7					
23-Apr-17	112540	<25	339	<0.1	321	<0.1	<0.5	<0.5	**35000**	<0.5	**686**	<0.5	<1		2.9	3		<0.5
03-Oct-17	116851								**49200**		**665**		<1					
25-Apr-18	121896	<25	285	<0.1	1210	<0.1	0.6	<0.5	**34500**	<0.5	**557**	<0.5	<1		4	9		0.7
09-Oct-18	126922								**42300**		**476**		<1					
28-Mar-19	130675	<25	476	<0.5	1510	<0.1	0.8	0.5	**43200**	<0.5	**1010**	3.5	2		8.3	20		1.7
01-Oct-19	135647								**42400**		**389**		3					
29-Apr-20	140547	<25	675	<0.5	3460	<0.1	1.3	<0.5	**35100**	<0.5	**432**	2	4		7.1	25		1.8
13-Sep-20	144107								**25400**		**840**		2					
22-Mar-21	148690	<25	254	<0.5	616	<0.1	0.5	<0.5	**34800**	<0.5	**962**	<0.5	<1		1.8	5		0.9
12-Oct-21	154586								**22800**		**806**		1					
29-Mar-22	159335	<25	366	<0.5	1100	<0.1	0.7	<0.5	**33700**	<0.5	**583**	<0.5	1		3.3	10		<0.5
28-Sep-22	164701								**33900**		**332**		2					
21-Mar-23	168976	<25	278	<0.5	335	<0.1	<0.5	<0.5	**16200**	<0.5	**819**	1.1	<1		1.4	4		<5
26-Sep-23	2023A026								**40300**		**770**		1					
19-Mar-24	179372	<25	129	<0.5	180	<0.1	<0.5	<0.5	**17600**	<0.5	**471**	<0.5	<1		0.6	<2		<5
17-Sep-24	184551								**35400**		**463**		3					
TOTAL SAMPLES		19	19	35	19	35	35	35	78	35	52	35	78	0	33	39	18	38
AVERAGE 2024									26500		467		2					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-70-II

Overburden Formation

Stand Pipe Piezometer
Screen 181.2 - 180.4 masl



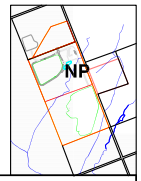
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Mar-93	HGW3120			<2		<1	<3	<2	**550**	<10	20	<20	<1		<10	<10	<40	9
28-Jun-93	HGW3121								**550**				<2					
28-Nov-93	HGW3122								180				<2					
08-Aug-94	HGW3123			<2		<1	<3	<2	**740**	<10	<2	<20	<2		<10	<10	<40	8
05-Aug-95	HGW3124			<5		<0.5	<2	<2	**530**	0.2	11	<2	1		<1	<2	<2	11
16-Aug-96	HGW3125			<1		<2	<4	<3	**390**	<2	10	<7	<2		<4	<10	<8	<4
06-Aug-97	HGW3126								**590**				<2					
23-Jul-98	HGW3127								**710**				<2					
19-Aug-99	HGW3128								**470**				<2					
15-Aug-00	HGW3129			<1		<5	<20	<5	**600**	4	10	<20	<2		<10	<10	<2	29
26-Jul-01	HGW3130								**600**				<2					
08-Aug-02	HGW3131								**570**				2					
29-Aug-06	37989								**470**				<1					
21-Aug-07	44622								**610**									
28-Aug-07	44777												<1					
04-May-09	55531								**510**		10		<1					
28-Apr-10	62148								**550**		9		<1					
26-Apr-11	67650								**620**		10		<1					
12-Apr-12	73951								**590**		11		<1					
16-Apr-13	81638								**530**		11		<1					
28-Apr-15	96633								**579**		10.6		<1					
28-Apr-16	103947								**531**		8.4		<1					
23-Apr-17	112534								**1270**		25.8		3					
09-Apr-18	121420								**1580**		24		<1					
23-Apr-19	131254								**674**		22.8		<1					
20-May-20	141023								**1400**		20.5		1					
08-Apr-21	149082								**1370**		20.9		2					
12-Apr-22	159791								**1380**		22.3		<1					
21-Mar-23	168978								**1480**		20.9		<1					
10-Apr-24	179982								**1400**		20.4		<1					
TOTAL SAMPLES		0	0	9	0	9	9	9	36	9	24	9	36	0	9	9	9	9
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-70-III

Shallow Overburden

Monitoring Well
Screen 194.0 - 189.4 masl



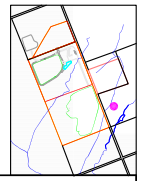
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Mar-93	HGW3137			<2		<1	<3	<2	260	<10	**100**	<20	<2		<10	<10	<40	9
28-Jun-93	HGW3138								**7500**				<2					
28-Nov-93	HGW3139								**1440**				<2					
08-Aug-94	HGW3140			<2		<1	<3	<2	**590**	<10	**150**	<20	<2		<10	<10	<40	13
05-Aug-95	HGW3141			<5		<0.5	<2	<2	**960**	0.3	**210**	<2	<1		<1	<2	<2	7
16-Aug-96	HGW3142			<0.2		0.7	<1	<1	<1	<2	**110**	<2	4		<1	<1	<8	<1
06-Aug-97	HGW3143								**1210**				2					
23-Jul-98	HGW3144								**710**				23					
19-Aug-99	HGW3145								**750**				7					
15-Aug-00	HGW3146								**2170**				5					
26-Jul-01	HGW3147								**720**				5					
08-Aug-02	HGW3148								**860**				<5					
29-Aug-06	37985								**2280**				<1					
21-Aug-07	44603								**1100**									
28-Aug-07	44778												<1					
04-May-09	55532								**4200**		**236**		<1					
28-Apr-10	62149								**3000**		**183**		<1					
26-Apr-11	67651								**10500**		**267**		<1					
12-Apr-12	73952								<50		**203**		<1					
16-Apr-13	81639								**2200**		**77**		<1					
28-Apr-15	96634								**3770**		**229**		<1					
28-Apr-16	103948								**4480**		**204**		<1					
23-Apr-17	112535								20		37.2		<1					
09-Apr-18	121421								**340**		46		<1					
23-Apr-19	131255								168		**50.4**		1					
20-May-20	141024								38		49.2		1					
08-Apr-21	149083								36		33.2		2					
12-Apr-22	159793								19		**53.5**		<1					
21-Mar-23	168979								<5		49.4		<1					
10-Apr-24	179983								276		**119**		<1					
TOTAL SAMPLES		0	0	8	0	8	8	8	34	8	23	8	34	0	8	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-75-II

Shallow Overburden

Monitoring Well
Screen 190.0 - 186.2 masl



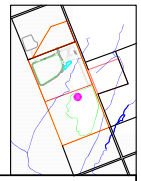
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Apr-02	HGW3476								<20				<2					
08-Aug-02	HGW3477			<1		<5	<20	<5	90	<0.2	28	<20	<2		20	<20	<2	<10
04-Nov-02	HGW3478								<20				<2					
21-Aug-06	37826	40	58	<1	<30	<1	<2	<5	<50	<20	7	<5	<1		<2	<5	<2	<30
21-Nov-06	39653								<50				<1					
26-Mar-07	41938								<50				<1					
14-Aug-07	44472	40	59	<1	<30	<1	<2	<5	<50	<20	2	<5			<2	<5	<2	<30
30-Aug-07	44872												<1					
10-Dec-07	46644								<50				<1					
08-Oct-14	92869								<50		**61**		<1					
22-Apr-15	96521	<25	56	<0.1	13.5	<0.1	<0.5	0.5	132	<0.5	48	<0.5	<1		0.3	<2		1.6
14-Sep-15	99618								<50		5		<1					
24-Apr-16	103850	<25	36	<0.1	6.4	<0.1	<0.5	<0.5	13	<0.5	15.6	<0.5	<1		0.1	<2		0.9
22-Sep-16	107587								79		**115**		<1					
09-Apr-17	112158	<25	22	<0.1	17.3	<0.1	<0.5	0.5	5	<0.5	1	<0.5	<1		<0.1	<2		<0.5
17-Oct-17	117244								<50		10		1					
25-Apr-18	121902	<25	25	<0.1	4.5	<0.1	<0.5	<0.5	12	<0.5	4.5	<0.5	<1		<0.1	<2		<0.5
09-Oct-18	126925								<50		1		<1					
03-Apr-19	130811	<25	44	<0.5	3	<0.1	<0.5	0.9	39	<0.5	12.3	<0.5	<1		<0.5	<2		0.8
07-Oct-19	135828								<50		2		<1					
13-May-20	140868	**1050**	58	<0.5	11.9	<0.1	1.1	2	**1510**	0.7	**116**	<0.5	1		1	<2		3.2
23-Sep-20	144446								14		4.4		2					
13-Apr-21	149228	<25	46	<0.5	11.3	<0.1	<0.5	0.6	19	<0.5	19.3	<0.5	<1		<0.5	<2		0.8
13-Oct-21	154613								35		17.8		1					
22-Mar-22	159174	<25	38	<0.5	6.7	<0.1	<0.5	0.6	11	<0.5	7.5	<0.5	<1		<0.5	<2		3.4
28-Sep-22	164702								149		7.5		<1					
11-Apr-23	169535	<25	28	<0.5	<5	<0.1	<0.5	0.5	267	<0.5	16.3	<0.5	<1		<0.5	<2		<5
27-Sep-23	2023A031								60		4		<1					
25-Mar-24	179553	**149**	38	<0.5	<5	<0.1	<0.5	0.6	229	<0.5	22.1	<0.5	<1		<0.5	<2		<5
23-Sep-24	184724								12		1.4		<1					
TOTAL SAMPLES		12	12	23	12	23	23	23	52	23	34	23	52	0	23	24	13	23
AVERAGE 2024									121		11.8		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-77-I

Shallow Overburden

Monitoring Well
Screen 193.0 - 190.0 masl



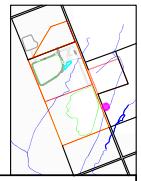
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW3545								60				<2					
18-Apr-01	HGW3546								**830**				<2					
26-Jul-01	HGW3547								**670**				3					
10-Dec-01	HGW3548								160				<2					
10-Apr-02	HGW3549								**580**				9					
01-Aug-02	HGW3550								**710**				<2					
01-Nov-02	HGW3551								**1050**				<2					
15-Aug-06	37702								**450**				<1					
11-Dec-06	40004								200				<1					
30-Apr-07	42584								**430**				<1					
21-Aug-07	44604								**520**									
28-Aug-07	44790												2					
13-Nov-07	46160								**340**				<1					
29-Apr-08	49016								**750**		19		<1		<2			
15-Apr-09	55048								**670**		20		<1					
28-Apr-10	62150								**430**		19		<1					
27-Apr-11	67672								**710**		20		<1					
12-Apr-12	73953								**730**		19		<1					
16-Apr-13	81640								**510**		22		<1					
14-Apr-14	89065								**750**		21		1					
27-Apr-15	96624								**1090**		19.7		<1					
26-Apr-16	103891								**663**		20.8		2					
23-Apr-17	112536								**555**		20.9		<1					
09-Apr-18	121427								**880**		22		<1					
14-Apr-19	131084								**668**		25.8		2					
20-May-20	141025								**413**		20.9		<1					
15-Apr-21	149269								**1230**		20.9		2					
12-Apr-22	159795								**1050**		21.1		<1					
11-Apr-23	169538								**885**		24.4		<1					
10-Apr-24	179984								**678**		27.2		<1					
TOTAL SAMPLES		0	0	6	0	6	6	6	45	6	23	6	45	0	7	6	6	6
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-81-II

Overburden Formation

Stand Pipe Piezometer
Screen 191.4 - 189.8 masl



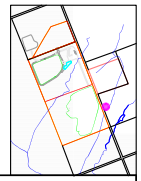
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Mar-10	61545	<20	126	<1	80	<1	<2	<5	**8320**	<20	**61**	<5	<1			<5		<30
27-Sep-10	64386								**9670**		**68**		<1					
29-Mar-11	67235	<20	119	<1	80	<1	<2	<5	**6440**	<20	**59**	<5	<1			<5		<30
18-Oct-11	71024								**11200**		**65**		<1					
25-Apr-12	74218	<20	98	<1	60	0.3	<2	<5	<50	1.6	**62**	<5	<1			<5		<30
03-Oct-12	77705								**2170**		**66**		<1					
19-Mar-13	81049	<20	111	<1	70	<1	<2	<5	**3190**	<10	**63**	<5	<1		<2	<5		<10
15-Oct-13	85689								**13800**		**65**		<1					
31-Mar-14	88763	<20	116	<1	70	<1	<2	<5	250	<10	**70**	6	<1		<2	6		<30
07-Oct-14	92844								**13500**		**58**		<1					
21-Apr-15	96456	<25	141	<0.1	49.1	<0.1	<0.5	<0.5	**8270**	<0.5	**63.8**	1.1	2		1	5		3.7
09-Sep-15	99516								**8720**		**69.7**		2					
24-Apr-16	103853	<25	125	<0.1	68	<0.1	<0.5	<0.5	**5440**	<0.5	**63.5**	1.5	<1		1	6		2.5
11-Oct-16	108020								**10800**		**53**		1					
09-Apr-17	112154	<25	94	<0.1	83.5	<0.1	<0.5	<0.5	**1180**	<0.5	**52.6**	1.1	<1		0.7	3		<0.5
03-Oct-17	116853								**2940**		**64**		<1					
18-Apr-18	121705	<25	146	<0.1	48.7	<0.1	<0.5	<0.5	**816**	<0.5	**60.8**	1.3	<1		0.6	3		1.7
14-Oct-18	127089								**12400**		**68**		<1					
01-Apr-19	130700	<25	157	<0.5	49.4	<0.1	<0.5	<0.5	**4780**	<0.5	**65.5**	1.1	1		0.8	3		5.4
30-Sep-19	135553								**13300**		**67**		<1					
16-Apr-20	140286	<25	177	<0.5	45.2	<0.1	<0.5	0.7	**4340**	<0.5	**64.4**	1.1	<1		0.8	3		1.6
13-Sep-20	144109								**7340**		**61.1**		<1					
16-Mar-21	148557	<25	176	<0.5	48.3	<0.1	<0.5	<0.5	**721**	<0.5	**66.4**	1.2	<1		0.6	4		1.7
06-Oct-21	154480								**13800**		**67.3**		2					
21-Mar-22	159046	<25	159	<0.5	55.7	<0.1	<0.5	<0.5	**1880**	<0.5	**61.6**	1	<1		0.6	3		1.1
27-Sep-22	164663								**17100**		**61.3**		<1					
20-Mar-23	168872	<25	167	<0.5	43	<0.1	<0.5	<0.5	**383**	<0.5	**67**	1.3	<1		0.5	3		<5
25-Sep-23	2023A016								**4050**		**65**		<1					
19-Mar-24	179374	<25	149	<0.5	46	<0.1	<0.5	0.8	**3230**	<0.5	**62.7**	1	<1		0.7	8		<5
17-Sep-24	184548								**12500**		**66.3**		<1					
TOTAL SAMPLES		19	19	24	19	24	25	24	53	24	41	24	53	0	21	25	7	24
AVERAGE 2024									7865		64.50		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-81-III

Shallow Overburden

Monitoring Well
Screen 197.8 - 193.2 masl



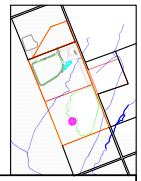
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
10-Dec-01	HGW3759								**38900**				5					
18-Apr-02	HGW3760								**37800**				9			<20		
04-Nov-02	HGW3761								**38500**				<2					
19-Jul-06	37164	30	173	<1	60	<1	<2	<5	**57100**	<20	**1460**	<5	<1		<5	13	<10	<30
14-Nov-06	39486								**50600**				<1					
13-Mar-07	41667								**71200**				1					
24-Jul-07	44082	<20	230	<1	80	<3	<2	<5	**65900**	<20	**1300**	<5			<2	<20	<10	<30
28-Aug-07	44794												2					
18-Mar-08	48234	<20	180	<1	80	<1	<2	<5	**8490**	<20	**1090**	5	1		4	11		<30
03-Sep-08	51042						<2		**23000**		**1190**		<1					
07-Apr-09	54927	20	177	<1	70	<1	<2	<5	**8850**	<20	**4200**	<5	3		12	8		<30
24-Mar-10	61546	<20	109	<1	50	<1	<2	<5	**14400**	<20	**1310**	<5	2			9		<30
29-Mar-11	67236	<20	148	<1	40	<1	<2	<5	**36300**	<20	**3700**	<5	13			9		<30
18-Oct-11	71025												<1					
25-Apr-12	74219	<20	135	<1	50	2.2	<2	<5	**43000**	6.4	**3330**	<5	2			6		<30
19-Mar-13	81050	<20	167	<1	50	4	<2	<5	**55200**	<10	**2440**	<5	<1		<2	12		10
31-Mar-14	88764	<20	96	<1	<30	2	<2	<5	**21500**	<10	**1270**	<5	<1		<2	6		<30
21-Apr-15	96457	<25	100	<0.1	5.9	<0.1	<0.5	0.7	**5790**	<0.5	**675**	<0.5	2		0.6	3		1.1
24-Apr-16	103854	<25	137	<0.1	18.7	<0.1	<0.5	<0.5	**24300**	<0.5	**1570**	<0.5	<1		0.3	<2		1.1
09-Apr-17	112155	<25	134	<0.1	40.9	<0.1	0.6	<0.5	**28500**	<0.5	**1430**	<0.5	<1		0.3	<2		<0.5
03-Oct-17	116854								**36000**		**1750**		<1					
18-Apr-18	121706	<25	141	<0.1	16.2	<0.1	<0.5	<0.5	**24000**	<0.5	**1520**	<0.5	<1		0.1	<2		0.8
01-Apr-19	130701	<25	235	<0.5	26.5	<0.1	1	1	**39400**	<0.5	**1760**	<0.5	7		<0.5	<2		2.5
16-Apr-20	140287	<25	131	<0.5	24.5	<0.1	0.6	<0.5	**19800**	<0.5	**1210**	<0.5	<1		<0.5	<2		0.8
16-Mar-21	148558	<25	183	<0.5	16.7	<0.1	0.6	0.7	**22900**	<0.5	**737**	<0.5	<1		<0.5	<2		1.8
06-Oct-21	154481								**35000**		**803**		22					
21-Mar-22	159047	<25	136	<0.5	12.2	<0.1	<0.5	<0.5	**14600**	<0.5	**831**	<0.5	<1		<0.5	<2		<0.5
20-Mar-23	168873	<25	111	<0.5	5	<0.1	<0.5	0.6	**8130**	<0.5	**475**	<0.5	7		<0.5	<2		<5
25-Sep-23	2023A017								**34200**		**1050**		<1					
19-Mar-24	179375	<25	135	<0.5	6	<0.1	<0.5	<0.5	**16900**	<0.5	**766**	<0.5	<1		<0.5	<2		<5
TOTAL SAMPLES		19	19	22	19	22	23	22	36	22	26	22	37	0	19	23	5	22
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**

BH-101-II

Overburden Formation

Stand Pipe Piezometer
Screen 204.1 - 202.5 masl



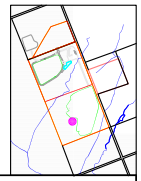
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW0049								50				<2					
23-Apr-01	HGW0050								<20				5					
03-Aug-01	HGW0051					<5	<20	<5	30	<2	**740**	30	8		<10	<20	<2	40
10-Dec-01	HGW0052								<20				<2					
18-Apr-02	HGW0053								<20				<2					
08-Aug-02	HGW0054					<5	<20	20	**11500**	3.4	**360**	<20	<2		30	<20	72	<20
04-Nov-02	HGW0055								<20				<2					
15-Aug-06	37695	20	59	<1	130	<1	<2	<5	<50	<20	1	17	<1		<2	<5	<2	<30
05-Dec-06	39912								<50				<1					
16-Apr-07	42339								<50				<1					
16-Jul-07	43919	<20	57	<1	120	<1	<2	<5	<50	<20	1	16			<2	<5	<2	<30
28-Aug-07	44796												<1					
26-Nov-07	46382								<50				<1					
26-Mar-08	48332								<50		2		<1		<2			
16-Apr-09	55052								<50		3		2					
12-Apr-10	61850								<50		2		<1					
05-Apr-11	67318								<50		4		<1					
11-Apr-12	73920								<50		1		<1					
25-Mar-13	81160								<50		<1		<1					
31-Mar-14	88760								<50		<1		<1					
21-Apr-15	96460								1		<0.5		<1					
24-Apr-16	103857								25		1.3		<1					
29-Mar-17	111925								7		0.6		<1					
26-Mar-18	121008								<50		<1		<1					
25-Mar-19	130610								4		<0.5		1					
29-Apr-20	140553								<5		<0.5		<1					
16-Mar-21	148560								<5		0.6		<1					
16-Mar-22	158955								16		<0.5		1					
21-Mar-23	168983								12		<0.5		<1					
26-Mar-24	179601								<5		<0.5		<1					
TOTAL SAMPLES		2	2	2	2	6	6	6	33	6	23	6	33	0	7	6	6	6
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-101-III

Shallow Overburden

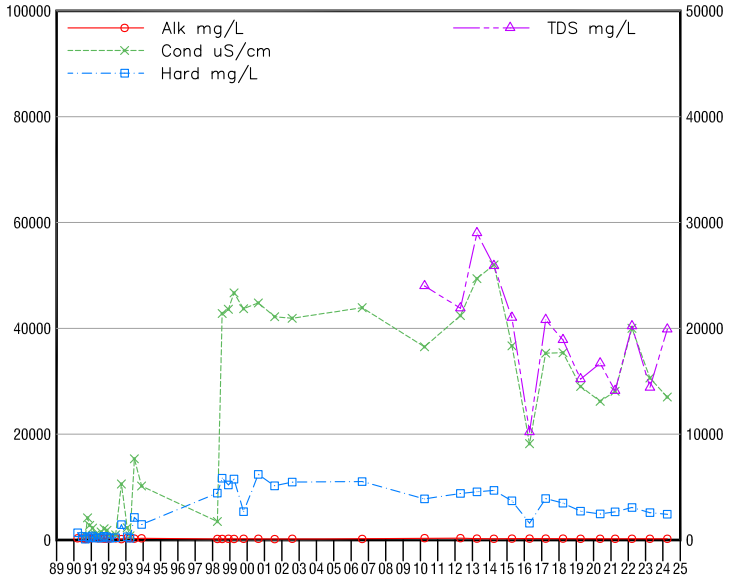
Monitoring Well
Screen 215.9 - 212.8 masl

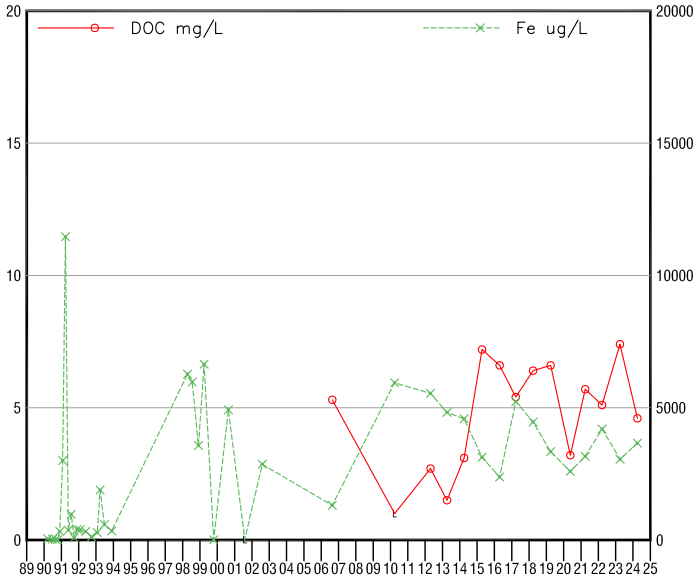


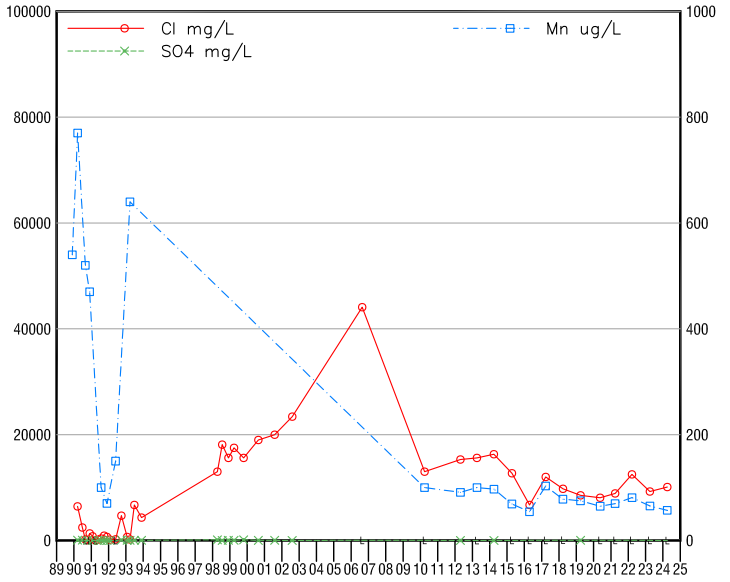
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
25-Apr-00	HGW0058								4				8					
22-Aug-00	HGW0059					<5	<20	<5	270	3	**87**	<20	4		<10	<10	<2	23
23-Apr-01	HGW0060								30				4					
03-Aug-01	HGW0061					<5	<20	<5	<20	<2	43	20	4		<10	<20	<2	<10
10-Dec-01	HGW0062								<20				<2					
18-Apr-02	HGW0063								<20				27					
08-Aug-02	HGW0064					<5	<20	<10	<20	<0.2	16	<20	<2		20	<20	110	<20
04-Nov-02	HGW0065								<20				<2					
15-Aug-06	37696	30	48	<1	40	<1	<2	<5	<50	<20	5	6	<1		<2	<5	<2	<30
05-Dec-06	39913								<50				<1					
16-Apr-07	42340								<50				<1					
16-Jul-07	43920	<20	72	<1	<30	<1	<2	<5	<50	<20	<1	6			<2	<5	<2	<30
28-Aug-07	44797												<1					
26-Mar-08	48333								50		2		<1		<2			
16-Apr-09	55053								<50		<1		<1					
12-Apr-10	61851								<50		<1		<1					
05-Apr-11	67319								160		6		<1					
11-Apr-12	73921								<50		<1		<1					
25-Mar-13	81161								<50		<1		<1					
31-Mar-14	88761								<50		<1		<1					
21-Apr-15	96461								3		<0.5		<1					
24-Apr-16	103858								19		1.3		<1					
29-Mar-17	111926								22		2.3		<1					
26-Mar-18	121009								<50		2		<1					
25-Mar-19	130611								33		3.1		<1					
29-Apr-20	140554								39		2.4		<1					
16-Mar-21	148561								5		1.2		<1					
16-Mar-22	158956								14		1.4		<1					
21-Mar-23	168984								27		1.1		<1					
26-Mar-24	179602								<5		<0.5		<1					
TOTAL SAMPLES		2	2	2	2	6	6	6	31	6	23	6	31	0	7	6	6	6
AVERAGE 2024																		

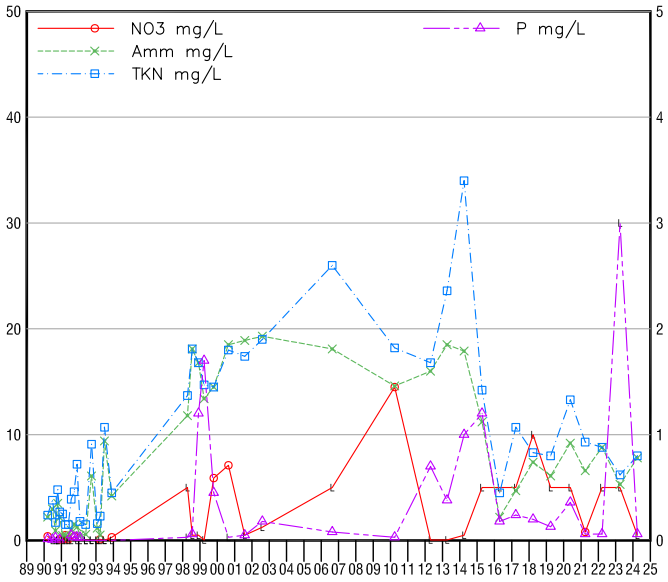
all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

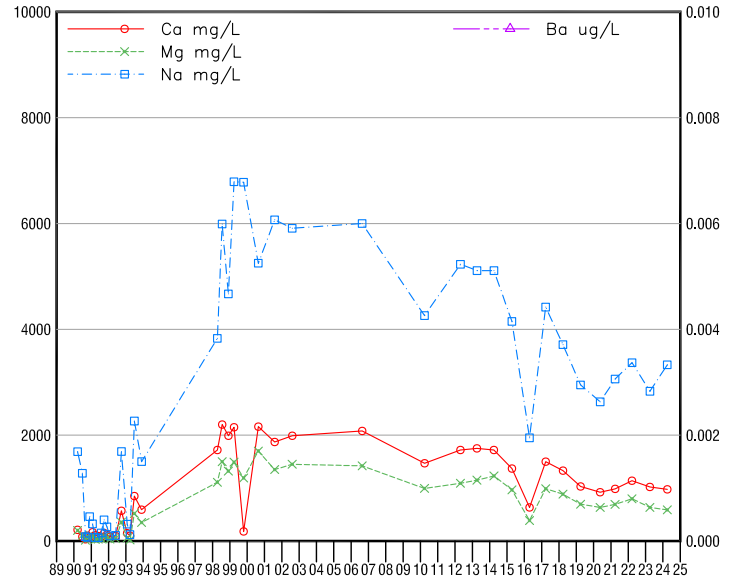
South Fill Area - Bedrock Monitors



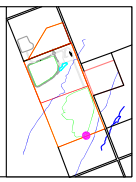








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-5-IV

Deep Bedrock Unit

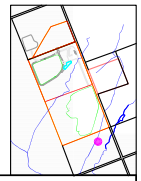
Screen 182.5 - 181.8 masl

CA008825 24 Mar 25	wsp	F424001

BH-5-IV

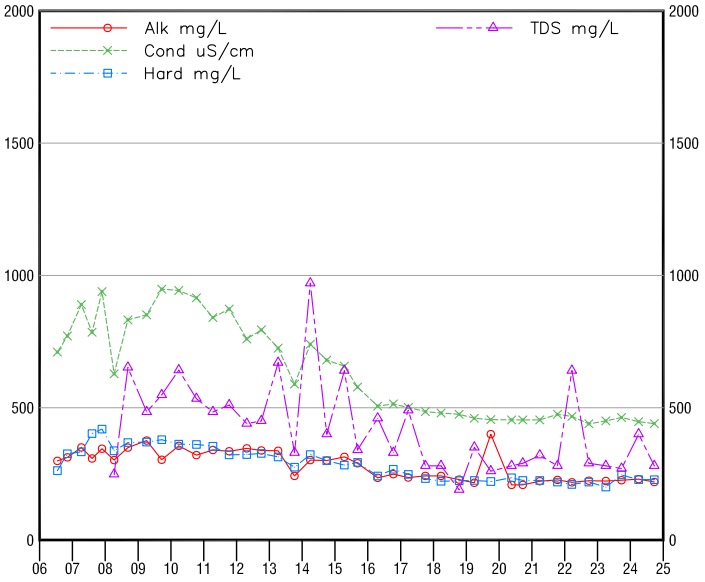
Deep Bedrock Unit

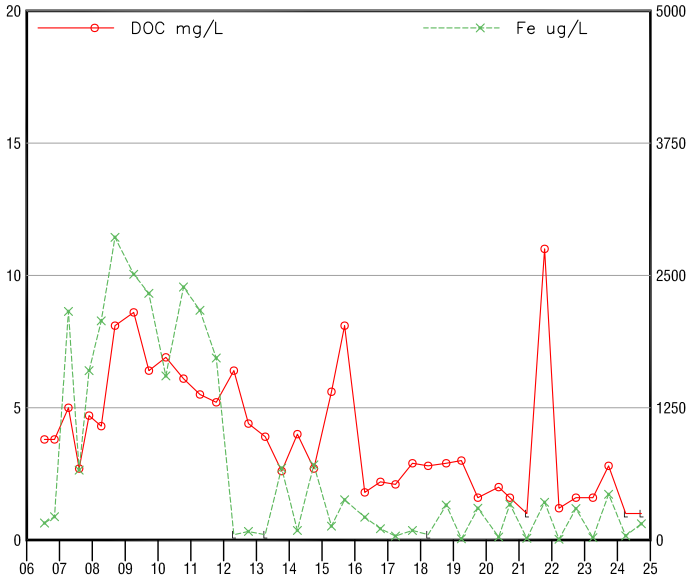
Stand Pipe Piezometer
Screen 182.5 - 181.8 masl

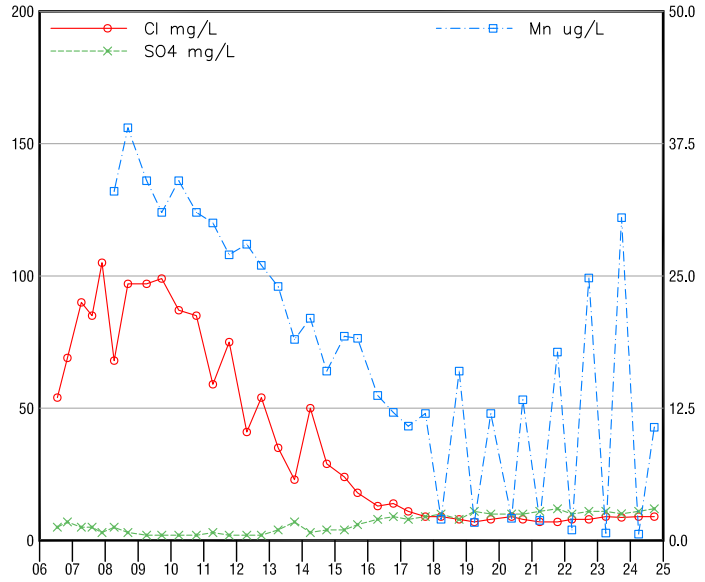


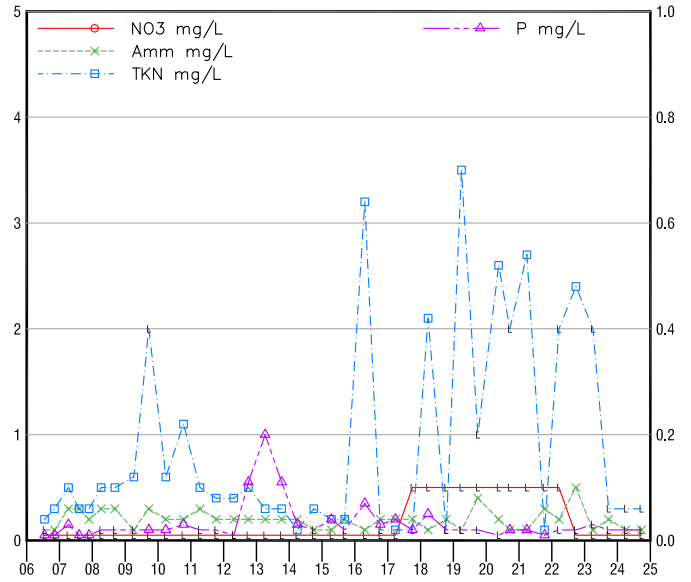
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jan-92	HGW2305	290	701	341	8.3	168	4	77	36.0	95	5.16		<0.01	<0.001	0.49		2.4
28-May-92	HGW2306	326	964	415	7.6	214	<5	93	44.1	105	6.15		<0.01	<0.001	0.58		2.0
28-Sep-92	HGW2308	150	10580	2890	7.3	**4680**	104	571	355	**1692**	42.9		<0.02	<0.001	6.09		-1.6
28-Jan-93	HGW2309	376	2320	600	7.6	**654**	41	148	56.1	**318**	11.8		<0.02	<0.001	1.16		-1.1
28-Mar-93	HGW2310	350	791	339	7.5	195	27	100	21.6	120	7.59		0.1	<0.001	0.51		-3.0
28-Jun-93	HGW2311	249	15340	4259	7.5	**6704**	40	848	520	**2267**	53.1		<0.02	<0.001	9.4		-2.4
28-Nov-93	HGW2312	302	10190	2917	7.3	**4339**	32	593	349	**1500**	37.4		0.3	0.004	4.21		-1.7
13-Apr-98	HGW2313	193	3480	8866	7.2	**13000**	129	1720	1110	**3830**	123		<5	<6	11.8		-3.5
23-Jul-98	HGW2314	185	42800	11670	7.6	**18100**	10	2200	1500	**5990**	178		<0.5	<0.6	18.1		-1.4
01-Dec-98	HGW2315	220	43600	10405	7.1	**15600**	32	1990	1320	**4670**	160		<0.5	<0.6	16.8		-3.3
30-Mar-99	HGW2316	197	46700	11504	7.6	**17500**	35	2150	1490	**6790**	181		<0.05	<0.06	13.4		3.2
18-Oct-99	HGW2317	232	43700	5355	7.8	**15600**	135	182	1190	**6780**	103		5.9	<0.6	14.5		-5.0
23-Aug-00	HGW2318	222	44800	12394	7.4	**19000**	18	2160	1700	**5250**	174		7.1	<0.6	18.5		-5.8
03-Aug-01	HGW2319	148	42200	10229	7.2	**20000**	19	1870	1350	**6070**	102		<0.5	<0.6	18.9		-9.1
08-Aug-02	HGW2320	230	41900	10940	7.4	**23400**	2	1990	1450	**5910**	106		<1.25	<1.5	19.3		-16.1
22-Aug-06	37849	197	43900	11041		**44100**	<30	2080	1420	**6000**	110	**5.3**	<5	<5	18.1		-44.0
29-Mar-10	61620	332	36500	7760	6.9	**13000**	<30	1470	993	**4260**	92.4	<1	**14.5**	<5	14.6	24000	-4.2
24-Apr-12	74166	346	42400	8783	6.8	**15300**	2	1720	1090	**5230**	112	2.7	<0.05	<0.05	16	21900	-3.7
08-Apr-13	81445	252	49400	9105	6.9	**15600**	<0.3	1750	1150	**5110**	110	1.5	<0.05	<0.05	18.5	29000	-4.3
01-Apr-14	88807	213	52000	9360	6.8	**16300**	1	1720	1230	**5110**	112	3.1	<0.5	<0.5	17.9	25900	-5.7
15-Apr-15	96363	241	36700	7403	6.9	**12700**	<8	1370	967	**4150**	73.6	**7.2**	<5	<5	11.2	21000	-4.6
20-Apr-16	103800	256	18200	3174	7.2	**6730**	<20	633	387	**1950**	37.8	**6.6**	<5	<5	2.2	10200	-13.2
27-Mar-17	111809	239	35300	7818	6.9	**12000**	<20	1500	989	**4420**	90.7	**5.4**	<5	<5	4.7	20800	1.2
26-Mar-18	121019	244	35400	6965	6.9	**9760**	<40	1330	885	**3710**	69.7	**6.4**	<10	<10	7.4	18900	3.9
01-Apr-19	130705	234	29000	5438	7.1	**8530**	31	1030	696	**2950**	59.0	**6.6**	<5	<5	6.1	15200	-1.4
19-May-20	140998	216	26200	4913	7.1	**8070**	<20	922	634	**2630**	49.7	3.2	<5	<5	9.2	16700	-3.9
29-Mar-21	148822	223	28100	5307	7.0	**8900**	<20	984	692	**3060**	57.0	**5.7**	0.8	<0.5	6.6	14100	-2.9
21-Mar-22	159048	214	40000	6137	6.9	**12500**	<20	1140	799	**3370**	75.3	**5.1**	<5	<5	8.8	20200	-13.5
03-Apr-23	169326	223	30600	5158	7.0	**9270**	<20	1020	634	**2830**	53.6	**7.4**	<5	<5	5.3	14400	-7.7
02-Apr-24	179742	224	27000	4860	6.7	**10100**	<2	976	588	**3330**	68.9	4.6	<0.5	<0.5	7.8	19900	8.2
TOTAL SAMPLES		41	39	41	40	41	41	41	41	41	41	15	41	41	41	14	
AVERAGE 2024																	

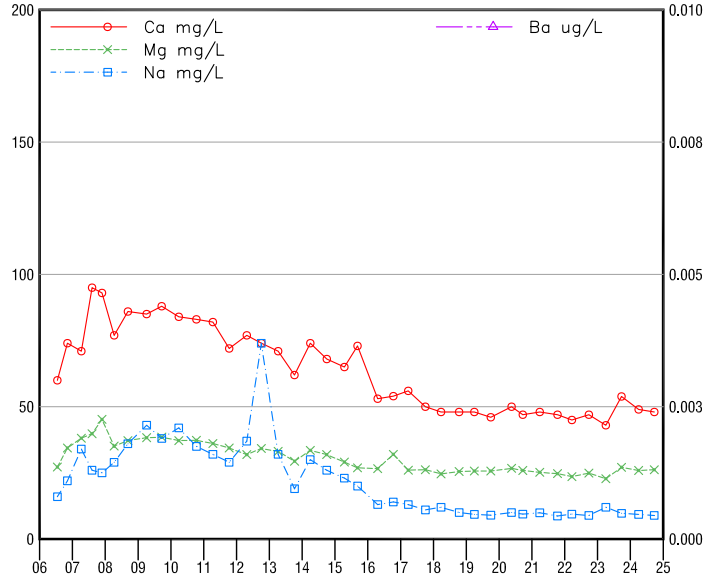
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



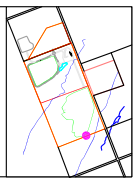








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-5-V

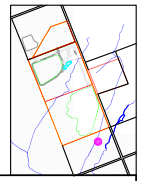
Shallow Bedrock Unit

CA008825 24 Mar 25	wsp	F424002

BH-5-V

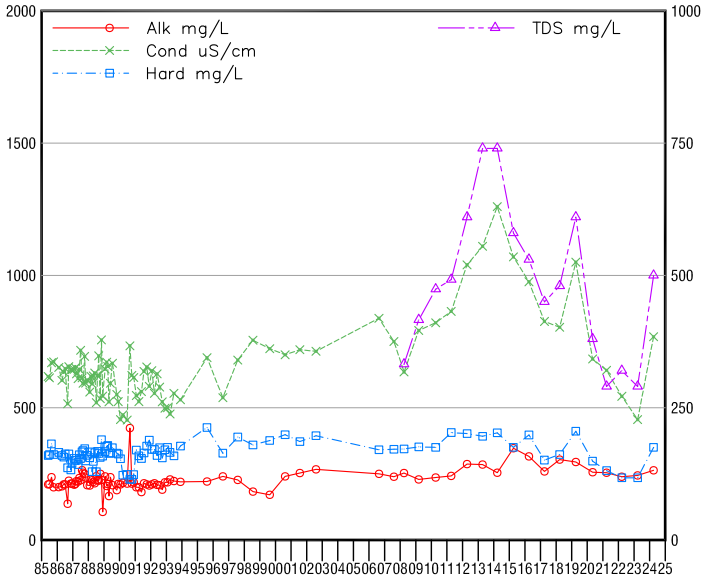
Shallow Bedrock Unit

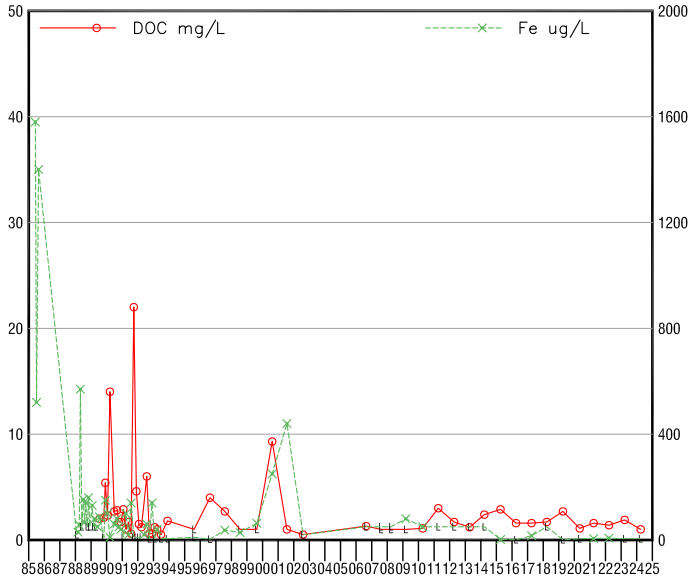
Stand Pipe Piezometer

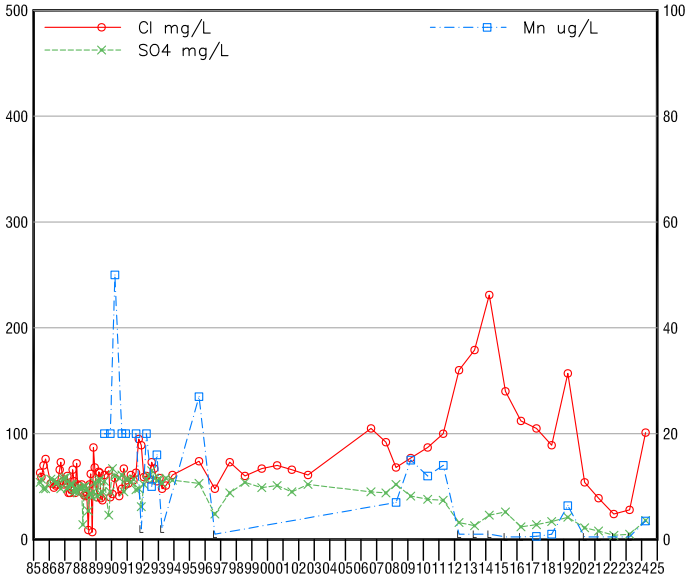


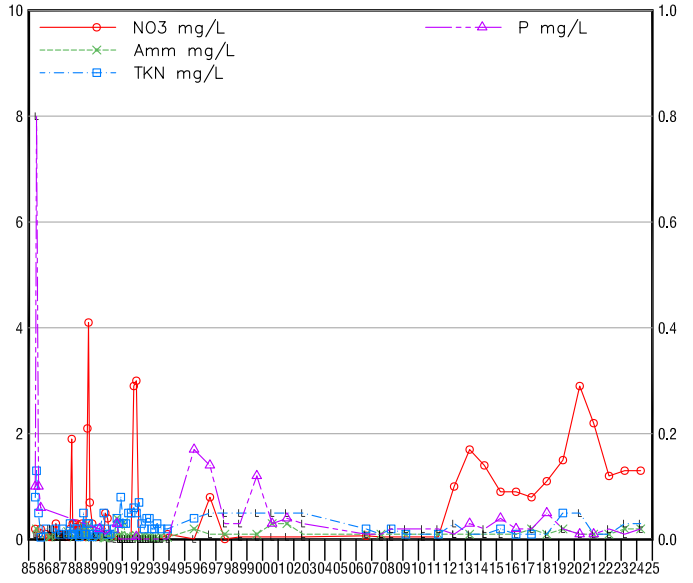
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
29-Mar-10	61621	356	943	362	7.4	87	2	84	37.2	42	2.81	**6.9**	<0.05	<0.05	0.2	642	-2.2
12-Oct-10	64594	321	915	361	7.5	85	2	83	37.3	35	2.73	**6.1**	<0.05	<0.05	0.2	534	0.3
13-Apr-11	67479	340	841	354	7.7	59	3	82	36.1	32	2.61	**5.5**	<0.05	<0.05	0.3	484	0.7
11-Oct-11	70806	335	873	322	7.6	75	2	72	34.4	29	2.67	**5.2**	<0.05	<0.05	0.2	510	-5.9
24-Apr-12	74164	346	760	323	7.4	41	2	77	31.9	37	2.65	**6.4**	<0.05	<0.05	0.2	440	0.2
03-Oct-12	77699	338	794	327	7.4	54	2	74	34.2	74	2.86	4.4	<0.05	<0.05	0.2	450	8.4
08-Apr-13	81446	337	725	314	7.6	35	4	71	33.1	32	2.55	3.9	<0.05	<0.05	0.2	670	-0.4
08-Oct-13	85579	242	589	275	7.6	23	7	62	29.4	19	2.3	2.6	<0.05	<0.05	0.2	330	6.6
01-Apr-14	88808	302	740	323	7.6	50	3	74	33.5	30	2.4	4	<0.05	<0.05	0.2	970	2.2
01-Oct-14	92762	300	680	300	7.5	29	4	68	31.9	26	2.4	2.7	<0.05	<0.05	0.1	400	2.5
15-Apr-15	96364	314	657	283	7.6	24	4	65	29.1	23	2.3	**5.6**	<0.05	<0.05	0.1	640	-2.3
09-Sep-15	99518	290	578	293	7.6	18	6	73	26.9	20	2.4	**8.1**	<0.05	<0.05	0.2	340	3.0
20-Apr-16	103801	235	506	242	8.0	13	8	53	26.6	13	2.3	1.8	<0.05	<0.05	0.1	460	2.4
11-Oct-16	108022	249	514	267	7.9	14	9	54	32.0	14	2.7	2.2	<0.05	<0.05	0.2	330	4.2
27-Mar-17	111810	236	501	248	7.7	11	8	56	26.0	13	2.2	2.1	<0.05	<0.05	0.2	490	3.4
03-Oct-17	116860	242	485	232	7.7	9	9	50	26.2	11	2.1	2.9	<0.5	<0.5	0.2	280	-0.6
26-Mar-18	121020	242	480	222	7.8	9	10	48	24.6	12	2.2	2.8	<0.5	<0.5	0.1	280	-2.7
14-Oct-18	127091	228	475	224	7.8	8	8	48	25.5	10	2	2.9	<0.5	<0.5	0.2	190	0.3
01-Apr-19	130706	216	460	225	8.0	7	11	48	25.7	9.3	2.2	3	<0.5	<0.5	<0.1	350	2.3
01-Oct-19	135645	400	455	221	7.8	8	10	46	25.7	9.0	2.2	1.6	<0.5	<0.5	0.4	260	-26.5
19-May-20	140999	208	454	235	8.0	9	10	50	26.7	10	2.2	2	<0.5	<0.5	0.2	280	6.0
21-Sep-20	144374	208	454	225	7.9	8	10	47	25.9	9.4	2.2	1.6	<0.5	<0.5	0.1	290	3.8
29-Mar-21	148823	222	454	225	7.7	7	11	48	25.2	9.9	2.3	<1	<0.5	<0.5	0.1	320	1.2
12-Oct-21	154579	227	475	219	7.8	7	12	47	24.7	8.7	2.1	**11**	<0.5	<0.5	0.3	280	-1.5
21-Mar-22	159049	218	467	210	7.9	8	10	45	23.6	9.4	2.2	1.2	<0.5	<0.5	0.2	640	-1.2
26-Sep-22	164643	224	439	219	7.9	8	11	47	24.9	8.9	2.1	1.6	<0.05	<0.05	0.5	290	-0.9
03-Apr-23	169327	223	450	200	8.0	9	11	43	22.8	12	1.9	1.6	<0.05	<0.05	0.1	280	-3.5
25-Sep-23	2023A022	226	463	246	7.9	8.7	10.1	53.9	27.1	9.7	2.4	2.8	<0.05	<0.05	0.2	270	6.1
02-Apr-24	179743	230	447	228	7.8	9	11	49	25.9	9.3	2.1	<1	<0.05	<0.05	0.1	400	1.3
23-Sep-24	184715	219	440	228	7.5	9	12	48	26.2	8.9	2.2	<1	<0.05	<0.05	0.1	280	3.2
TOTAL SAMPLES		39	39	39	33	39	39	39	39	39	39	39	39	39	39	34	
AVERAGE 2024		225	444	228	7.7	9	12	49	26.1	9.1	2.2	<1	<0.05	<0.05	0.1	340	

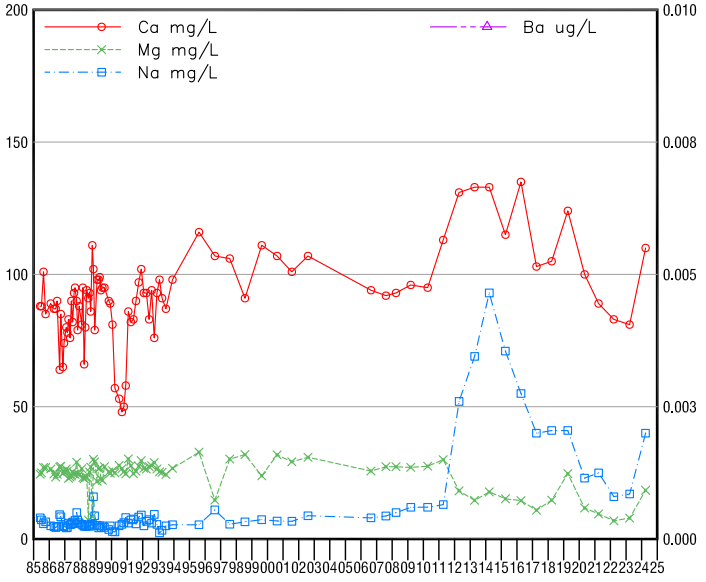
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









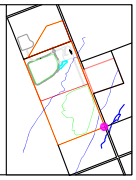


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-16A

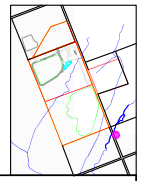
Shallow Bedrock Unit

CA008825 24 Mar 25	wsp	F424003

BH-16A

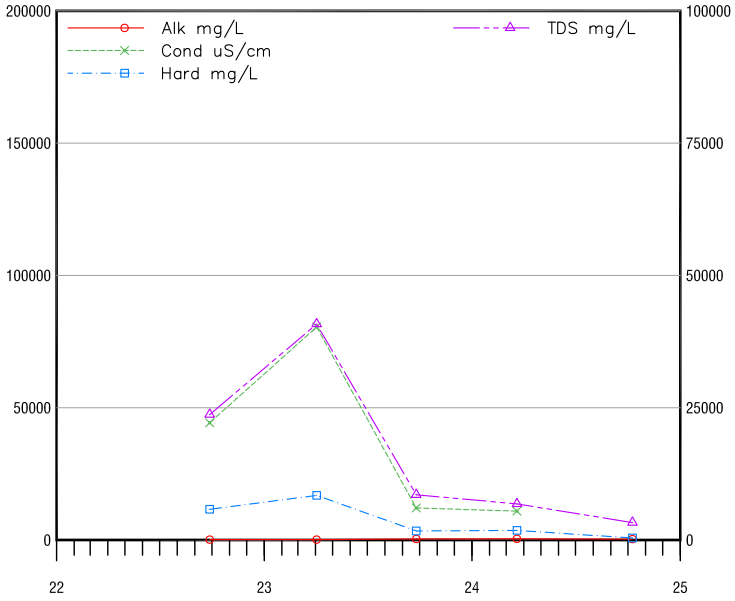
Shallow Bedrock Unit

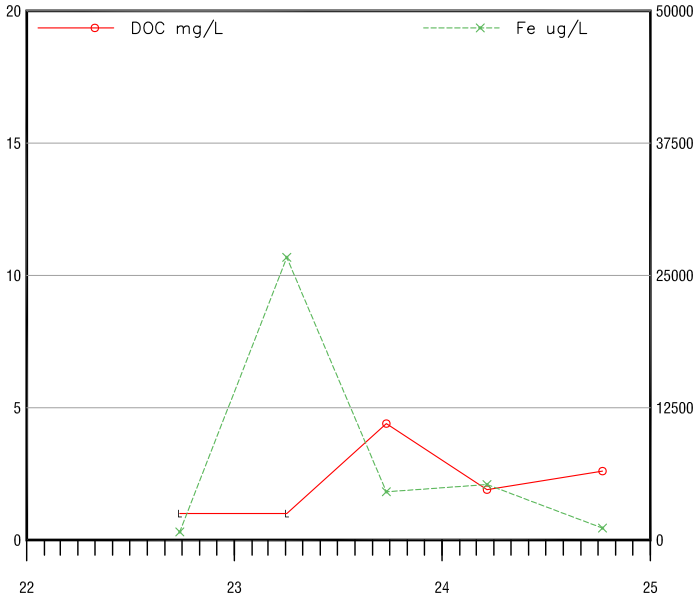
Stand Pipe Piezometer

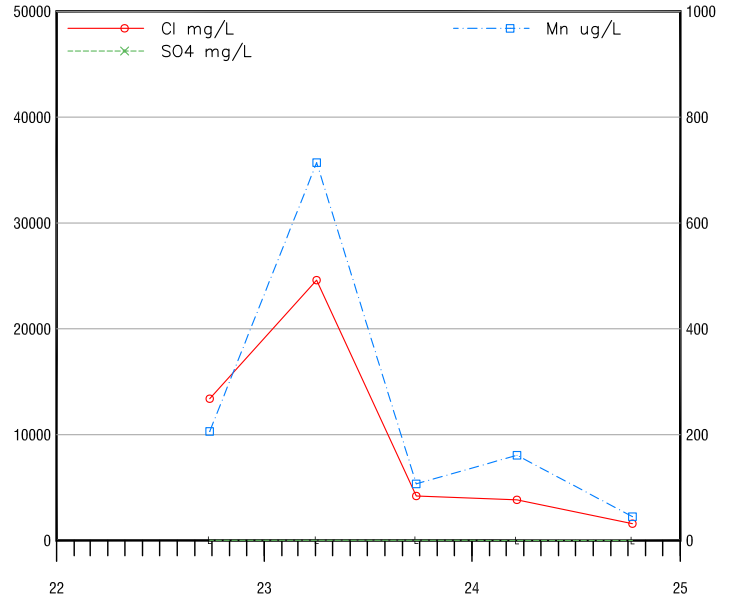


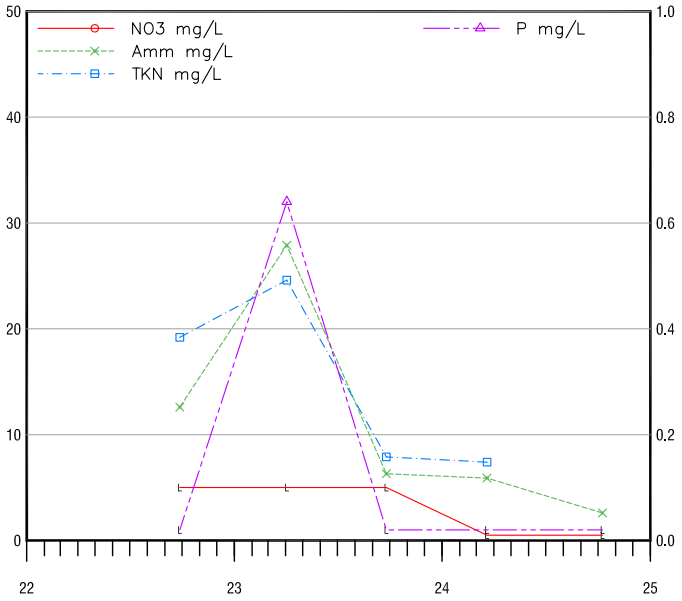
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Mar-93	HGW0253	229	476	331	7.7	48	53	91	25.2	3.3	2.42	1	<0.02	<0.001	0.02		-1.5
28-Jun-93	HGW0254	223	554	318	7.3	51	58	87	24.4	5.0	2.31	0.5	<0.02	<0.001	0.06		-3.3
28-Nov-93	HGW0255	220	530	355	7.4	61	56	98	26.7	5.4	2	1.8	0.1	<0.001	0.04		0.7
11-Aug-95	HGW0257	221	689	425	7.7	74	53	116	32.8	5.4	2	<1	<0.01	0.11	0.2		7.2
16-Aug-96	HGW0258	240	538	328	7.7	48	24	107	14.7	11	<0.8	4	0.8	0.016	<0.1		2.4
01-Aug-97	HGW0259	227	680	389	7.6	73	44	106	30.2	5.6	4.61	2.7	0.010	<0.006	0.1		4.0
23-Jul-98	HGW0260	183	755	359	8.0	60	54	91	31.9	6.5	2.32	<1	<0.05	<0.06	<0.1		7.5
19-Aug-99	HGW0261	171	723	376	8.2	67	49	111	23.9	7.3	2.61	<1	<0.05	<0.06	0.1		11.1
14-Aug-00	HGW0262	240	700	398	8.0	70	51	107	31.8	6.8	2.81	**9.3**	<0.05	<0.06	0.3		3.2
26-Jul-01	HGW0263	253	719	372	7.9	66	45	101	29.2	6.7	2.14	1	<0.05	<0.06	0.3		-0.2
08-Aug-02	HGW0264	267	713	394	8.0	61	52	107	30.9	8.8	2.24	0.5	<0.05	<0.06	<0.1		1.1
22-Aug-06	37848	250	838	341		105	45	94	25.7	8.0	1.62	1.3	0.07	<0.05	0.1		-10.4
07-Aug-07	44334	239	750	343		92	44	92	27.3	8.7	1.52	<1	<0.05	<0.05	0.1		-6.5
01-Apr-08	48466	253	635	344		68	52	93	27.3	10	1.92	<1	<0.05	<0.1	<0.1	332	-4.5
11-Mar-09	54361	229	792	352	7.8	77	41	96	27.1	12	1.96	<1	<0.05	<0.1	0.1	416	0.1
12-Apr-10	61853	236	821	350	7.5	87	38	95	27.5	12	1.99	1.1	<0.05	<0.05	<0.1	474	-2.4
11-Apr-11	67418	242	864	406	7.5	100	37	113	30.0	13	2.22	3	<0.05	<0.05	0.1	492	1.8
16-Apr-12	74002	287	1040	402	7.4	160	16	131	18.2	52	1.39	1.7	1.0	<0.05	<0.1	610	-1.6
15-Apr-13	81579	285	1110	392	7.4	179	13	133	14.6	69	1.4	1.2	1.7	<0.05	0.1	740	-1.3
25-Mar-14	88670	254	1260	405	7.6	231	23	133	17.8	93	1.4	2.4	1.4	<0.05	<0.1	740	-0.1
07-Apr-15	96145	347	1070	350	7.5	140	26	115	15.2	71	1.2	2.9	0.9	<0.05	<0.1	580	-6.5
05-Apr-16	103412	316	976	397	7.7	112	12	135	14.5	55	1.3	1.6	0.9	<0.05	<0.1	530	2.8
03-Apr-17	112045	259	826	302	7.9	105	14	103	10.9	40	1.3	1.6	0.8	<0.05	0.2	450	-4.0
26-Mar-18	121022	304	804	323	7.5	89	17	105	14.7	41	1.2	1.7	1.1	<0.5	0.1	480	-4.2
07-Apr-19	130906	295	1050	411	7.5	157	21	124	24.7	41	1.5	2.7	1.5	<0.5	0.2	610	-3.9
05-May-20	140689	256	684	298	7.6	54	11	100	11.7	23	1.5	1.1	2.9	<0.5	<0.1	380	-0.7
29-Mar-21	148821	254	641	262	7.5	39	8	89	9.5	25	1.2	1.6	2.2	<0.5	0.1	290	-1.0
21-Mar-22	159052	239	543	235	7.7	24	4	83	6.9	16	1.2	1.4	1.2	<0.05	0.1	320	-1.6
27-Mar-23	169146	244	455	235	7.6	28	5	81	7.9	17	1.2	1.9	1.3	<0.05	0.2	290	-3.1
02-Apr-24	179751	263	768	350	7.2	101	18	110	18.4	40	1.8	1	1.3	<0.05	0.2	500	2.4
TOTAL SAMPLES		91	91	91	88	91	90	91	91	91	91	51	91	91	91	17	
AVERAGE 2024																	

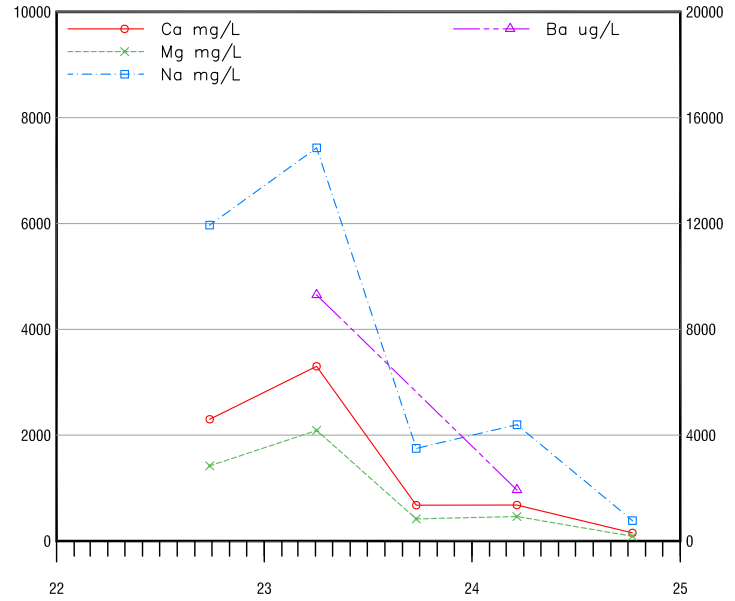
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



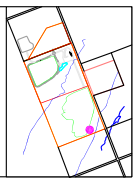








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-17-I

Deep Bedrock Unit

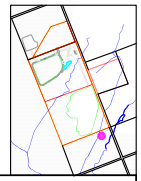
Screen 179.9 - 179.1 masl

CA008825 24 Mar 25	wsp	F424004

BH-17-I

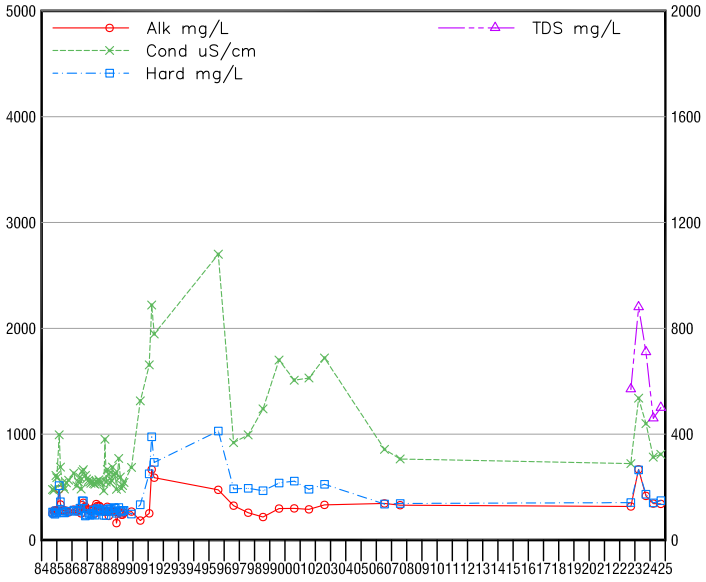
Deep Bedrock Unit

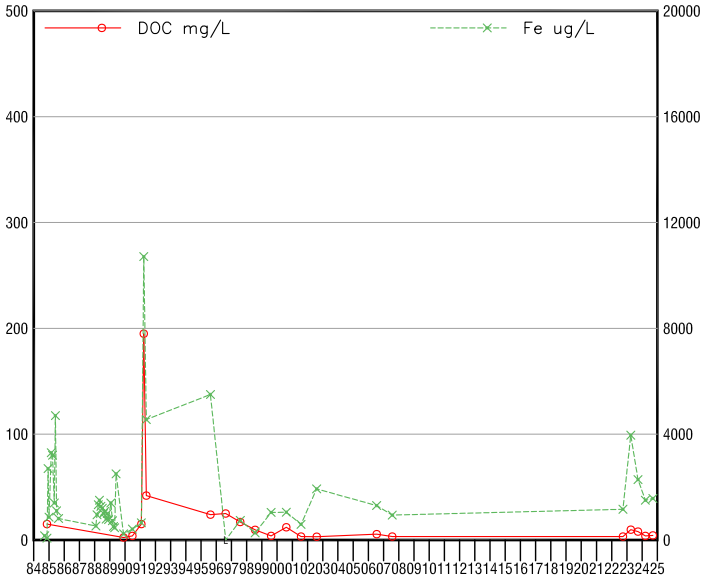
Stand Pipe Piezometer
Screen 179.9 - 179.1 masl

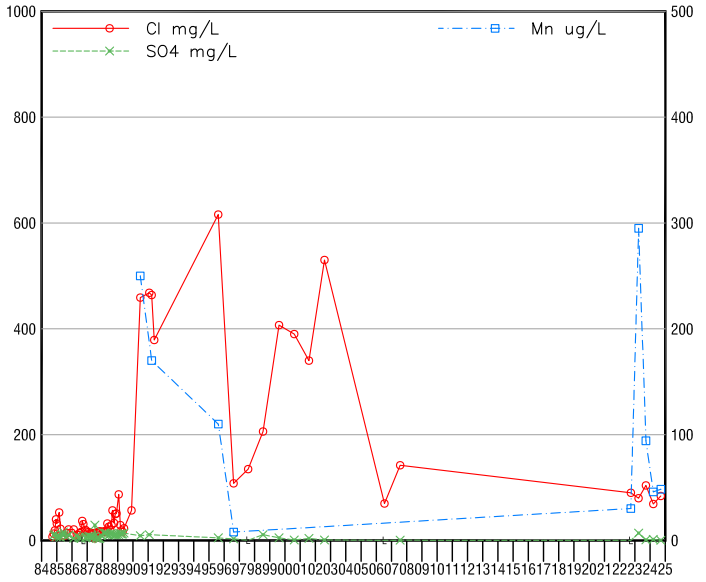


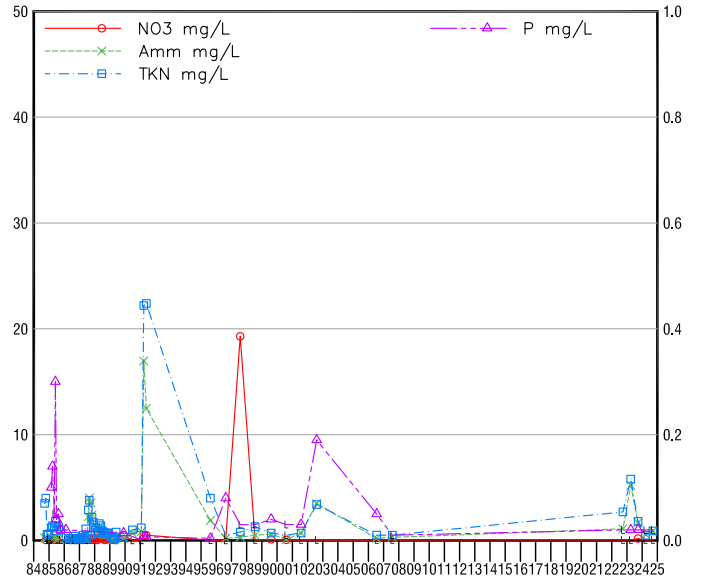
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Sep-22	164657	151	44300	11591	7.2	**13400**	<20	2300	1420	**5970**	106	<1	<5	<5	12.6	23700	13.0
03-Apr-23	169330	126	80500	16847	6.9	**24600**	<20	3300	2090	**7430**	163	<1	<5	<5	27.9	40800	-2.2
25-Sep-23	2023A021	404	12100	3410	7.3	**4200**	<20	677	418	**1750**	52.6	4.4	<5	<5	6.3	8550	7.5
20-Mar-24	179415	462	10900	3600	7.5	**3840**	<2	679	463	**2198**	50.5	1.9	<0.5	<0.5	5.9	6810	18.4
09-Oct-24	185174	352		753	7.0	**1590**	<2	155	88.8	**384**	16.9	2.6	<0.5	<0.5	2.6	3290	-23.1
TOTAL SAMPLES		5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	
AVERAGE 2024		407		2177	7.3	2715	<2	417	276	1291	33.7	2.3	<0.5	<0.5	4.3	5050	

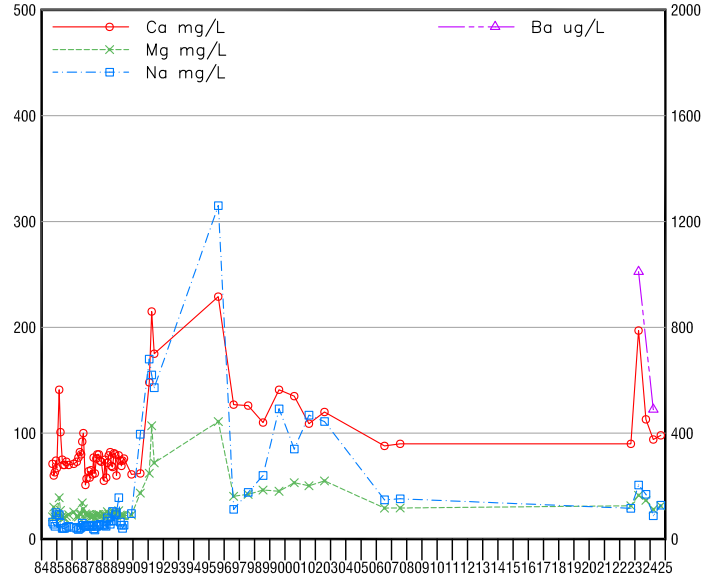
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









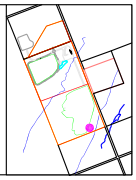


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-17A

Shallow Bedrock Unit

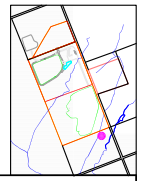
Screen 184.3 - 183.9 masl

CA008825 24 Mar 25	wsp	F424005

BH-17A

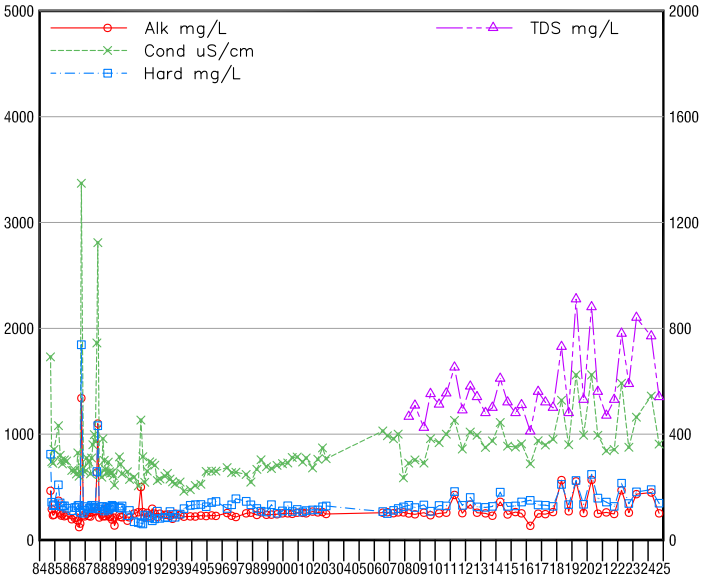
Shallow Bedrock Unit

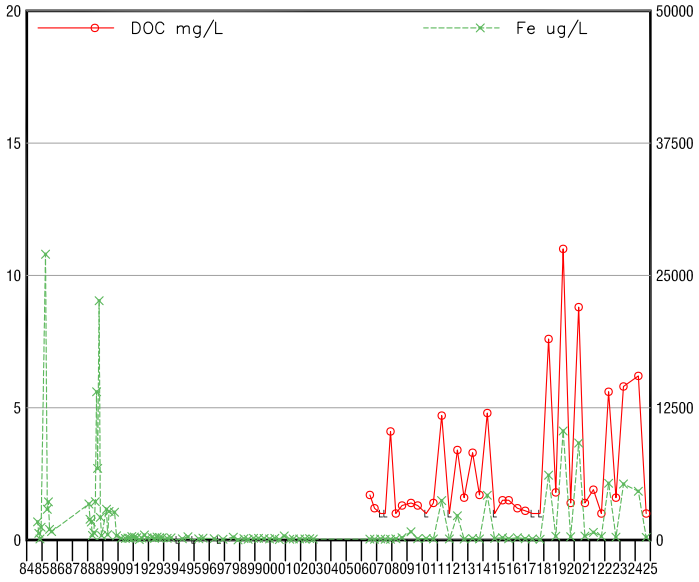
Stand Pipe Piezometer
Screen 184.3 - 183.9 masl

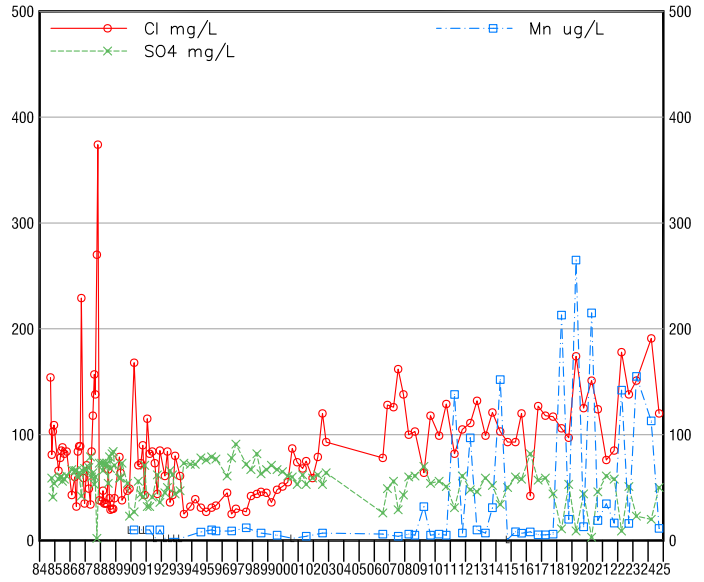


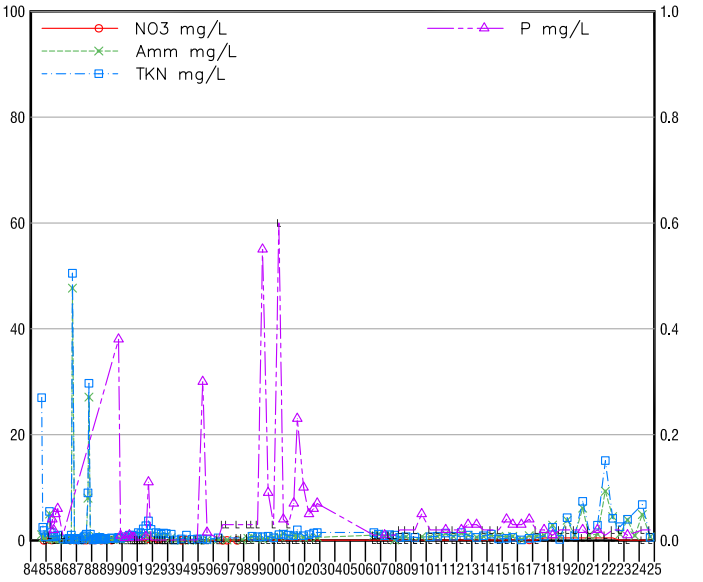
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
04-Aug-88	HGW0317	271	563	270	7.4	29	13	69	23.6	17	3.05		0.2	0.01	0.55		-1.8
30-Aug-88	HGW0318	275	688	274	8.1	57	11	68	25.2	26	3.35		0.05	0.015	0.65		-3.9
05-Oct-88	HGW0319	274	614	306	8.1	33	11	81	25.4	17	2.95		0.2	0.015	0.55		2.8
03-Nov-88	HGW0320	269	632	299	7.8	50	11	80	24.0	23	3.05		0.2	0.005	0.6		0.8
01-Dec-88	HGW0321	159	479	252	8.4	51	11	60	24.6	25	3.05		0.1	0.005	0.55		12.7
26-Jan-89	HGW0322	260	770	307	8.0	87	11	79	26.7	39	3.2		0.2	0.015	0.35		0.8
06-Mar-89	HGW0323	260	594	278	8.0	29	13	74	22.6	16	2.65		<0.05	<0.005	0.05		0.6
30-Mar-89	HGW0324	240	488	265	8.0	19	12	69	22.2	13	2.4		<0.05	0.005	0.05		3.1
27-Apr-89	HGW0325	239	514	275	7.8	16	12	74	22.0	10	2.45		0.05	<0.005	0.1		4.7
01-Jun-89	HGW0326	258	543	280	8.0	23	14	76	22.0	13	2.55		0.2	<0.05	0.35		2.0
27-Nov-89	HGW0327	268	685	245	7.7	57		61	22.6	24	2.78	2.3	0.5		0.19		
27-Jun-90	HGW0328	183	1314	333	7.4	**459**	9	62	43.4	99	4.23	3.8	<0.01	<0.001	0.7		-20.3
28-Jan-91	HGW0329	252	1654	625	8.3	**468**	11	148	62.1	170	6.86	**15**	<0.01	0.001	0.85		4.3
28-Mar-91	HGW0330	666	2220	975	8.0	**464**		215	107	155	21.4	**195**	0.5	0.008	16.97		
28-May-91	HGW0331	589	1946	733	7.2	**379**		175	72.0	143	20.5	**42**	0.5	0.01	12.48		
14-Aug-95	HGW0332	474	2700	1029	7.2	**616**	5	229	111	**315**	9.7	**24**	<0.03	<0.01	1.9		12.8
16-Aug-96	HGW0333	324	920	483	7.8	108	3	127	40.4	28	3.44	**25**	<0.005	<0.006	0.2		6.8
01-Aug-97	HGW0334	258	993	488	7.3	135	<0.5	126	42.2	44	4.32	**17**	**19.3**	<0.006	0.3		6.8
23-Jul-98	HGW0335	216	1239	465	7.9	206	11	110	46.3	60	5.55	**9.6**	<0.05	<0.06	0.5		7.8
12-Aug-99	HGW0336	297	1700	538	7.9	**407**	5	141	45.1	123	8.33	3.8	0.1	<0.06	0.6		-3.3
11-Aug-00	HGW0337	298	1510	556	8.0	**390**	1	135	53.2	85	9.06	**12**	0.06	<0.06	0.1		-5.9
30-Jul-01	HGW0338	289	1530	479	7.6	**340**	4	109	50.3	117	6.73	3.2	<0.05	<0.06	0.7		-1.7
08-Aug-02	HGW0339	331	1720	526	7.8	**530**	1	120	54.9	111	8.44	3	<0.05	<0.06	3.5		-15.3
19-Jul-06	37150	345	856	339		70	<0.3	88	29.2	37	3.28	**5.5**	<0.05	<0.05	0.2		-2.1
30-Jul-07	44199	329	765	345		142	0.5	90	29.3	38	3.26	3.2	<0.05	<0.05	0.3		-9.8
27-Sep-22	164658	316	722	353	7.3	90	<0.2	90	31.4	29	3.6	3.2	<0.05	<0.05	1.1	570	-1.8
03-Apr-23	169331	668	1340	662	6.9	80	14	197	41.3	51	9.5	**9.8**	<0.05	<0.05	5.2	880	0.9
25-Sep-23	2023A018	416	1100	432	7.2	104	1.3	113	36.5	42.2	6.1	**7.9**	0.18	<0.05	1.7	710	1.0
20-Mar-24	179412	344	783	350	7.4	69	2	94	27.9	22	3.3	3.9	<0.05	<0.05	0.6	460	3
17-Sep-24	184549	340	810	372	7.1	84	0.3	98	31.2	32	3.9	4.3	<0.05	<0.05	0.9	500	0.4
TOTAL SAMPLES		68	68	68	66	68	63	68	68	68	68	21	66	66	68	5	
AVERAGE 2024		342	797	361	7.3	77	1	96	29.6	27	3.6	4.1	<0.05	<0.05	0.8	480	

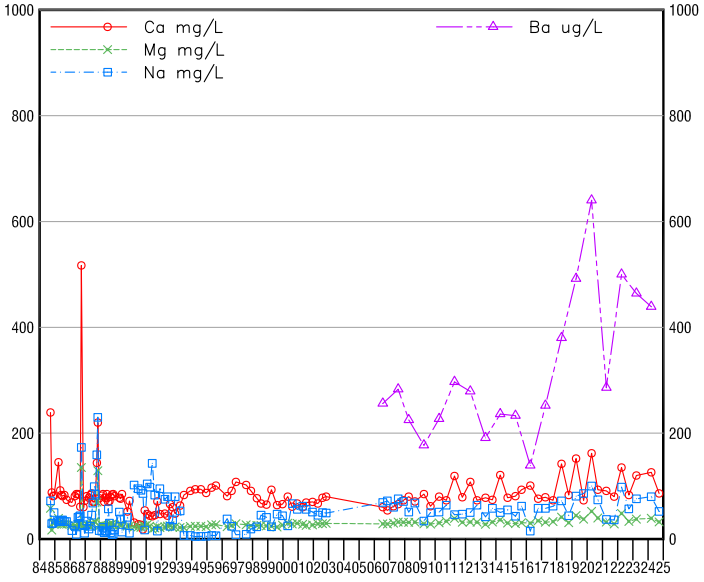
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**









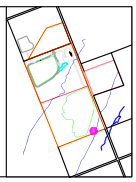


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-18A

Shallow Bedrock Unit

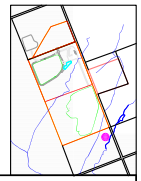
Screen 184.1 - 183.8 masl

CA008825	wsp	F424006
24 Mar 25		

BH-18A

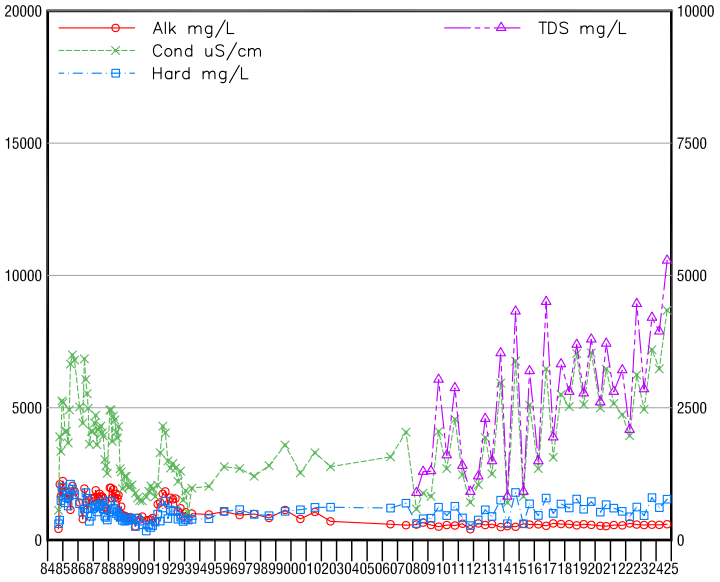
Shallow Bedrock Unit

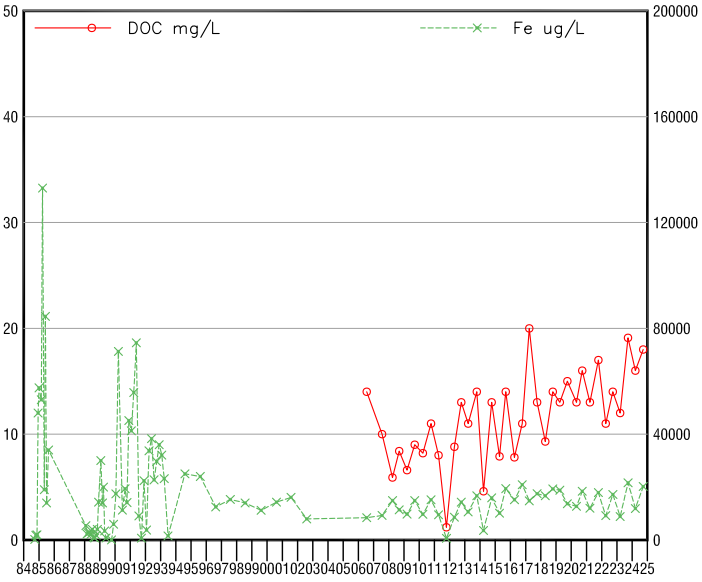
Stand Pipe Piezometer
Screen 184.1 - 183.8 masl

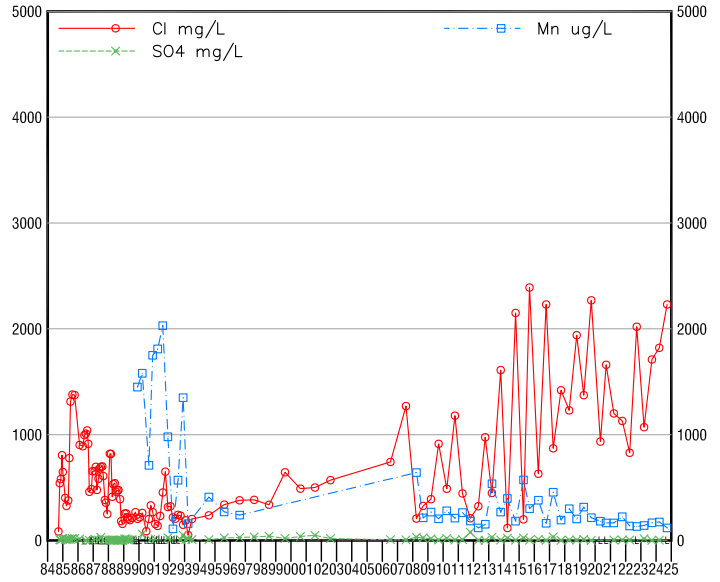


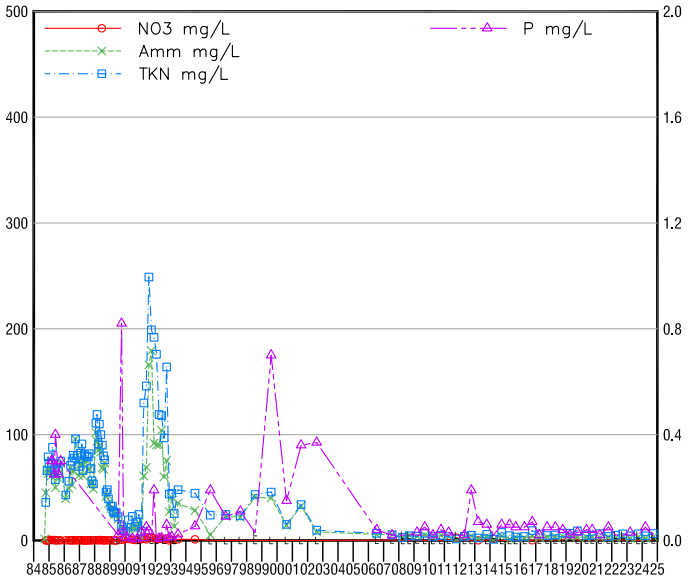
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
06-Apr-10	61738	252	920	326	7.6	99	56	80	30.5	51	4.86	<1	<0.05	<0.05	0.7	512	-0.5
27-Sep-10	64389	258	1000	322	7.7	129	51	73	33.6	64	6.19	1.4	<0.05	<0.05	0.8	554	-2.2
13-Apr-11	67476	426	1130	457	7.6	82	31	119	38.9	46	6.08	4.7	<0.05	<0.05	1.3	652	0.2
18-Oct-11	71017	253	860	327	7.6	105	61	79	31.6	47	5.64	<1	<0.05	<0.05	0.8	490	-2.9
24-Apr-12	74162	334	1020	402	7.3	111	48	108	32.1	50	6.1	3.4	<0.05	<0.05	1.4	580	-1.2
03-Oct-12	77701	257	989	313	7.7	132	46	73	31.7	64	6.93	1.6	<0.05	<0.05	1	540	-2.7
24-Apr-13	81856	251	874	308	7.2	99	59	78	27.7	42	4.4	3.3	<0.05	<0.05	0.6	480	-5.1
08-Oct-13	85581	229	936	317	7.7	121	52	74	32.1	58	6	1.7	<0.05	<0.05	0.8	500	-0.1
14-Apr-14	89055	360	1110	451	7.4	103	34	121	36.2	50	4.8	4.8	<0.05	<0.05	1	610	3.2
07-Oct-14	92837	241	886	317	7.8	93	50	78	30.1	55	5.7	<1	<0.05	<0.05	0.8	520	2.6
15-Apr-15	96367	264	878	322	7.6	93	60	81	29.1	43	4.1	1.5	<0.05	<0.05	0.7	480	-3.9
09-Sep-15	99510	251	908	359	7.8	120	58	93	30.9	62	6.1	1.5	<0.05	<0.05	0.8	510	2.3
05-Apr-16	103409	133	720	375	7.7	42	82	101	29.9	15	2.9	1.2	<0.05	<0.05	0.2	410	19.6
11-Oct-16	108011	248	938	331	7.9	127	57	76	34.5	58	6.4	1.1	0.1	<0.05	0.9	560	-2.0
03-Apr-17	112038	244	897	328	7.8	118	59	79	31.6	58	5.7	<1	<0.05	<0.05	0.8	520	-0.9
03-Oct-17	116862	264	952	317	7.7	117	44	73	32.9	62	6	<1	<0.5	<0.5	1	500	-1.3
25-Apr-18	121898	566	1320	525	7.1	106	11	142	41.3	72	7.2	**7.6**	<0.5	<0.5	2.9	730	-1.0
14-Oct-18	127083	271	900	334	7.6	97	53	83	30.7	44	4.7	1.8	<0.5	<0.5	0.8	480	-2.7
09-Apr-19	130961	554	1560	562	7.2	174	9	152	44.4	81	8.6	**11**	<0.5	<0.5	3.8	910	-1.7
07-Oct-19	135823	255	990	337	7.7	125	44	73	37.5	86	7.9	1.4	<0.5	<0.5	1	530	6.1
16-Apr-20	140282	567	1560	620	7.2	151	3	162	52.3	100	11.1	**8.8**	<0.5	<0.5	6.1	880	6.4
13-Sep-20	144105	249	989	395	7.6	124	46	93	39.7	74	6.6	1.4	<0.5	<0.5	1	560	9.3
06-Apr-21	148999	260	842	358	7.5	76	61	91	32.0	37	4.8	1.9	<0.5	<0.5	1.2	470	2.2
12-Oct-21	154581	246	854	317	7.7	85	58	80	28.5	36	4.4	1	<0.5	<0.5	9.3	530	0.9
06-Apr-22	159594	469	1480	536	7.1	178	9	135	48.4	98	10.4	**5.6**	<0.5	<0.5	4.5	780	4.0
27-Sep-22	164660	257	876	344	7.6	138	51	83	33.3	57	5.6	1.6	<0.05	<0.05	1.2	590	-2.6
29-Mar-23	169224	433	1160	454	7.2	151	23	120	37.6	76	8	**5.8**	<0.05	<0.05	3.9	840	-1.3
19-Sep-23	174345				7.5										0.9		
18-Mar-24	179273	448	1360	476	7.2	191	20	126	39.1	80	7.8	**6.2**	<0.05	<0.05	4.9	770	3.2
23-Sep-24	184716	252	906	347	7.3	120	50	86	32.2	52	5	1	<0.05	<0.05	0.7	540	0.6
TOTAL SAMPLES		127	127	127	122	127	123	127	127	127	127	38	125	126	128	33	
AVERAGE 2024		350	1133	412	7.3	156	35	106	35.7	66	6.4	3.60	<0.05	<0.05	2.8	655	

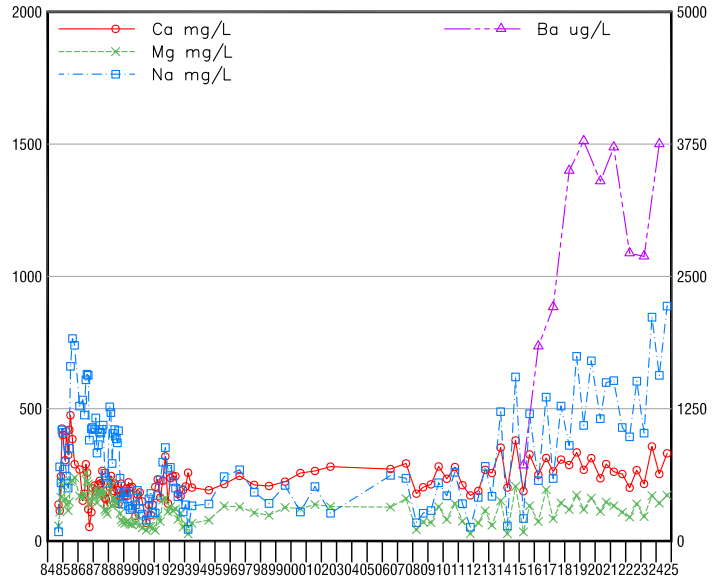
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









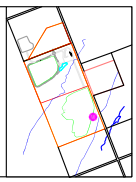


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-19A

Shallow Bedrock Unit

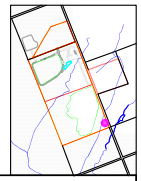
Screen 185.2 - 184.5 masl

CA008825 24 Mar 25	wsp	F424007

BH-19A

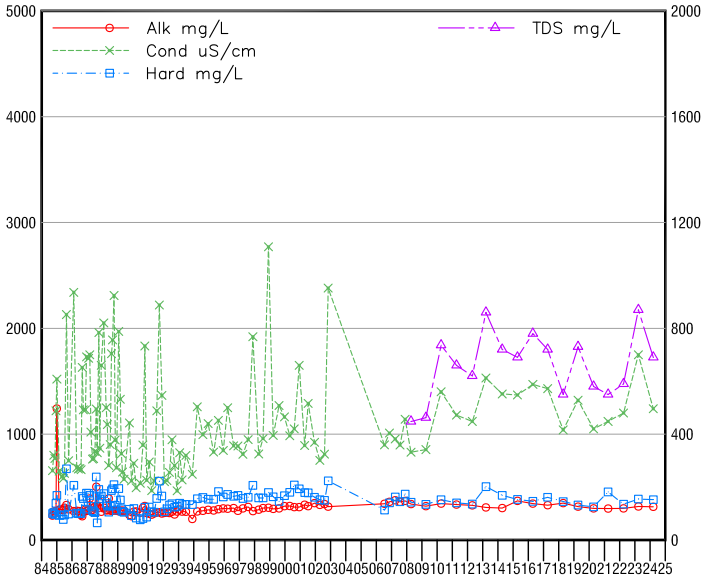
Shallow Bedrock Unit

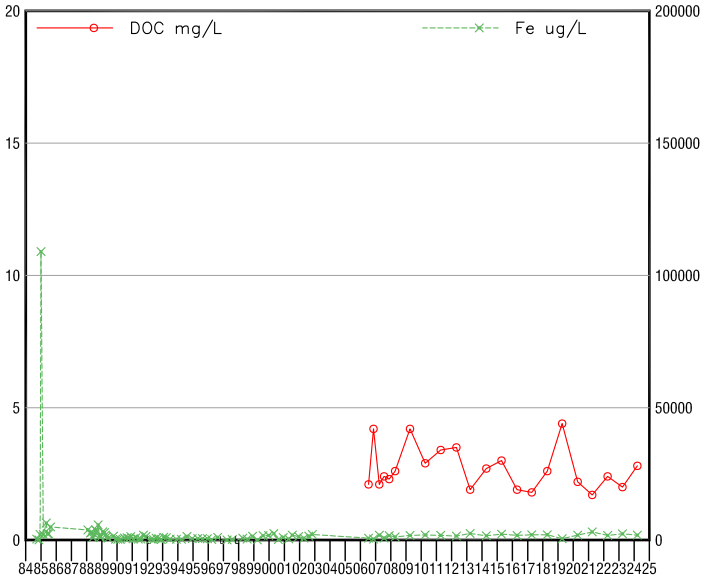
Stand Pipe Piezometer
Screen 185.2 - 184.5 masl

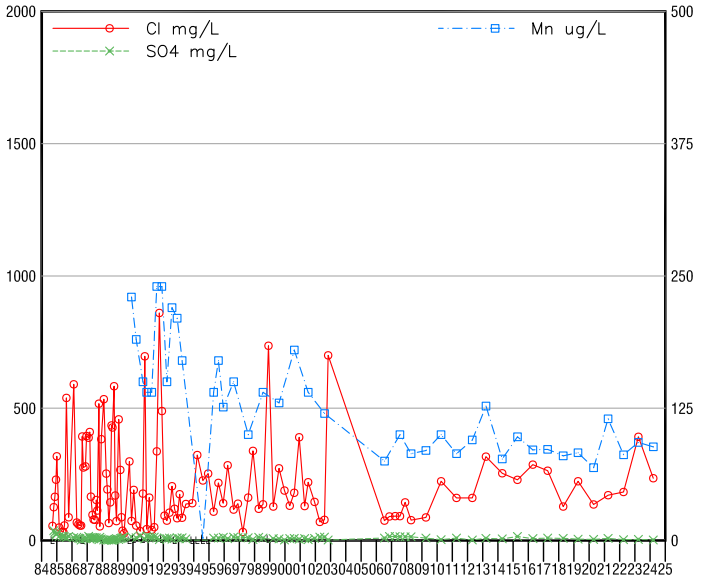


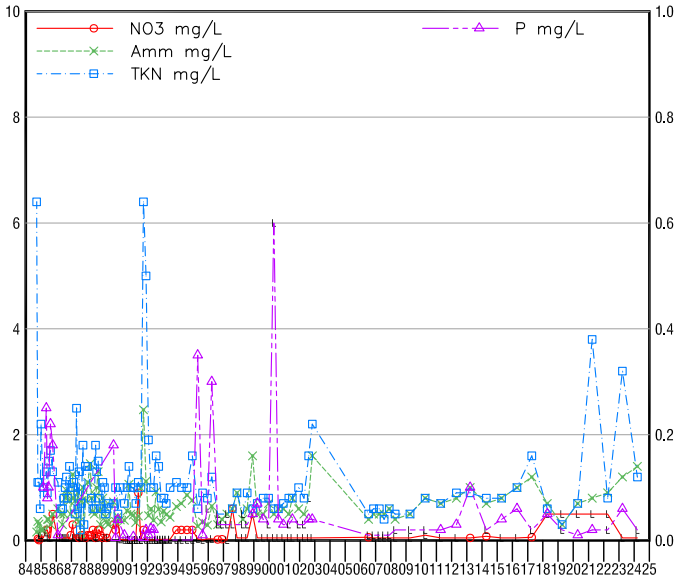
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
29-Mar-10	61625	565	2700	921	6.8	**488**	19	235	81.2	171	9.94	**8.2**	<0.05	<0.05	3.3	1600	2.4
12-Oct-10	64596	546	4560	1277	7.1	**1180**	5	279	141	**260**	13.1	**11**	<0.05	0.09	4.9	2870	-7.6
11-Apr-11	67420	613	2470	835	6.9	**444**	8	211	74.9	141	9.94	**8**	<0.5	0.13	3.7	1400	-2.6
18-Oct-11	71021	409	1420	544	7.1	211	78	172	27.9	52	4.96	1.2	2.7	0.08	0.9	910	-8.8
25-Apr-12	74224	624	2090	756	7.0	**324**	2	189	69.0	165	11.0	**8.8**	<0.05	<0.05	3.6	1200	3.3
09-Oct-12	77779	566	3870	1141	6.9	**976**	2	269	114	**282**	14.4	**13**	<0.05	<0.05	4.5	2290	-3.5
20-Mar-13	81108	600	2500	887	6.8	**449**	30	257	59.5	169	6.21	**11**	0.2	<0.05	2	1490	0.9
15-Oct-13	85687	484	5930	1507	7.0	**1610**	5	353	152	**489**	12.8	**14**	<0.05	<0.05	3.6	3530	-2.4
25-Mar-14	88672	522	1410	618	7.0	118	23	202	27.6	57	3.4	4.6	1.4	<0.05	0.9	820	2.6
07-Oct-14	92839	500	6760	1797	7.1	**2150**	3	380	206	**620**	15.4	**13**	<0.05	<0.05	4.1	4320	-4.9
15-Apr-15	96371	612	1640	610	6.7	200	24	188	34.2	85	4.7	**7.9**	<0.05	<0.05	1.1	910	-5.6
09-Sep-15	99512	580	5100	1364	6.9	**2390**	3	327	133	**481**	13.4	**14**	<0.05	<0.05	3.3	3190	-23.0
07-Apr-16	103502	587	2700	927	6.7	**630**	10	250	73.4	**228**	9.6	**7.8**	<0.05	<0.05	2.6	1490	-0.5
11-Oct-16	108014	534	6460	1583	7.0	**2230**	1	314	194	**544**	18.7	**11**	0.1	<0.05	4.1	4500	-12.9
29-Mar-17	111931	627	3120	1006	6.8	**871**	33	263	84.7	**236**	9.2	**20**	<0.5	<0.5	2.5	1940	-9.4
03-Oct-17	116855	599	5500	1362	7.0	**1420**	2	308	144	**510**	12.3	**13**	<0.5	<0.5	3.6	3320	-1.4
18-Apr-18	121702	593	5040	1207	6.9	**1230**	4	287	119	**361**	13.1	**9.3**	<0.5	<0.5	3.3	2800	-6.4
14-Oct-18	127086	550	7050	1549	6.9	**1940**	4	335	173	**698**	13.6	**14**	<0.5	<0.5	3.7	3690	-2.5
01-Apr-19	130702	596	5120	1162	6.9	**1373**	11	269	119	**437**	12.0	**13**	<5	<5	3.4	2770	-7.9
30-Sep-19	135555	572	7070	1449	6.9	**2270**	0.5	313	162	**681**	13.8	**15**	<0.5	<0.5	3.2	3790	-11.7
05-May-20	140693	532	4990	1053	7.0	**935**	<2	237	112	**462**	11.9	**13**	<0.5	<0.5	3.1	2600	6.5
21-Sep-20	144375	522	6460	1332	7.0	**1660**	<2	291	147	**599**	14.0	**16**	<0.5	<0.5	3.4	3710	-3.0
23-Mar-21	148726	562	5160	1202	7.0	**1200**	4	262	133	**606**	11.4	**13**	<0.5	<0.5	2.6	2800	6.3
12-Oct-21	154583	551	4740	1081	6.9	**1130**	5	253	109	**429**	11.1	**17**	<0.5	<0.5	3.4	3210	-1.9
07-Apr-22	159618	622	3940	875	6.9	**829**	4	201	90.5	**394**	10.1	**11**	<0.5	<0.5	2.4	2080	-0.7
26-Sep-22	164645	580	6240	1246	7.0	**2020**	<2	268	140	**604**	12.4	**14**	<0.5	<0.5	3.5	4460	-13.4
20-Mar-23	168874	562	4940	921	6.9	**1070**	16	216	92.7	**408**	7.9	**12**	<0.5	<0.5	2	2850	-6.3
26-Sep-23	2023A024	574	7190	1600	6.8	**1710**	1	357	171	**846**	13.8	**19.1**	<0.05	<0.05	3.1	4200	7.9
20-Mar-24	179416	571	6470	1220	7.0	**1820**	3	253	143	**626**	11.5	**16**	<0.5	<0.5	2	3940	8.9
23-Sep-24	184719	596	8680	1540	6.6	**2230**	<2	331	173	**888**	15.2	**18**	<0.5	<0.5	3.3	5280	2.9
TOTAL SAMPLES		116	117	117	114	117	113	117	117	117	117	36	115	110	114	34	
AVERAGE 2024		584	7575	1380	6.8	2025	<2	292	158	757	13.4	17	<0.5	<0.5	2.7	4610	

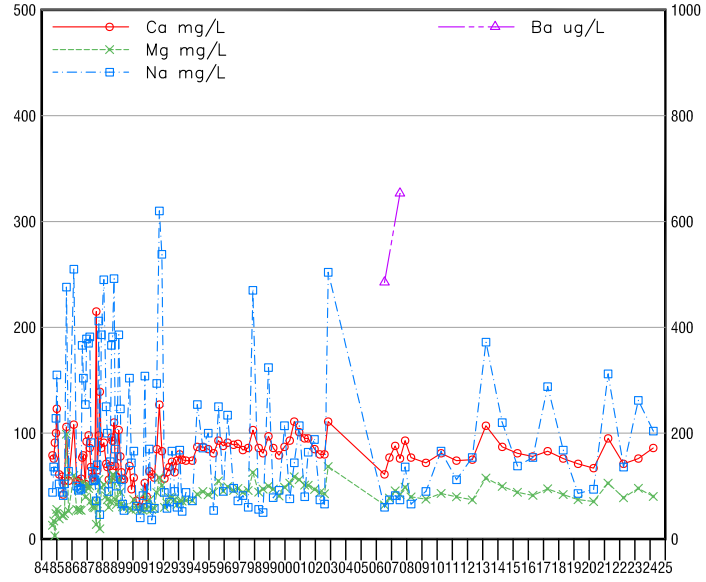
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



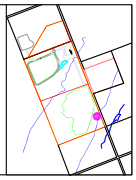








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-20A

Shallow Bedrock Unit

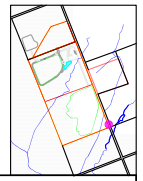
Screen 184.1 - 183.9 masl

CA008825 24 Mar 25	wsp	F424008

BH-20A

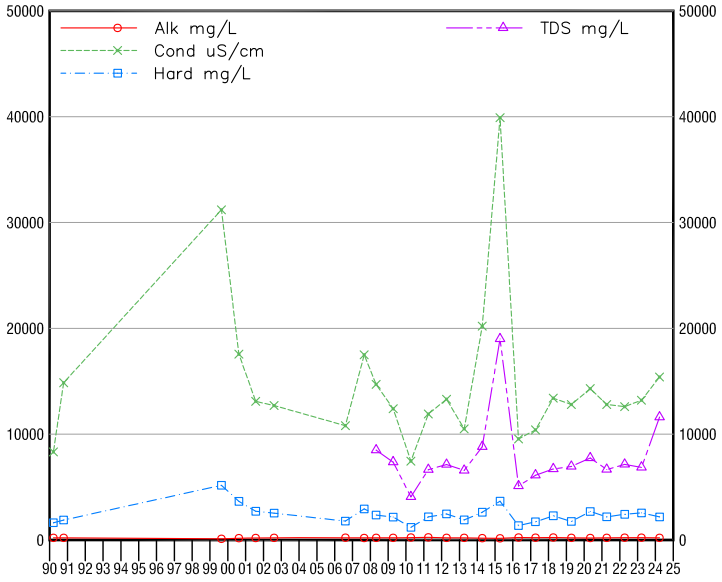
Shallow Bedrock Unit

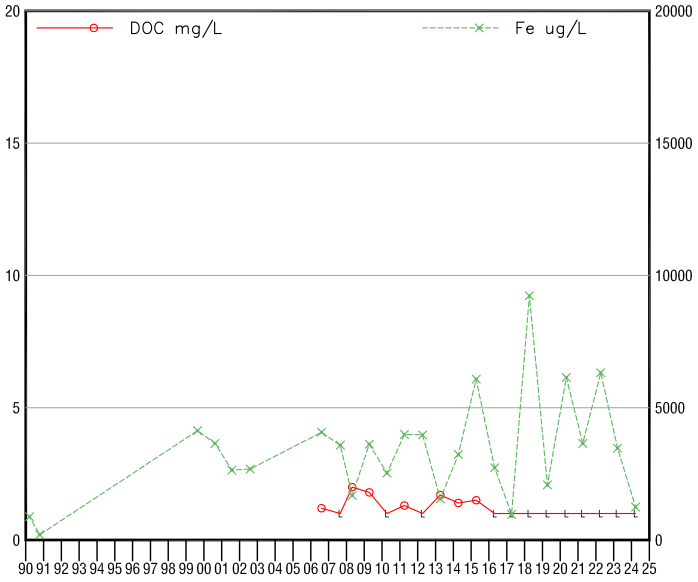
Stand Pipe Piezometer
Screen 184.1 - 183.9 masl

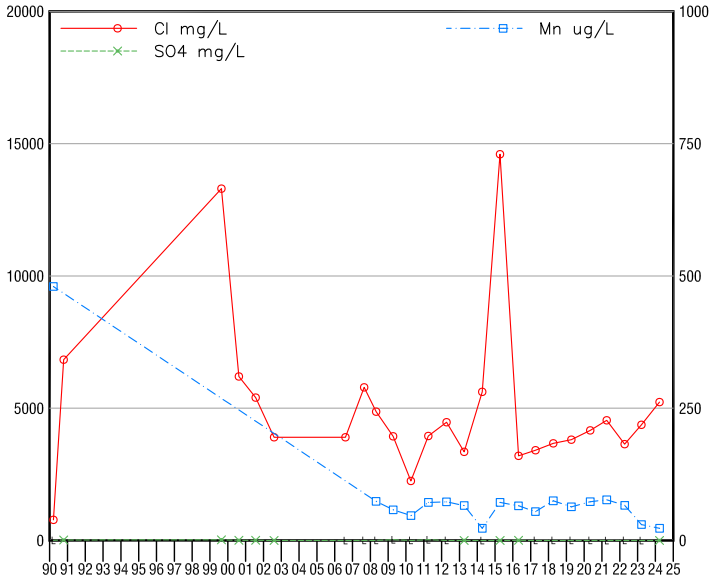


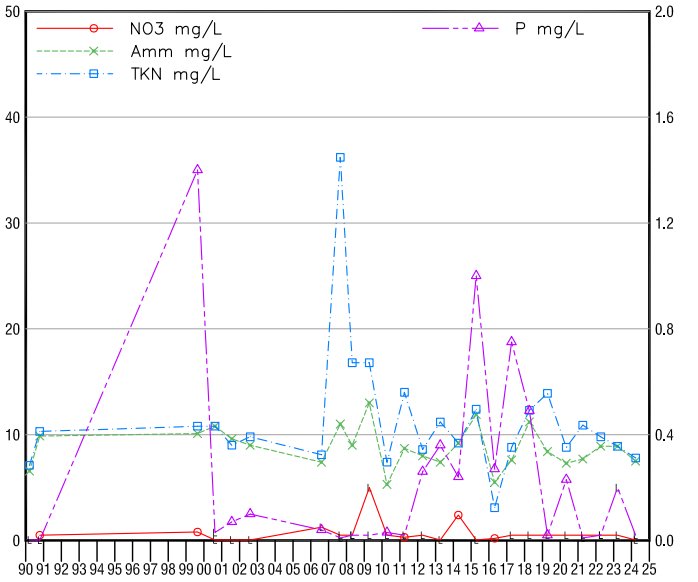
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
11-Aug-00	HGW0881	311	1050	519	8.1	180	8	111	58.8	72	11.0		<0.05	<0.06	0.6		9.5
08-Dec-00	HGW0882	310	1650	483	7.7	**390**	5	101	56.1	107	13.0		<0.05	<0.06	0.6		-8.1
18-Apr-01	HGW0883	333	893	447	7.9	130	7	95	50.9	40	8.75		<0.05	<0.06	0.5		2.3
12-Jul-01	HGW0884	320	1290	445	8.0	220	3	95	50.7	82	5.49		<0.05	<0.06	0.8		0.2
10-Dec-01	HGW0885	349	923	404	7.9	146	8	85	46.9	94	6.21		<0.05	<0.06	0.6		5.0
18-Apr-02	HGW0886	332	752	380	7.9	70	13	80	43.8	37	4.1		<0.05	<0.06	0.5		2.6
08-Aug-02	HGW0887	339	811	375	8.0	78	13	80	42.7	33	5.02		<0.05	<0.06	<0.8		-0.9
04-Nov-02	HGW0888	315	2380	559	7.8	**700**	2	111	68.4	**252**	9.98		<0.05	<0.06	1.6		-7.2
18-Jul-06	37155	342	898	283		75	9	61	32.1	30	3.21	2.1	0.06	<0.05	0.4		-12.6
13-Nov-06	39476	360	1010	351		91	15	77	38.7	37	4.1	4.2	<0.05	<0.05	0.5		-6.9
02-Apr-07	42093	375	954	407		92	15	88	45.4	41	4.37	2.1	<0.05	<0.05	0.5		-1.2
24-Jul-07	44084	360	897	362		92	14	76	42.0	37	4.41	2.4	<0.05	<0.05	0.5		-5.5
26-Nov-07	46384	369	1140	434		144	14	93	49.0	68	5.31	2.3	<0.05	<0.1	0.6		0.6
15-Apr-08	48710	339	829	357		77	14	77	39.8	33	3.93	2.6	<0.05	<0.1	0.4	448	-2.7
07-Apr-09	54928	319	854	336	7.7	87	9	72	37.7	45	4.33	4.2	<0.05	<0.1	0.5	462	-0.8
06-Apr-10	61743	344	1400	380	7.6	224	3	81	43.0	83	5.39	2.9	<0.1	<0.1	0.8	736	-7.2
13-Apr-11	67482	335	1180	350	7.8	161	9	74	39.9	56	5.13	3.4	<0.05	<0.05	0.7	660	-8.3
25-Apr-12	74222	327	1120	339	7.8	161	2	75	37.0	77	5.79	3.5	<0.05	<0.05	0.8	620	-3.5
20-Mar-13	81112	307	1530	504	7.7	**317**	8	107	57.5	186	8.29	1.9	0.05	<0.05	1	860	9.7
14-Apr-14	89058	301	1380	422	7.6	**254**	6	87	49.7	110	6.8	2.7	0.08	<0.05	0.7	720	0.7
15-Apr-15	96366	369	1370	383	7.7	229	15	81	44.1	69	5.4	3	<0.05	<0.05	0.8	690	-12.8
19-Apr-16	103706	343	1470	365	7.9	**287**	7	78	41.2	77	5.9	1.9	<0.05	<0.05	1	780	-16.1
09-Apr-17	112145	329	1430	403	7.8	**264**	9	83	47.4	144	7.7	1.8	0.06	<0.05	1.2	720	1.5
17-Apr-18	121644	348	1040	363	7.7	128	8	76	42.0	84	6.9	2.6	<0.5	<0.5	0.7	550	2.1
09-Apr-19	130964	315	1320	330	7.8	224	5	71	37.2	43	4.5	4.4	<0.5	<0.5	0.3	730	-19.3
16-Apr-20	140288	299	1050	313	7.9	136	4	67	35.4	47	4.9	2.2	<0.5	<0.5	0.7	580	-7.5
30-Mar-21	148867	297	1120	454	7.7	171	8	95	52.7	156	7.9	1.7	<0.5	<0.5	0.8	550	19.5
06-Apr-22	159613	299	1200	338	7.7	183	3	71	39.0	68	6.1	2.4	<0.5	<0.5	0.9	590	-5.7
27-Mar-23	169148	317	1750	387	7.5	**392**	4	76	47.9	131	6.9	2	<0.05	<0.05	1.2	870	-11.9
20-Mar-24	179420	314	1240	381	7.8	235	2	86	40.2	102	6.4	2.8	<0.05	<0.05	1.4	690	1.5
TOTAL SAMPLES		119	119	119	113	119	119	119	119	119	119	22	118	118	119	17	
AVERAGE 2024																	

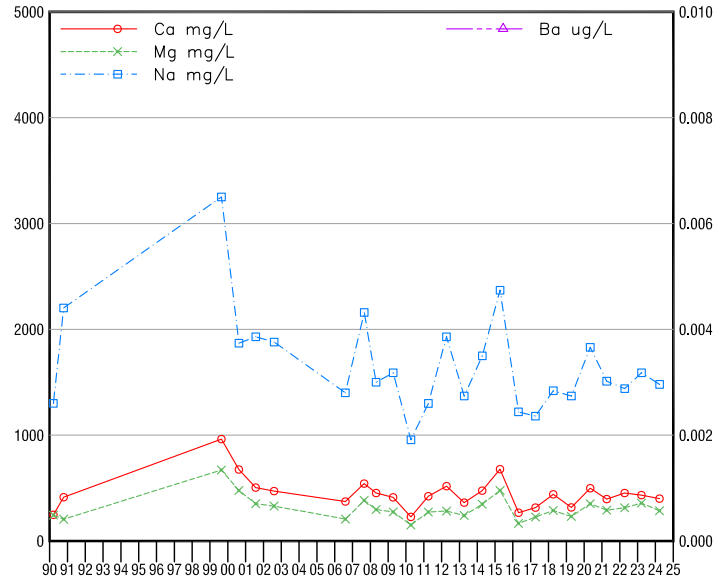
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



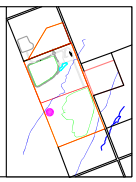








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-41-I

Deep Bedrock Unit

Screen 180.7 - 179.9 masl

CA008825 24 Mar 25	wsp	F424009

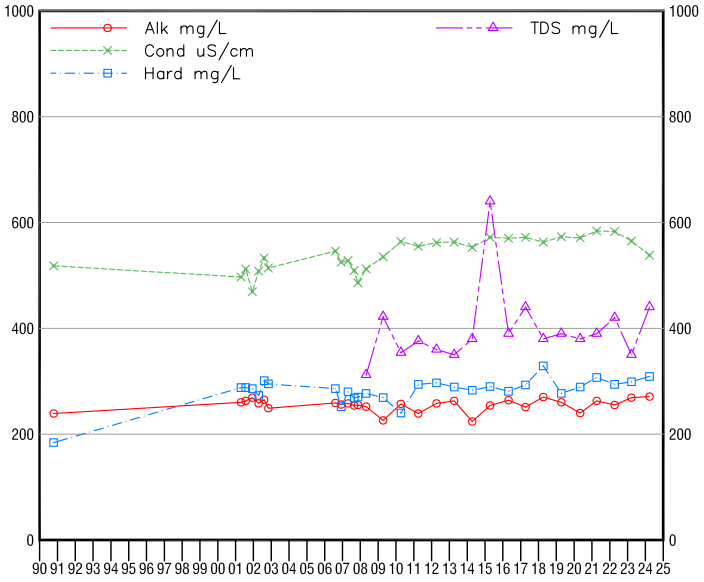
BH-41-I

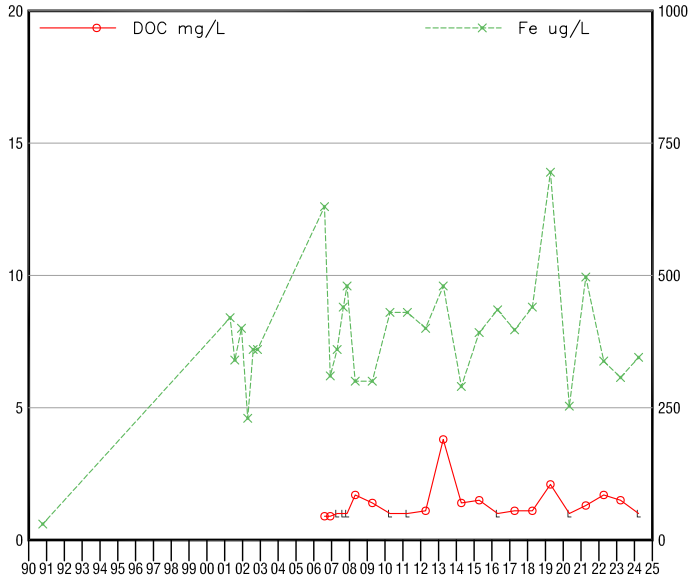
Deep Bedrock Unit

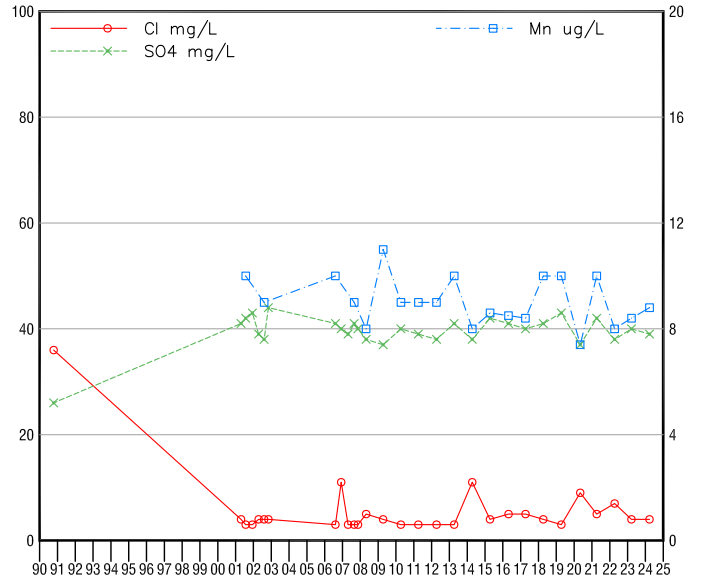
Stand Pipe Piezometer
Screen 180.7 - 179.9 masl

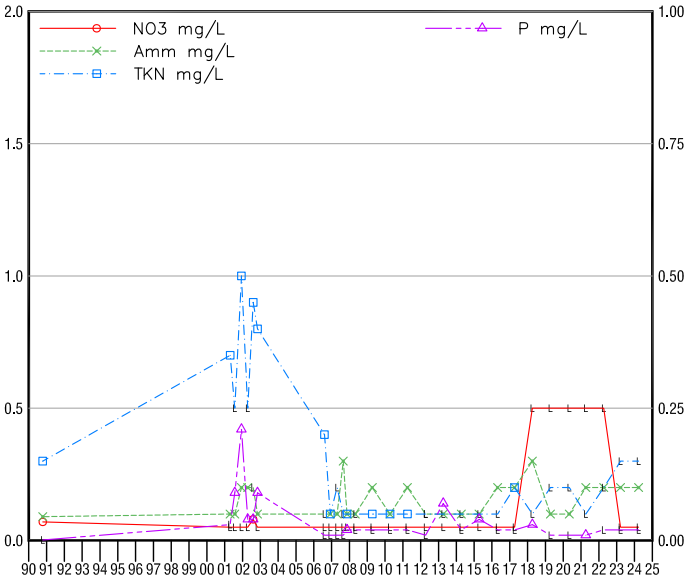
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
19-Mar-90	HGW1588	202	8320	1628	8.1	**778**	<5	248	245	**1301**	45.8			0.021	6.56		
15-Oct-90	HGW1589	203	14860	1882	7.8	**6835**	20	414	206	**2202**	139		0.5	0.049	9.87		-17.8
24-Aug-99	HGW1590	105	31200	5168	7.7	**13300**	27	963	671	**3251**	150		0.8	<0.6	10.1		-20.5
16-Aug-00	HGW1591	174	17560	3650	7.8	**6200**	6	675	477	**1869**	101		<0.05	<0.06	10.8		-6.2
27-Jul-01	HGW1592	183	13100	2711	7.5	**5400**	5	505	352	**1930**	46.7		<0.05	<0.06	9.6		-5.4
08-Aug-02	HGW1593	204	12700	2535	7.6	**3900**	2	471	330	**1880**	44.0		<0.05	<0.06	9		8.1
08-Aug-06	37587	214	10800	1784		**3900**	<0.3	373	207	**1400**	49.6	1.2	<1.25	<1.25	7.4		-7.4
29-Aug-07	44830	187	17500	2931		**5790**	<3	542	383	**2160**	41.5	<1	<0.5	<0.5	11		-3.9
29-Apr-08	49013	196	14700	2357		**4870**	<3	454	297	**1500**	53.1	2	<0.5	<1	9	8480	-10.5
14-Apr-09	55013	201	12400	2164	7.5	**3940**	<30	413	275	**1590**	36.6	1.8	<5	<10	13	7360	-0.3
12-Apr-10	61847	226	7450	1191	7.5	**2250**	<3	228	151	**956**	26.3	<1	<0.5	<0.5	5.3	4070	-1.1
05-Apr-11	67322	241	11900	2185	7.4	**3950**	<30	423	274	**1300**	40.3	1.3	0.3	0.15	8.7	6640	-6.5
11-Apr-12	73925	203	13300	2461	7.4	**4470**	<3	519	283	**1930**	46.9	<1	<0.5	<0.5	8	7130	1.9
09-Apr-13	81503	209	10500	1896	7.5	**3350**	3	362	241	**1370**	36.2	1.7	<0.05	<0.05	7.4	6570	0.1
14-Apr-14	89060	167	20200	2622	7.4	**5620**	<0.3	476	348	**1750**	43.8	1.4	2.4	<0.05	9.2	8810	-10.8
14-Apr-15	96319	156	39900	3664	7.2	**14600**	0.7	679	478	**2370**	70.0	1.5	<0.05	<0.05	11.9	19000	-39.7
26-Apr-16	103886	236	9550	1353	7.7	**3200**	5	268	166	**1220**	34.2	<1	0.2	<0.05	5.5	5100	-7.7
09-Apr-17	112150	211	10400	1720	7.8	**3410**	<2	316	226	**1180**	38.5	<1	<0.5	<0.5	7.6	6120	-7.0
09-Apr-18	121423	236	13400	2287	7.4	**3670**	<2	441	288	**1420**	55.0	<1	<0.5	<0.5	11.2	6710	0.8
14-Apr-19	131081	197	12800	1747	7.4	**3810**	<2	317	232	**1370**	48.3	<1	<0.5	<0.5	8.4	6950	-7.2
05-May-20	140687	193	14300	2693	7.4	**4160**	<2	498	352	**1830**	50.8	<1	<0.5	<0.5	7.3	7750	5.6
08-Apr-21	149077	209	12800	2187	7.6	**4540**	<0.2	396	291	**1510**	37.7	<1	<0.5	<0.5	7.7	6650	-8.7
11-Apr-22	159721	218	12600	2424	7.4	**3640**	<2	453	314	**1440**	50.1	<1	<0.5	<0.5	8.9	7140	2.8
22-Mar-23	169035	216	13200	2555	7.5	**4370**	<0.2	433	358	**1590**	42.7	<1	<0.5	<0.5	8.9	6860	-2.2
26-Mar-24	179598	200	15400	2180	7.4	**5230**	0.2	401	286	**1480**	40.4	<1	<0.05	<0.05	7.5	11600	15.9
TOTAL SAMPLES		25	25	25	22	25	25	25	25	25	25	19	24	25	25	17	
AVERAGE 2024																	

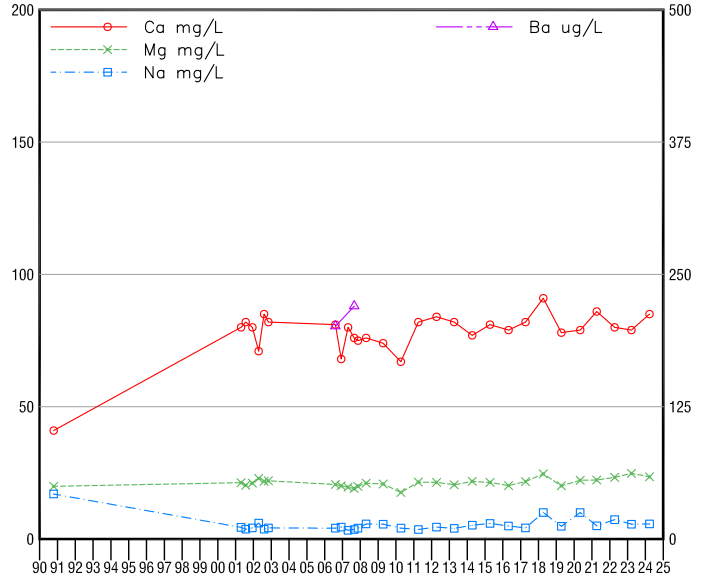
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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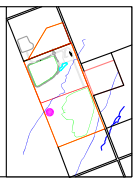
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-41-II

Shallow Bedrock Unit

Screen 185.2 - 184.4 masl

CA008825 24 Mar 25	wsp	F424010

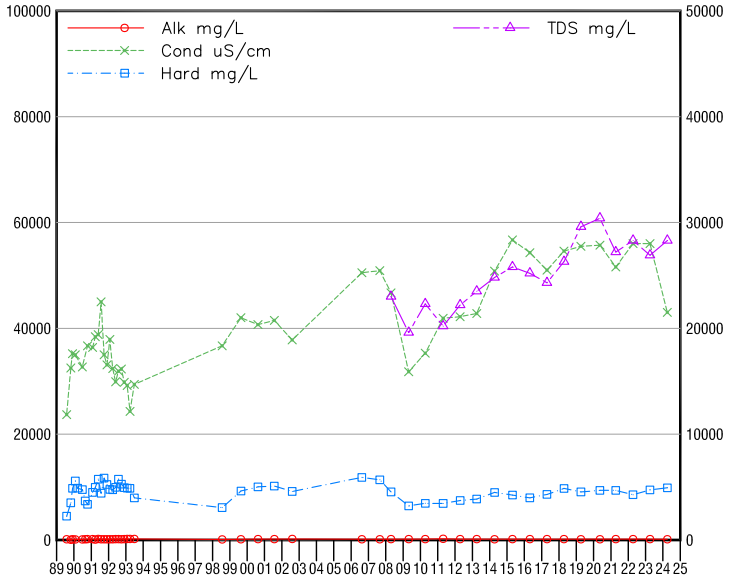
BH-41-II

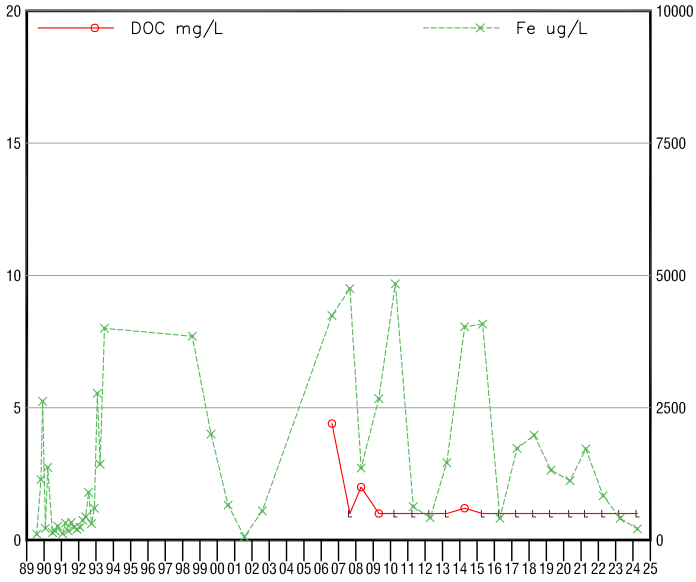
Shallow Bedrock Unit

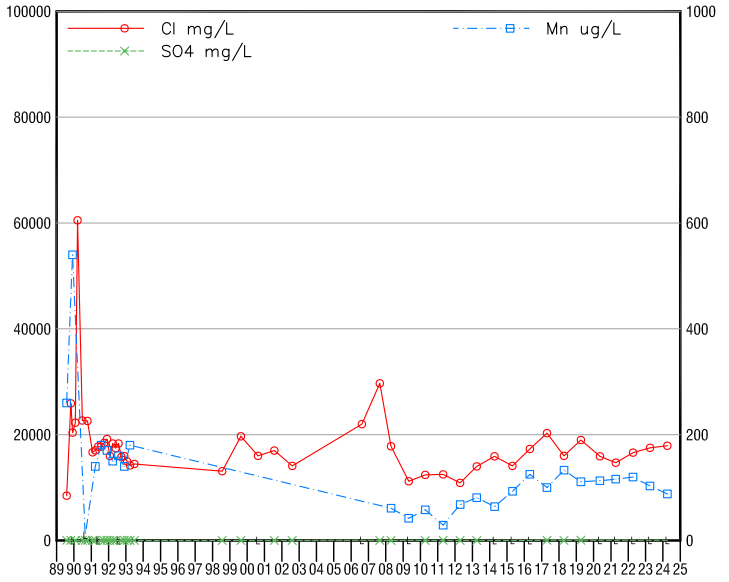
Stand Pipe Piezometer
Screen 185.2 - 184.4 masl

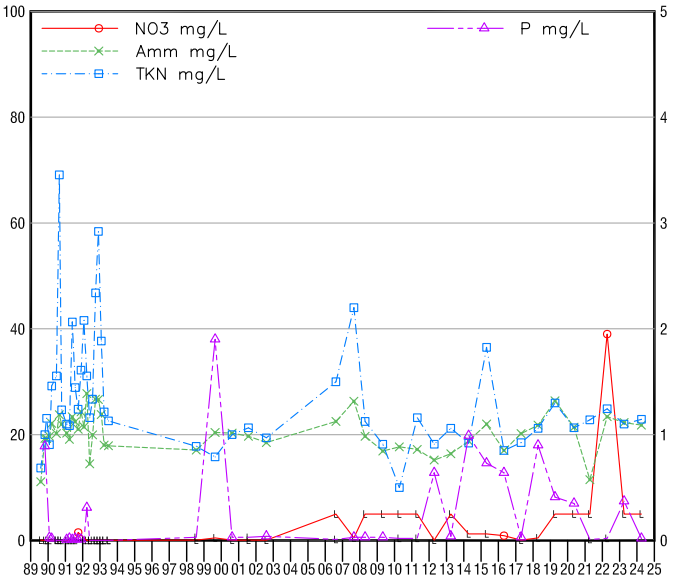
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
15-Oct-90	HGW1594	239	518	184	8.2	36	26	41	19.9	17	1.11		0.07	<0.001	0.09		-17.7
22-Apr-01	HGW1595	260	497	288	8.0	4	41	80	21.3	4.4	1.63		<0.05	<0.06	0.1		-1.1
27-Jul-01	HGW1596	263	512	288	8.0	3	42	82	20.3	3.7	1.59		<0.05	<0.06	0.1		-2.0
10-Dec-01	HGW1597	269	469	286	7.9	3	43	80	21.1	4.2	1.49		<0.05	0.09	0.2		-3.1
18-Apr-02	HGW1598	258	508	273	8.0	4	39	71	22.9	6.0	1.61		<0.05	<0.06	0.2		-2.6
08-Aug-02	HGW1599	265	533	301	8.0	4	38	85	21.8	3.7	1.44		0.08	<0.06	<0.2		0.2
04-Nov-02	HGW1600	249	514	295	7.8	4	44	82	22.0	4.2	1.47		<0.05	<0.06	0.1		1.1
08-Aug-06	37584	259	546	286		3	41	81	20.6	4.1	1.67	0.9	<0.05	<0.05	<0.1		-1.2
05-Dec-06	39909	256	525	252		11	40	68	20.1	4.5	1.55	0.9	<0.05	<0.05	0.1		-8.3
24-Apr-07	42485	258	528	280		3	39	80	19.6	3.3	1.53	<1	<0.05	<0.05	0.1		-2.2
29-Aug-07	44825	254	509	268		3	41	76	19.1	3.6	1.72	<1	<0.05	<0.05	0.3		-3.6
13-Nov-07	46173	255	486	270		3	40	75	19.9	4.1	1.63	<1	<0.05	<0.05	0.1		-3.1
29-Apr-08	49014	252	512	277		5	38	76	21.1	5.7	1.7	1.7	<0.05	<0.1	0.1	312	-1.0
14-Apr-09	55014	226	535	269	7.7	4	37	74	20.8	5.6	1.61	1.4	<0.05	<0.1	0.2	422	2.7
12-Apr-10	61848	257	564	240	7.6	3	40	67	17.6	4.1	1.56	<1	<0.05	<0.05	0.1	354	-9.1
05-Apr-11	67323	239	555	294	7.7	3	39	82	21.5	3.6	1.72	<1	<0.05	<0.05	0.2	376	3.7
11-Apr-12	73926	258	562	297	7.5	3	38	84	21.4	4.5	1.81	1.1	<0.05	<0.05	<0.1	360	1.3
09-Apr-13	81504	263	563	289	7.6	3	41	82	20.5	4.0	1.61	3.8	<0.05	<0.05	0.1	350	-1.4
14-Apr-14	89061	224	553	283	7.6	11	38	77	21.8	5.2	1.7	1.4	<0.05	<0.05	0.1	380	3.1
14-Apr-15	96320	254	572	290	7.8	4	42	81	21.4	5.9	1.6	1.5	<0.05	<0.05	0.1	640	0.5
26-Apr-16	103887	264	570	281	7.9	5	41	79	20.2	4.9	1.6	<1	<0.05	<0.05	0.2	390	-3.2
09-Apr-17	112151	251	572	293	7.7	5	40	82	21.7	4.2	1.8	1.1	<0.05	<0.05	0.2	440	1.0
09-Apr-18	121424	270	563	329	7.6	4	41	91	24.6	10	2	1.1	<0.5	<0.5	0.3	380	5.5
14-Apr-19	131082	260	573	277	7.6	3	43	78	20.1	4.8	1.8	2.1	<0.5	<0.5	0.1	390	-2.9
05-May-20	140688	240	571	289	7.6	9	37	79	22.2	10	2.1	<1	<0.5	<0.5	0.1	380	3.8
08-Apr-21	149078	263	584	307	7.7	5	42	86	22.3	5.0	1.8	1.3	<0.5	<0.5	0.2	390	1.3
11-Apr-22	159722	255	583	294	7.5	7	38	80	23.3	7.3	1.8	1.7	<0.5	<0.5	0.2	420	1.4
22-Mar-23	169036	269	565	299	7.6	4	40	79	24.8	5.6	1.8	1.5	<0.05	<0.05	0.2	350	-0.2
26-Mar-24	179599	271	538	309	7.7	4	39	85	23.5	5.7	1.8	<1	<0.05	<0.05	0.2	440	2.8
TOTAL SAMPLES		29	29	29	23	29	29	29	29	29	29	22	29	29	29	17	
AVERAGE 2024																	

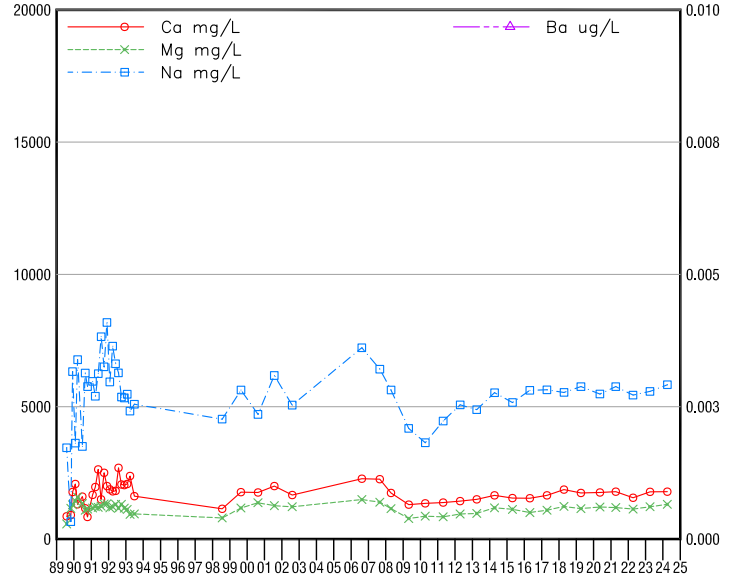
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



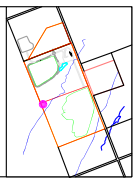








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-44-I

Deep Bedrock Unit

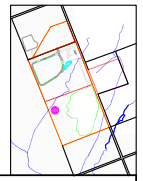
Screen 176.0 - 175.3 masl

CA008825 24 Mar 25	wsp	F424011

BH-44-I

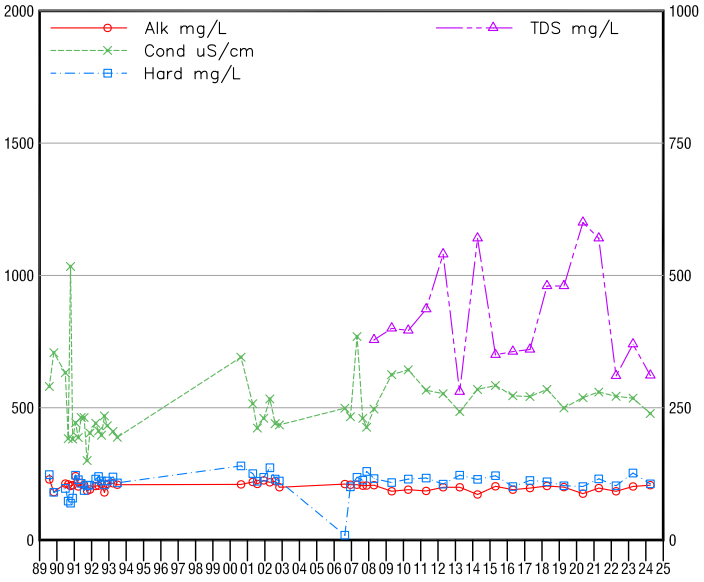
Deep Bedrock Unit

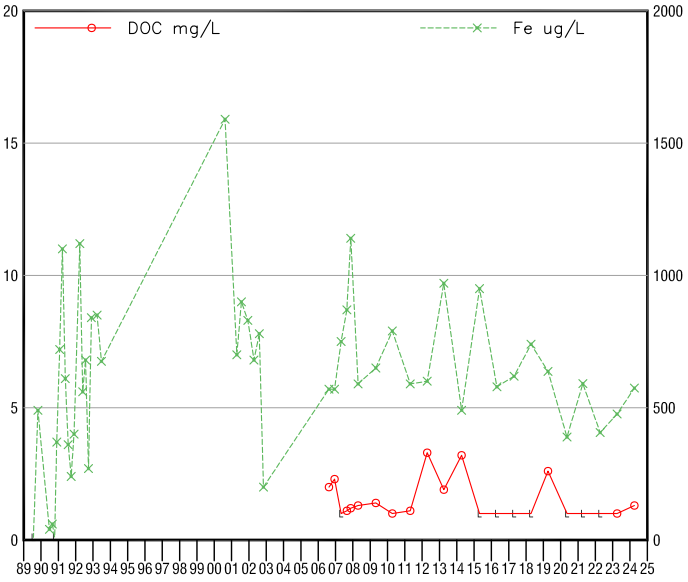
Stand Pipe Piezometer
Screen 176.0 - 175.3 masl

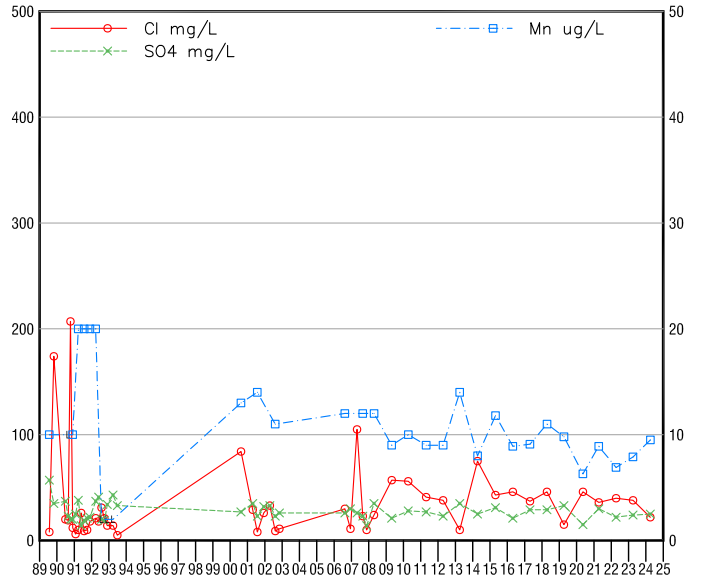


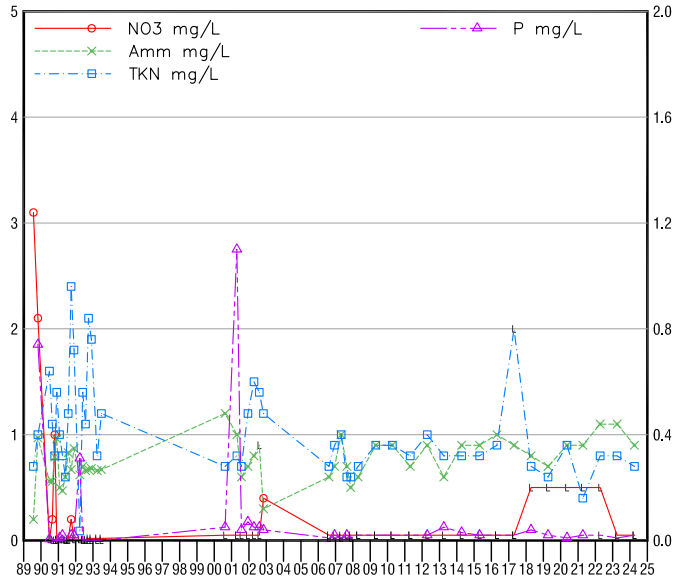
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jul-92	HGW1660	156	31900	11488	7.8	**18330**	<5	2691	1158	**6281**	110		<0.01	<0.001	19.96		-1.3
28-Sep-92	HGW1661	142	32300	10550	7.3	**15783**	14	2059	1313	**5366**	101		<0.02	<0.001	26.69		0.0
28-Nov-92	HGW1662	164	29800	9891	7.5	**15936**	16	2037	1167	**5333**	103		<0.02	<0.001	26.63		-2.1
28-Jan-93	HGW1663	178	29200	9796	7.0	**14925**	24	2080	1118	**5472**	95.8		<0.02	<0.001	23.8		1.5
28-Mar-93	HGW1664	185	24300	9773	7.2	**14192**	16	2381	930	**4833**	76.3		<0.02	<0.001	18.02		0.6
28-Jun-93	HGW1665	196	29400	7953	7.5	**14441**	11	1618	950	**5094**	92.5		<0.02	<0.001	17.89		-3.4
23-Jul-98	HGW1666	92	36700	6120	7.4	**13100**	9	1140	795	**4530**	126		<0.05	<0.06	17.1		-6.8
24-Aug-99	HGW1667	128	42000	9250	7.7	**19700**	0.7	1770	1173	**5630**	264		<0.5	<0.6	20.4		-12.1
16-Aug-00	HGW1668	175	40700	10036	7.6	**16000**	<0.5	1760	1370	**4710**	223		<0.05	<0.06	20.3		-4.9
27-Jul-01	HGW1669	165	41500	10183	7.3	**17000**	2	2000	1260	**6180**	105		<0.05	<0.6	19.7		-0.7
08-Aug-02	HGW1670	187	37800	9169	7.5	**14100**	11	1660	1220	**5060**	88.8		<0.05	<0.06	18.5		0.7
15-Aug-06	37703	136	50500	11829		**22000**	<30	2280	1490	**7230**	136	4.4	<5	<5	22.5		-5.7
29-Aug-07	44829	130	50900	11367		**29700**	4	2260	1390	**6420**	128	<1	<0.5	<0.5	26.3		-24.3
22-Apr-08	48847	169	46700	9080		**17800**	0.8	1740	1150	**5630**	142	2	<5	<0.1	19.7	23000	-7.9
29-Apr-09	55451	170	31800	6433	7.4	**11200**	<30	1300	774	**4180**	68.7	1	<5	<10	16.9	19600	-0.9
14-Apr-10	61888	168	35300	6921	7.3	**12400**	9	1350	862	**3640**	80.0	<1	<5	<5	17.7	22300	-8.1
26-Apr-11	67646	207	41900	6905	7.3	**12500**	19	1380	840	**4460**	73.8	<1	<5	<5	17.2	20200	-3.2
18-Apr-12	74083	171	42200	7462	7.1	**10900**	0.5	1430	945	**5070**	93.9	<1	<0.05	0.10	15.2	22200	9.1
02-Apr-13	81303	162	42800	7728	7.5	**14000**	9	1500	967	**4890**	77.9	<1	<5	<5	16.4	23500	-3.6
14-Apr-14	89062	141	50800	8979	7.2	**15900**	<0.3	1650	1180	**5530**	102	1.2	<1.25	<1.25	18.8	24800	-3.1
27-Apr-15	96619	154	56700	8483	7.2	**14100**	<8	1550	1120	**5160**	90.0	<1	<1.25	<1.25	22	25800	-0.4
26-Apr-16	103888	159	54300	7963	7.4	**17300**	<0.2	1540	1000	**5620**	87.3	<1	0.9	<0.05	17	25200	-9.4
23-Apr-17	112541	158	51000	8609	7.3	**20300**	38	1650	1090	**5640**	94.7	<1	<0.05	<0.05	20.2	24300	-15.6
17-Apr-18	121639	160	54600	9735	7.2	**16000**	0.9	1870	1230	**5540**	146	<1	<0.5	<0.5	21.8	26300	-1.5
09-Apr-19	130965	136	55500	9080	7.4	**19000**	46	1740	1150	**5760**	92.4	<1	<5	<5	26.4	29600	-10.6
13-May-20	140869	139	55700	9378	7.6	**15900**	<20	1760	1210	**5480**	99.2	<1	<5	<5	21.4	30400	-2.4
12-Apr-21	149196	154	51600	9370	7.3	**14700**	<20	1790	1190	**5760**	100	<1	<5	<5	11.5	27200	2.7
12-Apr-22	159785	165	56000	8549	7.2	**16600**	<20	1560	1130	**5440**	105	<1	**39.0**	<5	23.4	28300	-7.0
04-Apr-23	169368	153	56000	9469	7.4	**17500**	<20	1780	1220	**5580**	101	<1	<5	<5	22.3	26900	-6.5
04-Apr-24	179817	143	43000	9860	7.1	**17900**	<20	1790	1310	**5830**	123	<1	<5	<5	21.8	28300	5.2
TOTAL SAMPLES		46	45	47	40	46	46	47	47	47	47	19	43	47	47	17	
AVERAGE 2024																	

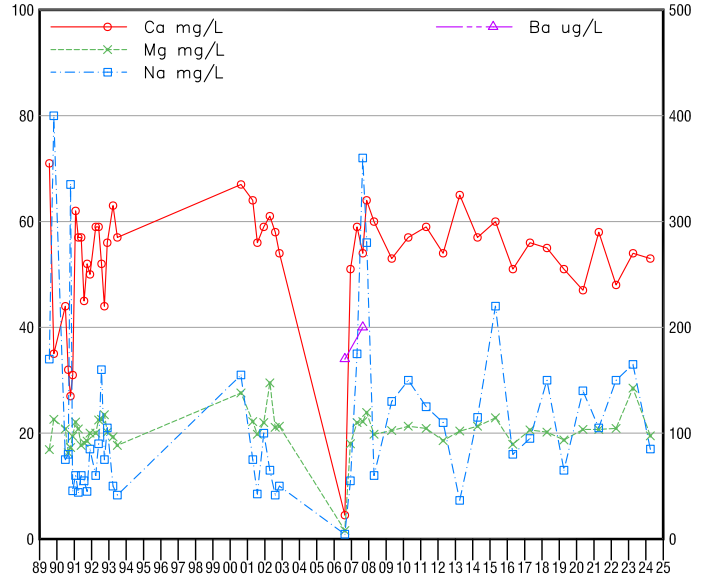
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



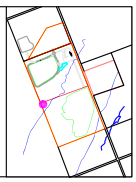








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-44-II

Shallow Bedrock Unit

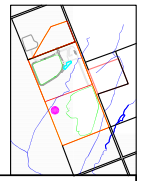
Screen 180.8 - 180.0 masl

CA008825 24 Mar 25	wsp	F424012

BH-44-II

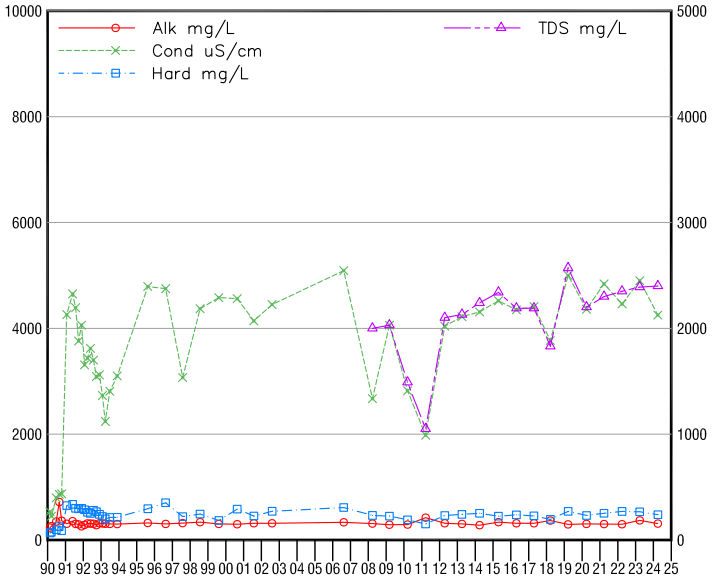
Shallow Bedrock Unit

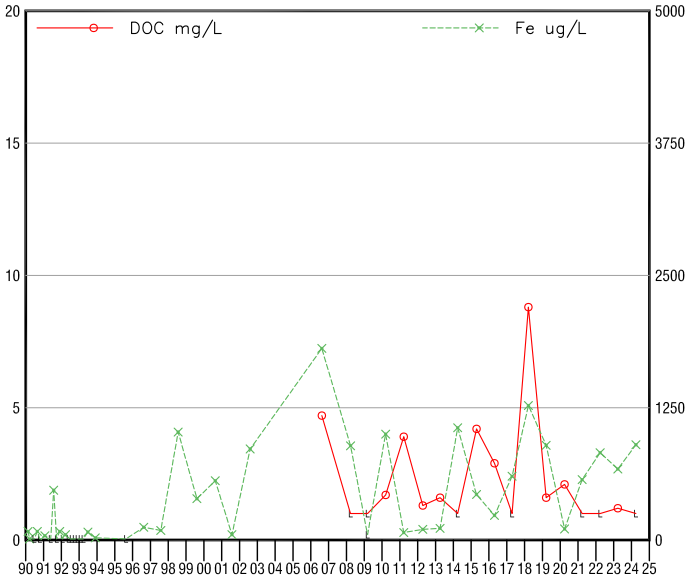
Stand Pipe Piezometer
Screen 180.8 - 180.0 masl

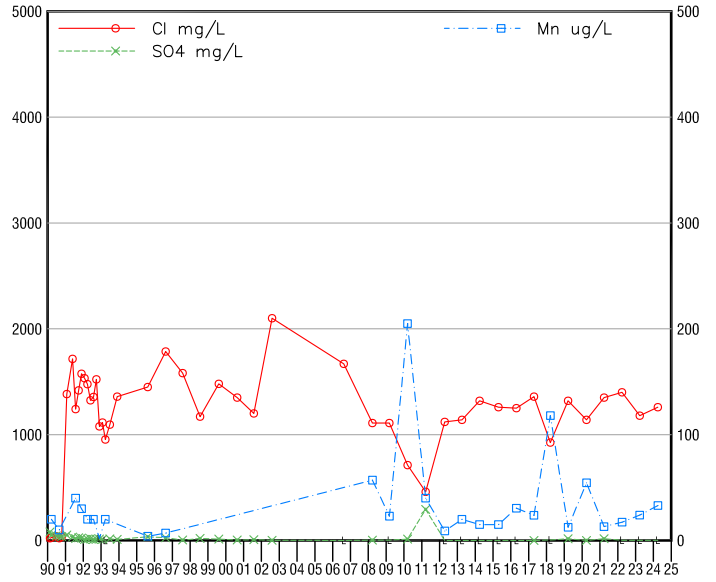


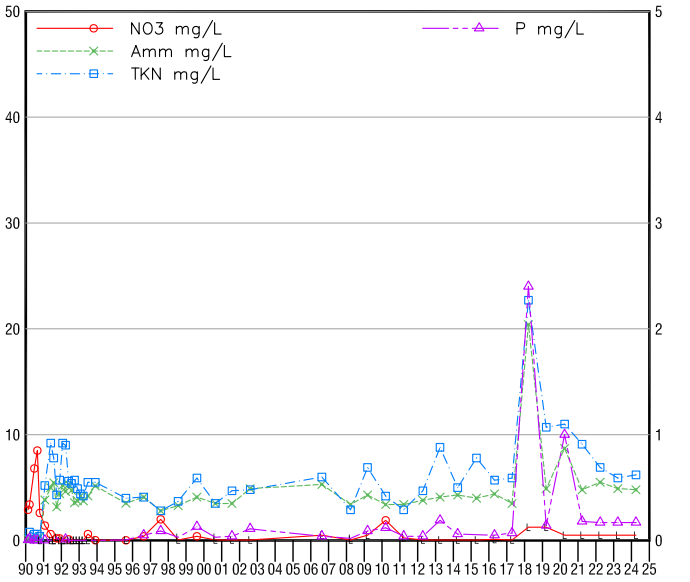
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW1689	209	388	216	7.5	5	33	57	17.7	8.3	3.13		<0.02	<0.001	0.67		-1.8
16-Aug-00	HGW1690	210	691	280	8.2	84	27	67	27.6	31	5.74		<0.05	<0.06	1.2		0.7
22-Apr-01	HGW1691	219	515	251	8.1	29	35	64	22.2	15	2.98		<0.05	<0.06	1		-0.8
27-Jul-01	HGW1692	212	423	222	7.9	8	23	56	19.8	8.5	2.02		<0.05	<0.06	0.6		0.1
10-Dec-01	HGW1693	225	460	237	7.9	26	32	59	22.0	20	2.26		<0.05	<0.06	0.7		-1.5
18-Apr-02	HGW1694	218	533	273	8.0	33	33	61	29.5	13	3.04		<0.05	<0.06	0.8		1.6
08-Aug-02	HGW1695	222	440	230	8.0	9	23	58	21.1	8.3	2.16		<0.05	<0.06	<0.9		-1.3
04-Nov-02	HGW1696	199	435	223	7.9	11	26	54	21.3	10	2.22		0.4	<0.06	0.3		1.2
15-Aug-06	37689	211	498	18		30	26	4.5	1.6	0.9	2.08	2	<0.05	<0.05	0.6		-83.3
11-Dec-06	39999	209	466	201		11	30	51	18.0	11	2.59	2.3	<0.05	<0.05	0.7		-5.1
30-Apr-07	42581	209	769	237		105	26	59	22.0	35	3.73	<1	<0.05	<0.05	1		-8.8
28-Aug-07	44752	205	460	226		23	23	54	22.2	72	4.36	1.1	<0.05	<0.05	0.7		20.0
19-Nov-07	46269	206	426	259		10	14	64	23.9	56	3.59	1.2	<0.05	<0.05	0.5		24.7
22-Apr-08	48848	207	495	232		24	35	60	19.8	12	2.7	1.3	<0.05	<0.1	0.6	378	-2.4
29-Apr-09	55452	184	625	217	7.8	57	21	53	20.5	26	3.42	1.4	<0.05	<0.1	0.9	400	-0.8
14-Apr-10	61889	190	643	230	7.8	56	28	57	21.3	30	3.6	1	<0.05	<0.05	0.9	396	0.9
26-Apr-11	67647	185	566	234	7.8	41	27	59	20.9	25	3.98	1.1	<0.05	<0.05	0.7	436	4.3
18-Apr-12	74084	199	553	211	7.7	38	23	54	18.6	22	3.9	3.3	<0.05	<0.05	0.9	540	-1.7
02-Apr-13	81304	199	485	245	7.7	10	35	65	20.4	7.3	2.37	1.9	<0.05	<0.05	0.6	280	3.5
14-Apr-14	89063	172	569	229	7.8	75	25	57	21.3	23	3.7	3.2	<0.05	<0.05	0.9	570	-2.7
27-Apr-15	96620	203	584	243	7.8	43	31	60	22.9	44	3.5	<1	<0.05	<0.05	0.9	350	8.3
26-Apr-16	103889	190	545	202	8.2	46	21	51	17.9	16	3.8	<1	<0.05	<0.05	1	356	-5.9
23-Apr-17	112542	196	542	225	7.9	37	29	56	20.6	19	3.4	<1	<0.05	<0.05	0.9	360	-0.5
17-Apr-18	121640	204	569	220	7.8	46	29	55	20.2	30	3.9	<1	<0.5	<0.5	0.8	480	-1.0
09-Apr-19	130966	200	499	205	7.9	15	33	51	18.7	13	3	2.6	<0.5	<0.5	0.7	480	-3.2
13-May-20	140870	175	538	202	8.0	46	15	47	20.7	28	4	<1	<0.5	<0.5	0.9	600	2.9
12-Apr-21	149197	196	559	231	7.8	36	30	58	20.7	21	3.9	<1	<0.5	<0.5	0.9	570	1.4
12-Apr-22	159786	184	543	205	7.8	40	22	48	20.9	30	4.3	<1	<0.5	<0.5	1.1	310	2.9
04-Apr-23	169369	202	536	253	7.8	38	24	54	28.5	33	3.3	1	<0.05	<0.05	1.1	370	8.6
04-Apr-24	179818	207	478	212	7.7	22	25	53	19.5	17	3.6	1.3	<0.05	<0.05	0.9	311	0.1
TOTAL SAMPLES		48	48	48	40	48	48	48	48	48	48	22	48	48	48	17	
AVERAGE 2024																	

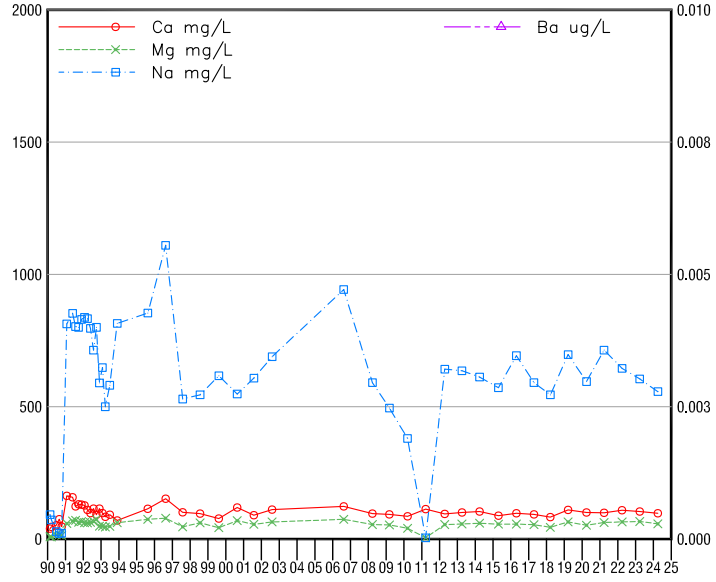
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



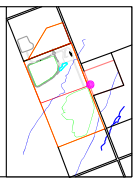








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-46-I

Shallow Bedrock Unit

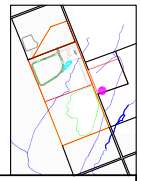
Screen 175.5 - 175.0 masl

CA008825 24 Mar 25	wsp	F424013

BH-46-I

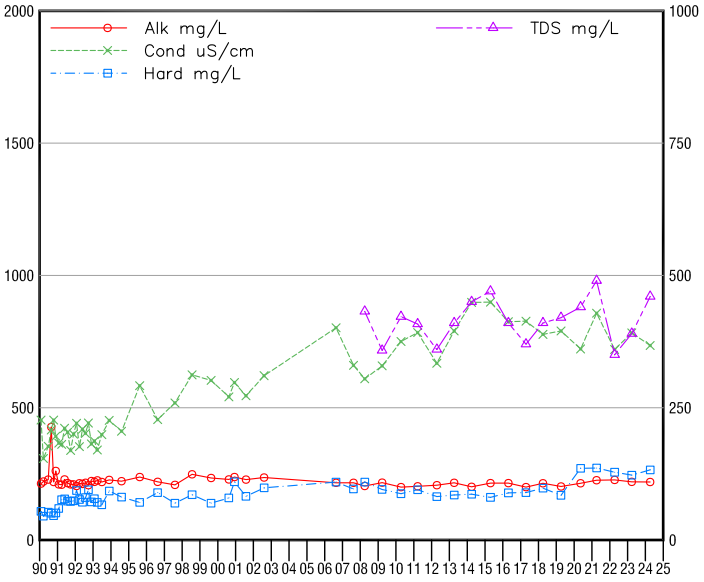
Shallow Bedrock Unit

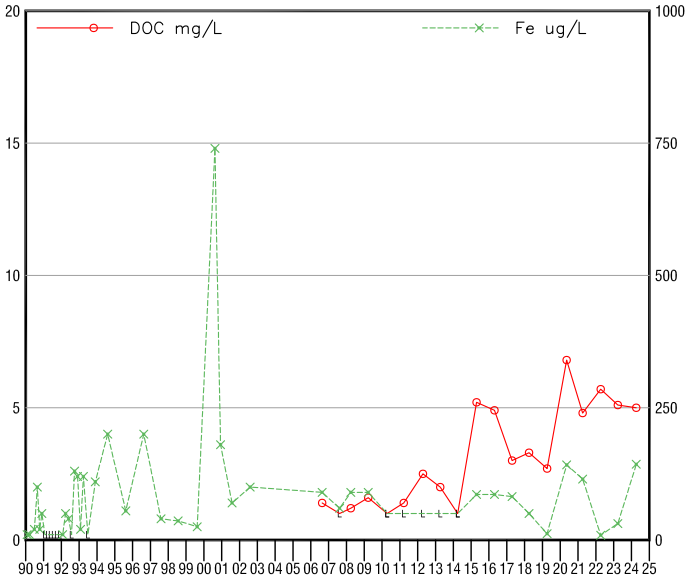
Stand Pipe Piezometer
Screen 175.5 - 175.0 masl

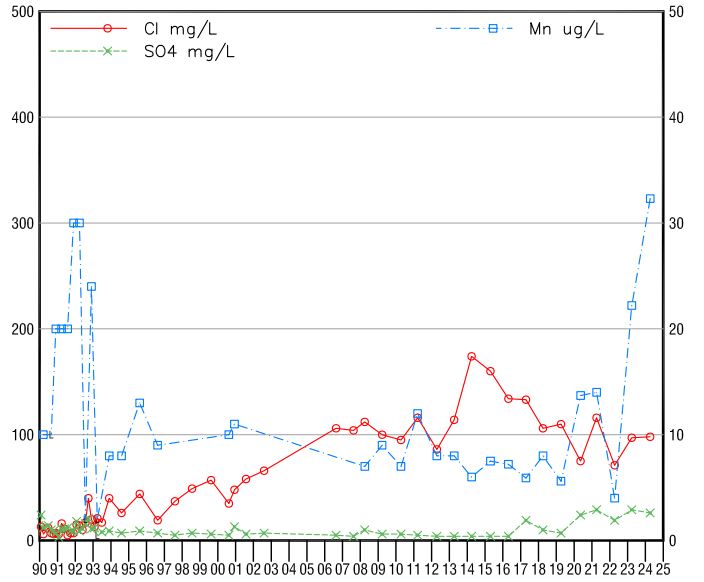


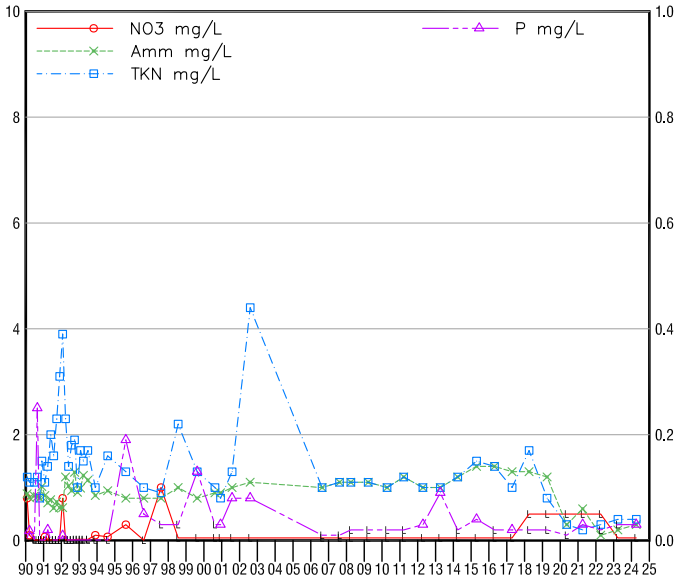
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jan-93	HGW1792	312	2730	444	7.8	**1115**	11	98	48.1	**648**	18.4		<0.02	<0.001	4.21		-0.1
28-Mar-93	HGW1793	305	2240	398	7.7	**954**	<1	84	45.5	**500**	16.8		<0.02	<0.001	3.73		-4.1
28-Jun-93	HGW1794	303	2810	425	7.7	**1095**	15	92	47.5	**581**	18.6		0.6	0.016	4.21		-3.9
28-Nov-93	HGW1795	301	3100	429	7.6	**1359**	10	70	61.7	**815**	20.0		0.036	<0.001	5.15		0.4
17-Aug-95	HGW1796	321	4790	591	7.6	**1450**	35	114	74.4	**854**	21.9		0.020	0.20	3.52		1.8
16-Aug-96	HGW1797	302	4750	703	7.9	**1785**	26	152	78.5	**1110**	25.5		0.4	<0.006	4.1		5.3
01-Aug-97	HGW1798	319	3070	442	7.9	**1582**	4	101	46.1	**529**	17.3		2.0	0.083	2.8		-22.4
23-Jul-98	HGW1799	336	4370	490	8.2	**1170**	19	96	61.0	**545**	31.6		<0.05	<0.06	3.3		-7.4
12-Aug-99	HGW1800	303	4580	368	8.3	**1480**	13	77	42.8	**617**	30.2		0.4	<0.06	4.1		-15.4
22-Aug-00	HGW1801	298	4560	583	8.0	**1350**	4	119	69.4	**548**	35.1		<0.05	<0.06	3.5		-9.2
30-Jul-01	HGW1802	317	4140	452	7.6	**1200**	7	90	55.3	**608**	20.0		<0.05	<0.06	3.5		-5.4
08-Aug-02	HGW1803	316	4450	542	8.0	**2100**	2	111	64.4	**689**	19.2		<0.05	<0.06	4.9		-22.3
15-Aug-06	37698	333	5090	613		**1670**	<0.3	123	74.3	**943**	24.2	4.7	<0.5	<0.5	5.3		0.5
26-Mar-08	48329	310	2670	464		**1110**	3	96	54.6	**591**	21.2	<1	<0.05	<0.1	3.4	2000	-2.4
09-Mar-09	54304	288	4060	451	7.8	**1110**	<3	93	53.2	**495**	19.0	<1	<0.5	<1	4.3	2030	-8.4
15-Mar-10	61253	290	2820	381	7.9	**712**	13	86	40.5	**380**	15.0	1.7	1.9	0.16	3.4	1490	-2.9
21-Mar-11	67065	420	1980	302	7.7	**460**	294	113	4.7	4.2	<0.5	3.9	<0.25	<0.25	3.4	1050	-62.0
16-Apr-12	73998	317	4040	463	7.5	**1120**	<0.3	95	54.6	**642**	20.5	1.3	<0.05	<0.05	3.8	2100	0.1
03-Apr-13	81360	303	4220	483	7.7	**1140**	<0.3	100	56.7	**636**	24.7	1.6	<0.05	<0.05	4.1	2130	0.0
31-Mar-14	88756	279	4310	505	7.6	**1320**	<0.3	104	59.6	**612**	23.4	<1	<0.05	<0.05	4.3	2240	-6.4
21-Apr-15	96462	337	4520	450	7.5	**1260**	<0.3	88	56.2	**572**	24.7	4.2	<0.05	<0.05	4	2340	-9.7
24-Apr-16	103859	316	4350	475	7.7	**1250**	<0.4	97	56.4	**693**	22.0	2.9	<0.1	<0.1	4.4	2190	-1.3
19-Apr-17	112410	316	4410	455	7.5	**1360**	0.2	93	54.1	**591**	20.7	<1	<0.05	<0.05	3.5	2190	-11.3
21-Mar-18	120949	368	3770	389	7.2	**925**	<5	83	44.2	**545**	20.9	**8.8**	<1.25	<1.25	20.4	1830	
20-Mar-19	130488	295	5000	540	7.6	**1320**	16	110	64.5	**697**	22.7	1.6	<1.25	<1.25	4.9	2570	-1.6
31-Mar-20	139938	303	4360	463	7.8	**1140**	0.6	100	52.0	**595**	19.3	2.1	<0.5	<0.5	8.7	2200	-2.6
25-Mar-21	148775	300	4840	504	7.6	**1350**	17	99	62.3	**714**	20.1	<1	<0.5	<0.5	4.8	2300	-2.8
30-Mar-22	159375	296	4460	539	7.6	**1400**	<2	109	64.7	**645**	25.0	<1	<0.5	<0.5	5.5	2350	-6.5
27-Mar-23	169143	370	4900	532	7.5	**1180**	<2	104	66.1	**605**	20.0	1.2	<0.5	<0.5	4.9	2390	-3.6
02-Apr-24	179745	308	4250	478	7.3	**1260**	<2	97	57.4	**557**	18.8	<1	<0.5	<0.5	4.8	2400	8.9
TOTAL SAMPLES		46	46	46	44	46	46	46	46	46	46	18	46	46	46	17	
AVERAGE 2024																	

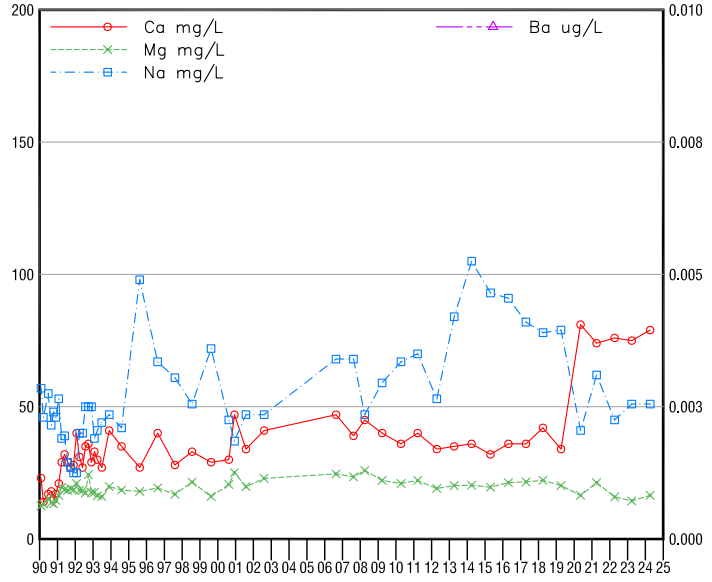
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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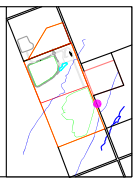
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-50-I

Shallow Bedrock Unit

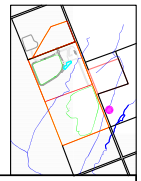
Screen 183.2 - 182.6 masl

CA008825 24 Mar 25	wsp	F424014

BH-50-I

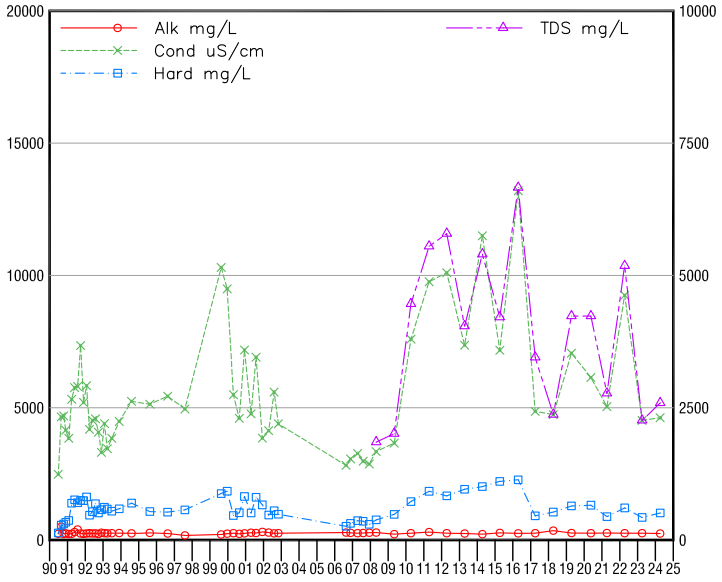
Shallow Bedrock Unit

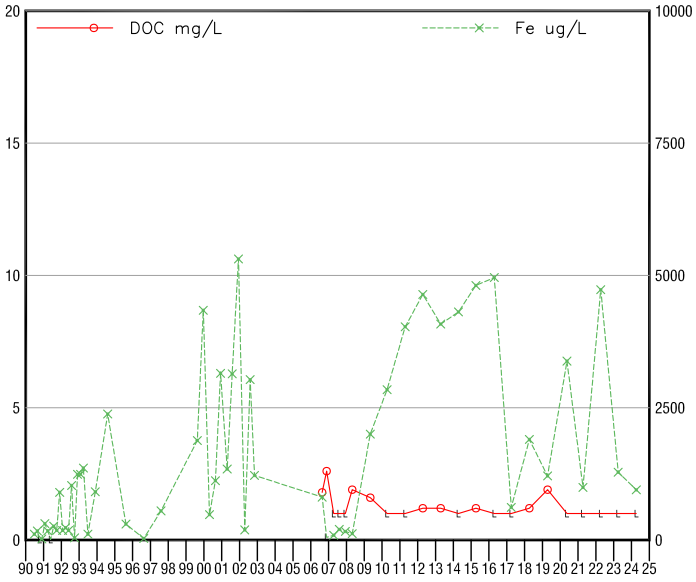
Stand Pipe Piezometer
Screen 183.2 - 182.6 masl

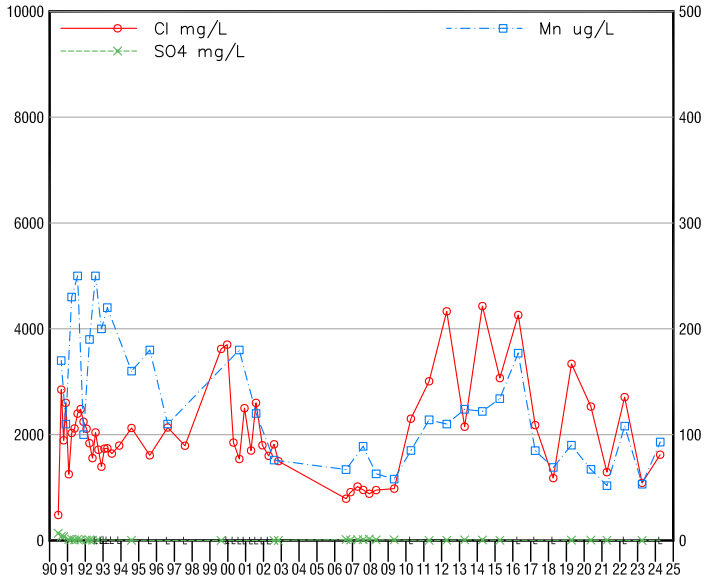


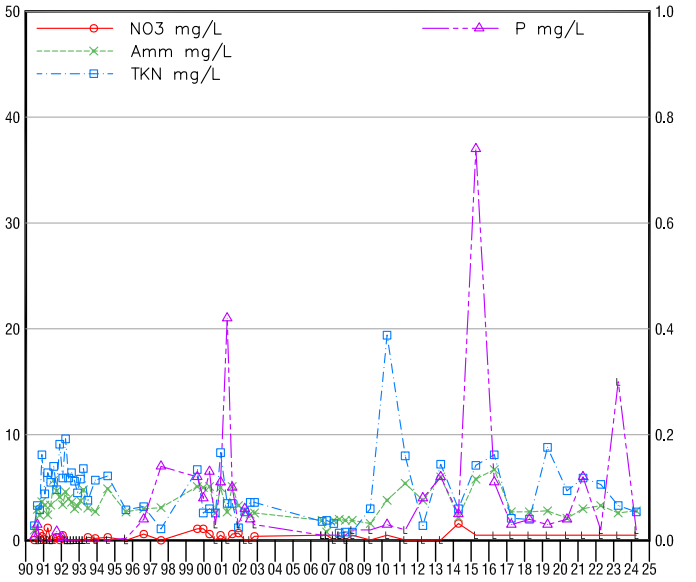
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-93	HGW2342	227	452	185	7.7	40	9	41	19.8	47	4		0.1	<0.001	0.85		0.4
08-Aug-94	HGW2343	222	411	162	7.7	26	7	35	18.5	42	4.44		0.07	<0.001	0.94		-0.6
14-Aug-95	HGW2344	238	583	142	7.9	44	9	27	18.0	98	6.5		0.3	<0.01	0.8		8.4
16-Aug-96	HGW2345	220	455	179	8.1	19	7	40	19.3	67	8.4		<0.005	<0.006	0.8		14.2
05-Aug-97	HGW2346	208	518	139	8.1	37	5	28	16.9	61	4.59		1.0	0.011	0.8		2.0
23-Jul-98	HGW2347	248	624	171	8.6	49	7	33	21.5	51	7.44		<0.05	<0.06	1		-4.9
17-Aug-99	HGW2348	234	603	139	8.3	57	6	29	16.1	72	8.87		<0.05	<0.06	0.8		-1.7
15-Aug-00	HGW2349	229	541	159	8.4	35	5	30	20.6	45	9.81		<0.05	<0.06	0.9		-1.8
08-Dec-00	HGW2350	238	595	220	7.9	48	13	47	25.1	37	9.8		<0.05	<0.06	0.9		-0.3
01-Aug-01	HGW2351	228	545	165	7.9	58	6	34	19.8	47	5.46		<0.05	<0.06	1		-6.3
08-Aug-02	HGW2352	236	621	197	8.2	66	7	41	22.9	47	5.92		<0.05	<0.06	1.1		-3.9
21-Aug-06	37846	216	802	219		106	5	47	24.6	68	5.99	1.4	<0.05	<0.05	1		0.9
14-Aug-07	44475	216	660	193		104	4	39	23.5	68	6.37	<1	<0.05	<0.05	1.1		-2.0
01-Apr-08	48467	204	609	219		112	10	45	25.9	47	6.26	1.2	<0.05	<0.1	1.1	432	-5.6
23-Mar-09	54640	217	658	191	7.9	100	6	40	22.1	59	6.43	1.6	<0.05	<0.1	1.1	358	-4.7
14-Apr-10	61885	200	750	175	7.9	95	6	36	21.0	67	6.68	<1	<0.05	<0.05	1	422	-1.2
21-Mar-11	67069	203	784	190	8.0	116	5	40	22.1	70	7.36	1.4	<0.05	<0.05	1.2	408	-2.0
17-Apr-12	74037	207	668	164	7.7	86	4	34	19.1	53	6.58	2.5	<0.05	<0.05	1	360	-6.4
09-Apr-13	81497	216	790	170	7.7	114	4	35	20.2	84	7.14	2	<0.05	<0.05	1	410	-2.2
01-Apr-14	88810	201	898	173	7.7	174	4	36	20.3	105	7.2	<1	<0.05	<0.05	1.2	450	-4.2
22-Apr-15	96517	215	899	161	7.8	160	4	32	19.6	93	7.2	**5.2**	<0.05	<0.05	1.4	470	-8.1
24-Apr-16	103862	215	825	178	7.8	134	4	36	21.3	91	7.7	4.9	<0.05	<0.05	1.4	410	-2.2
19-Apr-17	112404	200	827	179	7.9	133	19	36	21.6	82	7.2	3	<0.05	<0.05	1.3	370	-4.7
03-Apr-18	121267	214	777	196	7.7	106	10	42	22.2	78	7.1	3.3	<0.5	<0.5	1.3	410	0.8
07-Apr-19	130909	202	790	169	7.9	110	7	34	20.2	79	6.5	2.7	<0.5	<0.5	1.2	420	-1.6
13-May-20	140872	214	722	271	7.9	75	24	81	16.5	41	3.9	**6.8**	<0.5	<0.5	0.3	440	3.0
06-Apr-21	149005	226	857	272	7.6	116	29	74	21.3	62	5.9	4.8	<0.5	<0.5	0.6	490	-0.1
11-Apr-22	159714	227	720	256	7.5	71	19	76	15.9	45	4.4	**5.7**	<0.5	<0.5	0.1	350	1.8
28-Mar-23	169185	220	783	245	7.8	97	29	75	14.4	51	4.4	**5.1**	<0.05	<0.05	0.2	390	-3.2
09-Apr-24	179938	219	735	265	7.3	98	26	79	16.5	51	4.5	5	<0.05	<0.05	0.3	460	1.0
TOTAL SAMPLES		51	51	51	48	51	51	51	51	51	51	19	51	51	51	17	
AVERAGE 2024																	

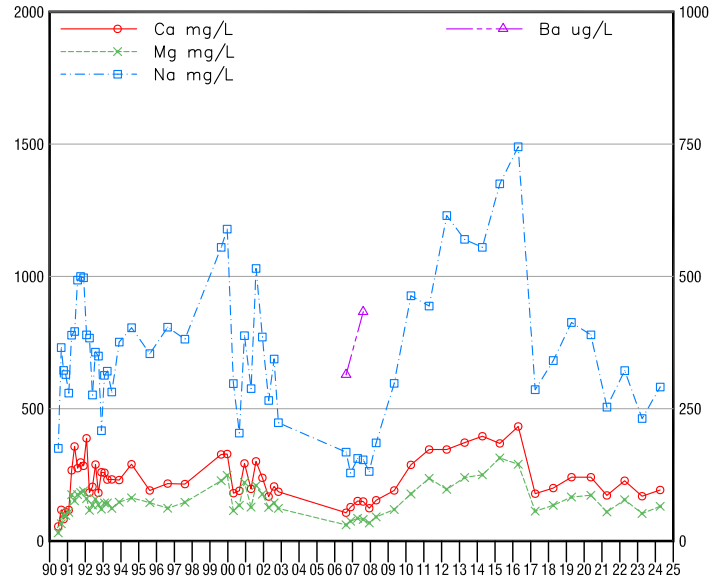
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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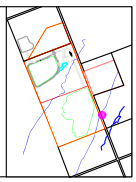
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-52-I

Shallow Bedrock Unit

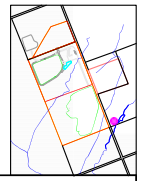
Screen 182.4 - 181.8 masl

CA008825 24 Mar 25	wsp	F424015

BH-52-I

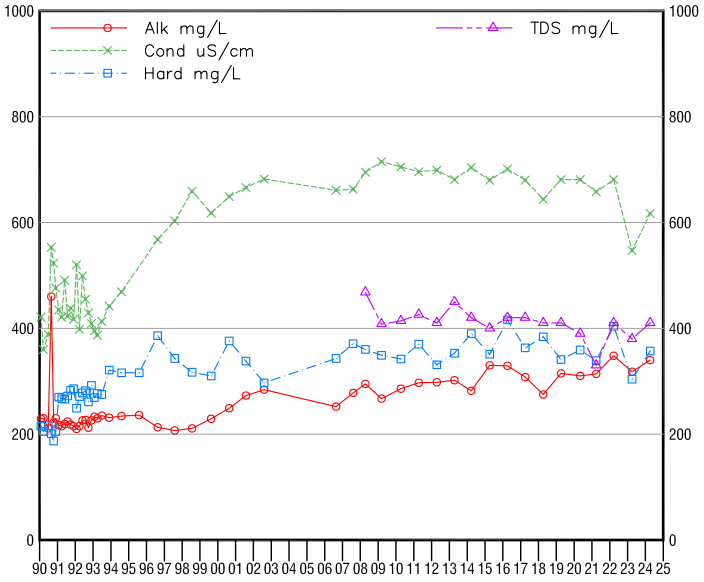
Shallow Bedrock Unit

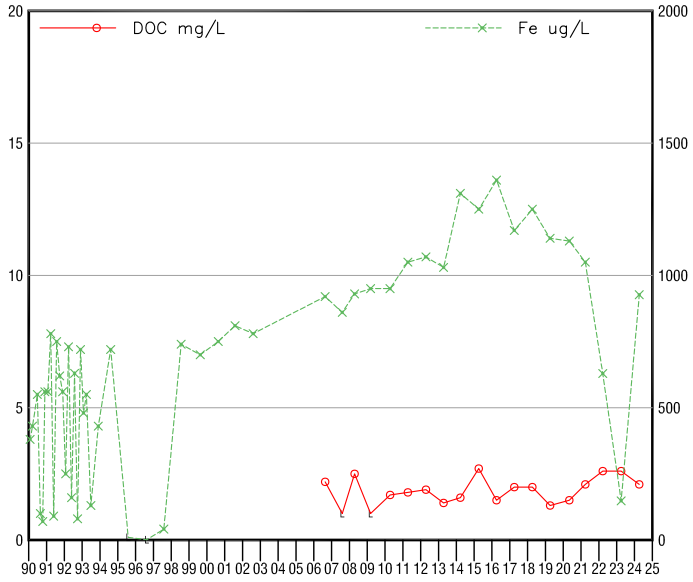
Stand Pipe Piezometer
Screen 182.4 - 181.8 masl

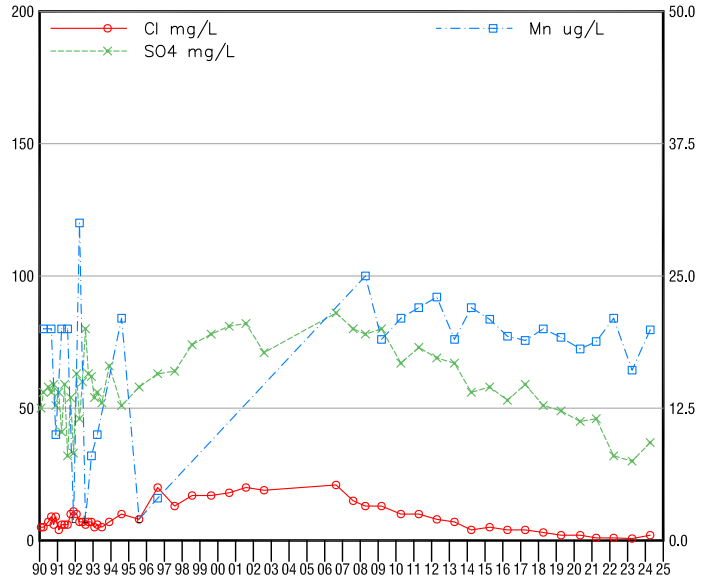


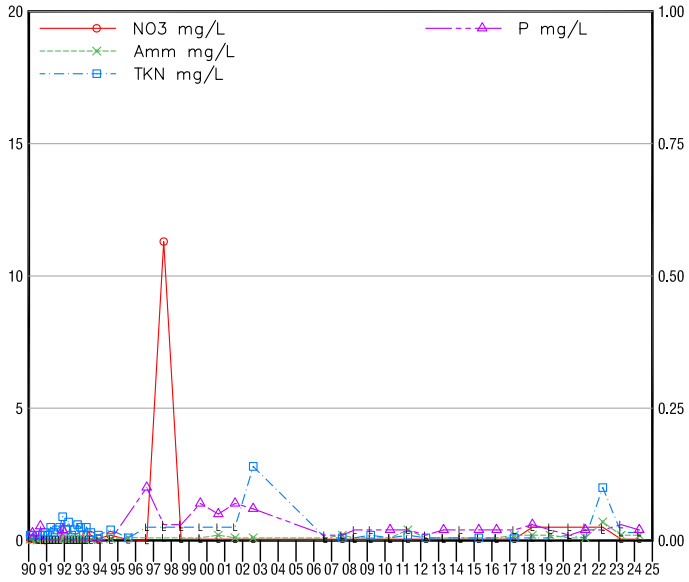
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Aug-00	HGW2514	234	4600	1030	8.2	**1540**	<0.5	190	135	**408**	29.2		<0.05	<0.06	2.6		-10.1
08-Dec-00	HGW2515	251	7180	1642	8.1	**2500**	<0.5	293	221	**776**	50.5		0.5	<0.06	5		-5.0
23-Apr-01	HGW2516	272	4770	1019	7.8	**1700**	<0.5	197	128	**576**	17.1		<0.05	<0.06	2.7		-7.3
03-Aug-01	HGW2517	263	6910	1616	7.6	**2600**	<0.5	301	210	**1030**	25.3		0.6	<0.06	5.1		-0.3
10-Dec-01	HGW2518	302	3850	1326	7.7	**1800**	<0.5	239	177	**771**	20.7		0.7	<0.06	3.3		3.5
18-Apr-02	HGW2519	282	4130	942	7.9	**1600**	<0.5	168	127	**531**	15.2		<0.05	<0.06	2.8		-8.8
08-Aug-02	HGW2520	252	5590	1107	7.9	**1819**	0.5	206	144	**688**	18.6		<0.05	<0.06	2.5		-3.2
04-Nov-02	HGW2521	255	4390	971	7.9	**1500**	0.1	186	123	**447**	24.6		0.4	<0.06	2.6		-8.9
22-Aug-06	37828	279	2820	517		**788**	19	107	60.7	**336**	11.4	1.8	<0.5	<0.5	1.9		-5.2
21-Nov-06	39650	269	3060	627		**914**	10	128	74.7	**257**	14.5	2.6	<0.5	<0.5	0.8		-13.0
16-Apr-07	42341	259	3270	730		**1020**	15	151	85.8	**312**	15.8	<1	<0.05	<0.05	1.9		-8.8
07-Aug-07	44326	260	2980	708		**955**	16	149	81.7	**307**	14.2	<1	<0.5	<0.5	2		-7.3
10-Dec-07	46635	273	2870	591		**883**	28	124	68.3	**263**	12.8	<1	<0.05	<0.05	1.9		-13.2
30-Apr-08	49009	280	3340	759		**953**	11	154	91.0	**371**	18.1	1.9	<0.5	<1	1.9	1850	-1.2
04-May-09	55534	222	3660	967	7.8	**980**	11	191	119	**596**	23.3	1.6	<0.05	<0.1	1.6	2010	17.5
13-Apr-10	61859	254	7590	1452	7.8	**2300**	<3	288	178	**927**	25.3	<1	<0.5	<0.5	3.8	4460	0.3
20-Apr-11	67591	296	9760	1840	7.2	**3010**	0.9	346	237	**888**	28.2	<1	<0.05	0.08	5.4	5550	-8.5
16-Apr-12	74003	259	10100	1667	7.3	**4330**	2	346	195	**1230**	30.8	1.2	<0.05	<0.05	3.8	5790	-18.2
17-Apr-13	81657	242	7360	1917	7.6	**2150**	11	372	240	**1140**	28.7	1.2	<0.05	<0.05	6	4040	15.2
16-Apr-14	89112	222	11500	2018	7.3	**4430**	9	396	250	**1110**	30.5	<1	1.6	<1.25	2.2	5400	-18.2
08-Apr-15	96182	270	7170	2214	7.6	**3070**	3	369	314	**1350**	41.2	1.2	<0.5	<0.5	5.8	4210	6.4
19-Apr-16	103707	251	13200	2275	7.6	**4260**	<2	433	290	**1490**	38.8	<1	<0.5	<0.5	6.7	6660	-5.6
03-Apr-17	112040	254	4860	912	7.7	**2180**	<2	179	113	**572**	19.5	<1	<0.5	<0.5	2.7	3450	-20.6
09-Apr-18	121417	354	4740	1055	7.8	**1180**	<2	200	135	**682**	22.7	1.2	<0.5	<0.5	2.7	2370	12.2
16-Apr-19	131144	260	7060	1285	7.8	**3340**	5	241	166	**826**	26.9	1.9	<0.5	<0.5	2.8	4230	-22.8
19-May-20	141002	253	6140	1314	7.7	**2530**	5	241	173	**779**	23.6	<1	<0.5	<0.5	2.1	4230	-11.3
12-Apr-21	149199	260	5040	882	7.6	**1290**	3	172	110	**506**	18.1	<1	<0.5	<0.5	3	2770	-1.6
11-Apr-22	159717	253	9250	1212	7.2	**2710**	<2	228	156	**644**	24.4	<1	<0.5	<0.5	3.3	5180	-21.0
04-Apr-23	169371	255	4520	850	7.4	**1090**	1	169	104	**463**	16.9	<1	<0.5	<0.5	2.6	2260	2.6
09-Apr-24	179937	245	4620	1020	7.2	**1620**	<2	193	131	**582**	17.7	<1	<0.5	<0.5	2.8	2590	4.0
TOTAL SAMPLES		57	57	57	51	57	55	57	57	57	57	22	57	57	57	17	
AVERAGE 2024																	

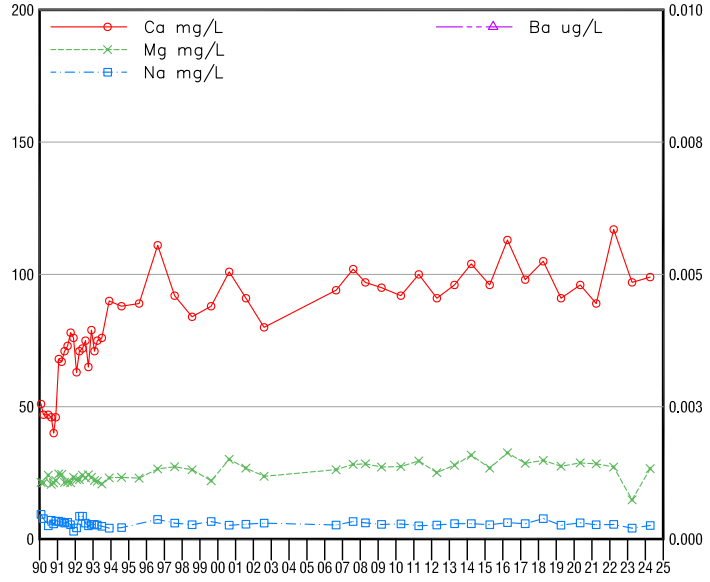
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



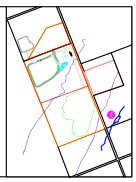








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-53-I

Shallow Bedrock Unit

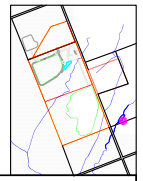
Screen 184.7 - 184.3 masl

CA008825 24 Mar 25	wsp	F424016

BH-53-I

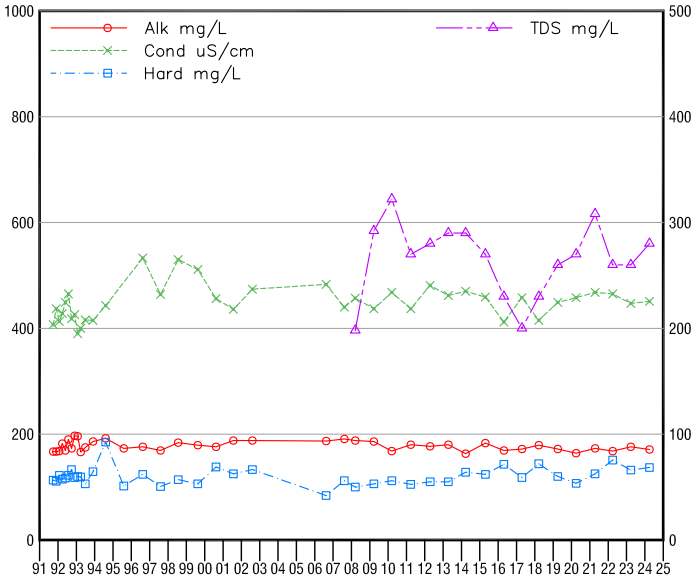
Shallow Bedrock Unit

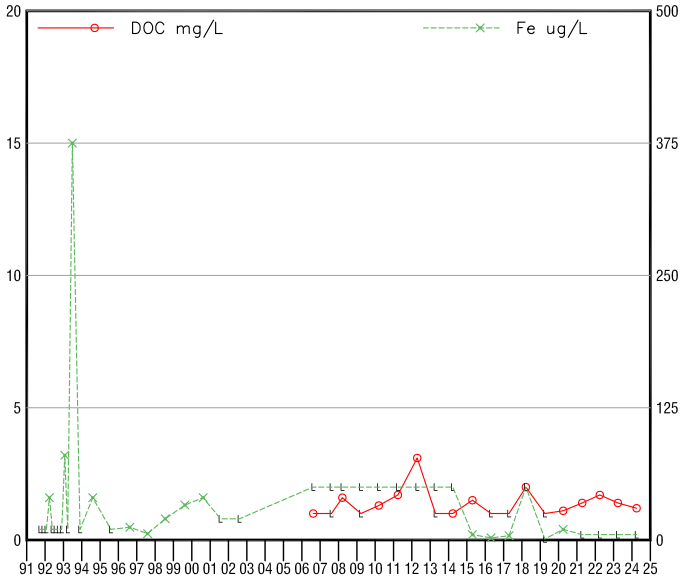
Stand Pipe Piezometer
Screen 184.7 - 184.3 masl

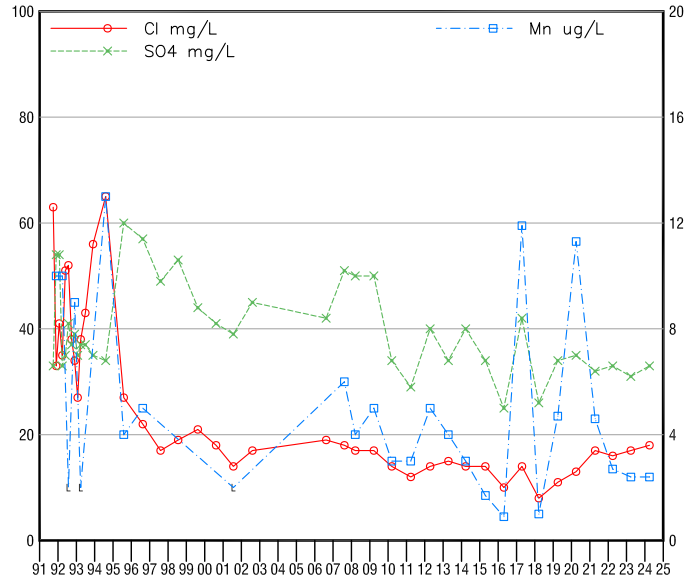


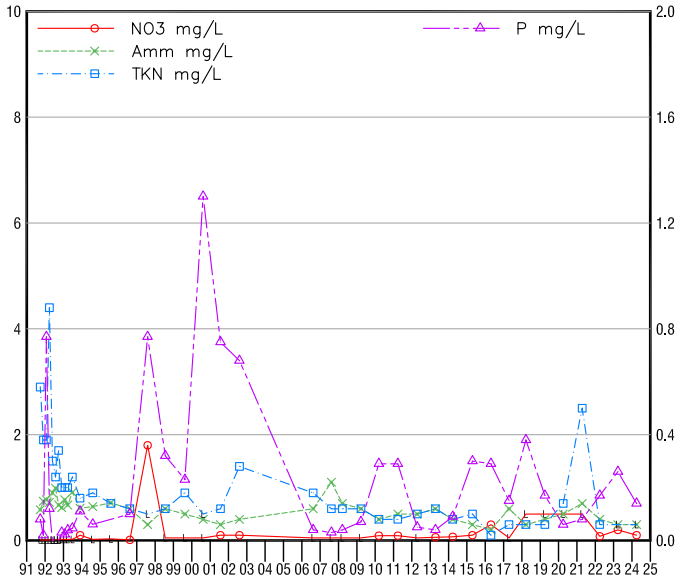
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW2573	235	413	275	7.5	5	52	76	20.8	4.8	2.35		0.2	<0.001	0.04		-1.5
28-Nov-93	HGW2574	231	442	321	7.6	7	66	90	23.1	4.1	1.47		0.07	<0.001	0.04		3.5
08-Aug-94	HGW2575	234	469	316	7.6	10	51	88	23.3	4.3	2.22		0.2	0.003	0.07		4.4
03-Aug-95	HGW2576	236		316		8	58	89	23.0				<0.03	<0.01	0.11		
16-Aug-96	HGW2577	213	568	386	7.9	20	63	111	26.5	7.4	3.2		<0.005	<0.006	<0.1		14.0
01-Aug-97	HGW2578	207	603	343	7.4	13	64	92	27.3	6.0	2.65		**11.3**	<0.006	<0.1		3.9
23-Jul-98	HGW2579	211	659	317	7.9	17	74	84	26.2	5.4	1.61		<0.05	<0.06	<0.1		3.1
19-Aug-99	HGW2580	229	618	310	8.2	17	78	88	22.0	6.6	2.09		<0.05	<0.06	<0.1		-0.9
22-Aug-00	HGW2581	249	649	376	7.9	18	81	101	30.1	5.2	2.3		<0.05	<0.06	0.2		4.5
31-Jul-01	HGW2582	273	666	338	7.9	20	82	91	26.8	5.6	1.53		<0.05	<0.06	0.1		-4.4
08-Aug-02	HGW2583	284	682	297	8.0	19	71	80	23.7	6.0	1.57		<0.05	<0.06	0.1		-10.1
22-Aug-06	37835	252	661	343		21	86	94	26.2	5.3	1.46	2.2	<0.05	<0.05	<0.1		-1.8
07-Aug-07	44329	278	663	371		15	80	102	28.2	6.6	1.63	<1	<0.05	<0.05	0.2		0.9
15-Apr-08	48712	295	695	360		13	78	97	28.4	6.1	1.7	2.5	<0.05	<0.1	<0.1	468	-2.3
11-Mar-09	54363	267	715	349	7.7	13	80	95	27.2	5.5	1.66	<1	<0.05	<0.1	<0.1	408	-0.4
13-Apr-10	61857	286	705	342	7.7	10	67	92	27.4	5.7	1.65	1.7	<0.05	<0.05	<0.1	414	-1.5
13-Apr-11	67485	297	696	370	7.4	10	73	100	29.5	5.0	1.76	1.8	<0.05	<0.05	0.4	426	-0.2
17-Apr-12	74039	298	699	331	7.4	8	69	91	25.1	5.3	1.79	1.9	<0.05	<0.05	<0.1	410	-4.9
15-Apr-13	81580	302	681	353	7.4	7	67	96	27.9	5.8	1.65	1.4	<0.05	<0.05	<0.1	450	-1.6
25-Mar-14	88674	282	704	390	7.5	4	56	104	31.7	5.8	1.8	1.6	<0.05	<0.05	<0.1	420	8.2
07-Apr-15	96147	330	680	351	7.4	5	58	96	26.8	5.4	1.6	2.7	<0.05	<0.05	<0.1	400	-3.9
05-Apr-16	103414	329	701	416	7.6	4	53	113	32.6	6.2	1.7	1.5	<0.05	<0.05	<0.1	420	5.5
03-Apr-17	112043	308	680	363	7.6	4	59	98	28.6	5.8	1.7	2	<0.05	<0.05	0.2	420	0.8
09-Apr-18	121415	275	644	384	7.3	3	51	105	29.7	7.7	1.7	2	<0.5	<0.5	0.2	410	10.1
07-Apr-19	130907	315	681	341	7.4	2	49	91	27.5	5.2	1.6	1.3	<0.5	<0.5	0.2	410	-1.5
05-May-20	140691	310	681	359	7.3	2	45	96	28.8	6.1	1.9	1.5	<0.5	<0.5	<0.1	390	2.4
29-Mar-21	148819	314	658	339	7.4	1	46	89	28.4	5.4	1.6	2.1	<0.5	<0.5	0.1	330	-1.3
22-Mar-22	159170	348	681	404	7.4	1	32	117	27.2	5.5	1.9	2.6	<0.5	<0.5	0.7	410	4.9
03-Apr-23	169323	318	547	304	7.3	0.7	30	97	14.8	4.1	1.2	2.6	<0.05	<0.05	0.2	380	-5.3
09-Apr-24	179935	340	617	357	7.0	2	37	99	26.6	5.1	1.9	2.1	<0.05	<0.05	0.2	410	0.4
TOTAL SAMPLES		50	49	50	46	50	50	50	50	49	49	19	50	50	50	17	
AVERAGE 2024																	

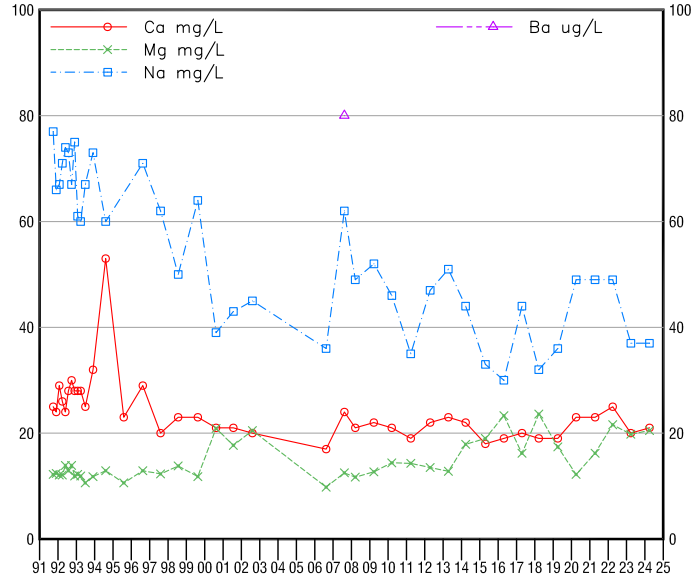
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



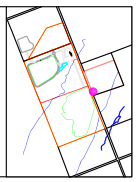








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-61-I

Shallow Bedrock Unit

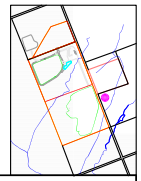
Screen 173.8 - 173.0 masl

CA008825 24 Mar 25	wsp	F424017

BH-61-I

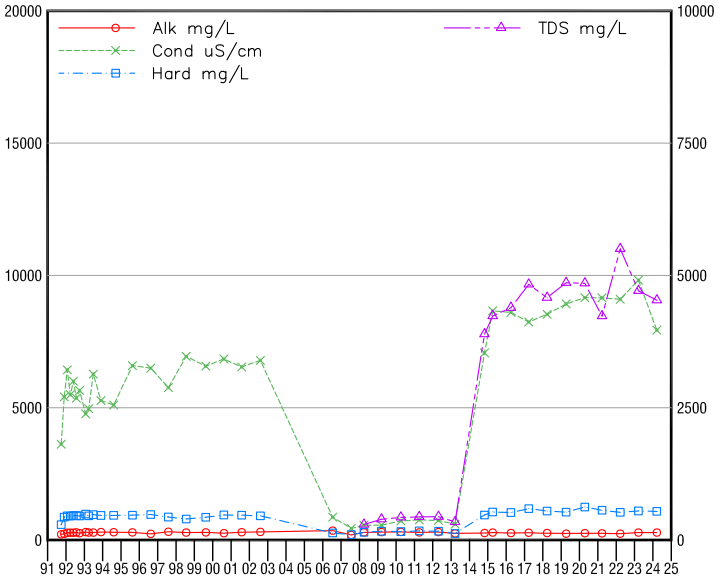
Shallow Bedrock Unit

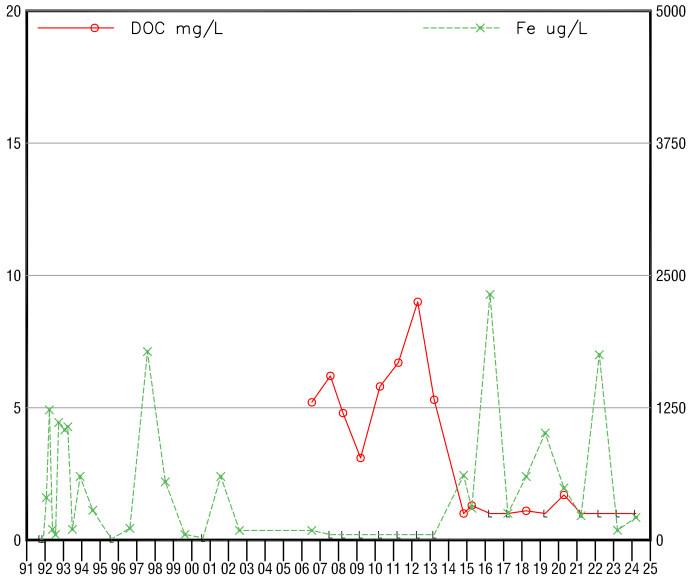
Stand Pipe Piezometer
Screen 173.8 - 173.0 masl

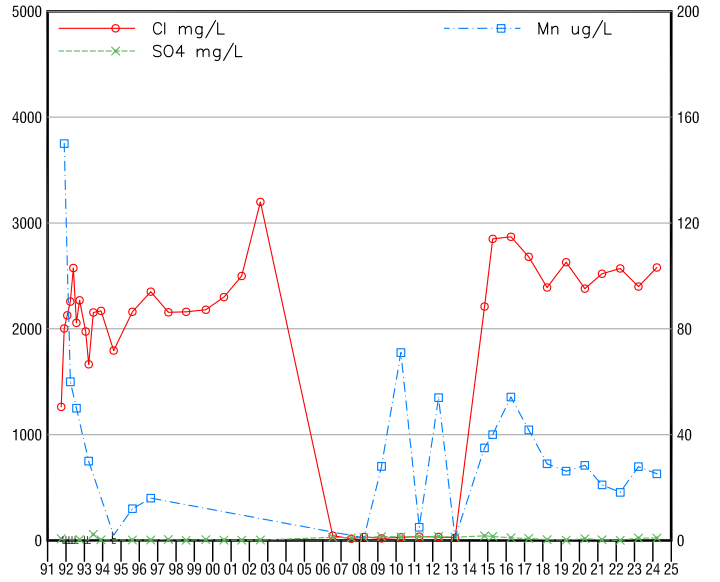


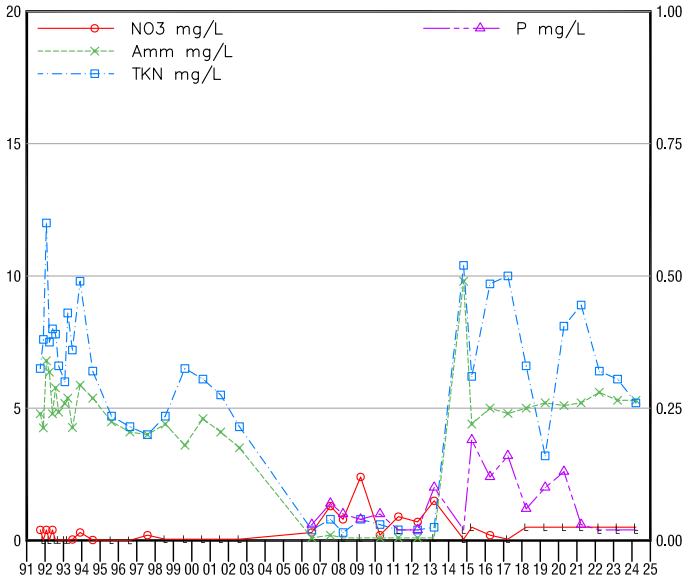
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW2718	175	416	106	8.0	43	37	25	10.6	67	4.29		<0.02	<0.001	0.91		-2.7
28-Nov-93	HGW2719	186	415	129	8.3	56	35	32	11.8	73	4		0.1	<0.001	0.61		-1.2
08-Aug-94	HGW2720	192	443	185	8.0	65	34	53	12.9	60	5.11		<0.02	<0.001	0.64		0.7
03-Aug-95	HGW2721	173		102		27	60	23	10.6				<0.03	<0.01	0.71		
16-Aug-96	HGW2722	176	533	124	8.1	22	57	29	12.9	71	4.54		0.011	<0.006	0.6		3.8
05-Aug-97	HGW2723	169	464	101	7.9	17	49	20	12.3	62	3.47		1.8	0.02	0.3		-1.8
23-Jul-98	HGW2724	184	530	114	7.9	19	53	23	13.8	50	5.56		<0.05	<0.06	0.6		-7.2
17-Aug-99	HGW2725	179	511	106	8.3	21	44	23	11.8	64	6.29		<0.05	<0.06	0.5		0.0
14-Aug-00	HGW2726	176	456	138	8.3	18	41	21	20.9	39	6.34		<0.05	<0.06	0.4		-2.5
26-Jul-01	HGW2727	188	436	125	8.1	14	39	21	17.7	43	4.18		0.1	<0.06	0.3		-5.1
08-Aug-02	HGW2728	188	474	133	8.1	17	45	20	20.5	45	3.45		0.1	<0.06	0.4		-4.3
15-Aug-06	37700	187	483	84		19	42	17	9.8	36	3.05	1	<0.05	<0.05	0.6		-21.3
13-Aug-07	44444	191	440	112		18	51	24	12.5	62	4.64	<1	<0.05	<0.05	1.1		-2.4
18-Mar-08	48238	188	457	100		17	50	21	11.7	49	4.02	1.6	<0.05	<0.1	0.7	198	-10.3
24-Mar-09	54688	186	437	106	8.1	17	50	22	12.7	52	4.03	<1	<0.05	<0.1	0.6	292	-7.2
15-Mar-10	61256	168	468	112	7.9	14	34	21	14.4	46	3.9	1.3	0.09	<0.05	0.4	322	-1.4
28-Mar-11	67212	180	437	105	8.0	12	29	19	14.3	35	3.52	1.7	0.09	<0.05	0.5	270	-9.4
17-Apr-12	74040	177	481	110	7.8	14	40	22	13.5	47	4.05	3.1	<0.05	<0.05	0.5	280	-4.4
15-Apr-13	81582	180	462	110	8.0	15	34	23	12.8	51	4.01	<1	0.06	<0.05	0.6	290	-1.8
25-Mar-14	88676	163	470	128	7.8	14	40	22	17.9	44	3.7	1	0.07	<0.05	0.4	290	1.0
22-Apr-15	96514	183	459	124	7.9	14	34	18	19.0	33	3	1.5	0.1	<0.05	0.3	270	-8.6
24-Apr-16	103865	169	412	143	8.2	10	25	19	23.3	30	3	<1	0.3	<0.05	0.2	230	0.5
19-Apr-17	112407	172	458	118	8.2	14	42	20	16.2	44	3.6	<1	<0.05	<0.05	0.6	200	-3.5
21-Mar-18	120953	179	415	144	8.1	8	26	19	23.6	32	2.9	2	<0.5	<0.5	0.3	230	-0.1
03-Apr-19	130815	172	449	120	8.2	11	34	19	17.4	36	3.3	<1	<0.5	<0.5	0.4	260	-4.5
02-Apr-20	139977	164	458	107	8.0	13	35	23	12.2	49	3.5	1.1	<0.5	<0.5	0.5	270	0.0
15-Apr-21	149266	173	468	125	8.0	17	32	23	16.2	49	4.3	1.4	<0.5	<0.5	0.7	308	1.8
31-Mar-22	159429	168	465	151	8.0	16	33	25	21.6	49	4.4	1.7	0.08	<0.05	0.4	260	8.2
28-Mar-23	169182	176	447	132	8.1	17	31	20	19.8	37	3.2	1.4	0.2	<0.05	0.3	260	-3.6
02-Apr-24	179748	171	451	137	7.5	18	33	21	20.5	37	3.5	1.2	0.1	<0.05	0.3	280	0.0
TOTAL SAMPLES		40	39	40	36	40	40	40	40	39	39	19	40	40	40	17	
AVERAGE 2024																	

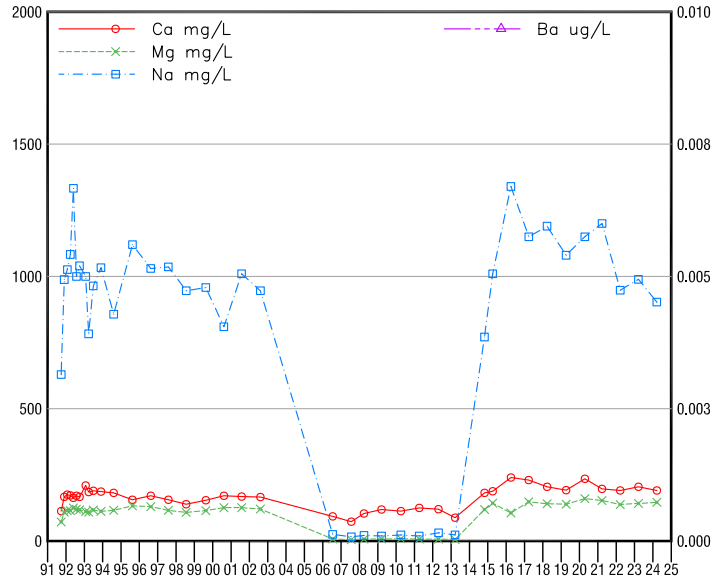
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



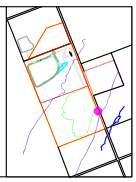








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-62-IR

Deep Bedrock Unit

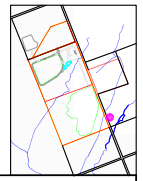
Screen 183.8 - 183.0 masl

CA008825 24 Mar 25	wsp	F424018

BH-62-IR

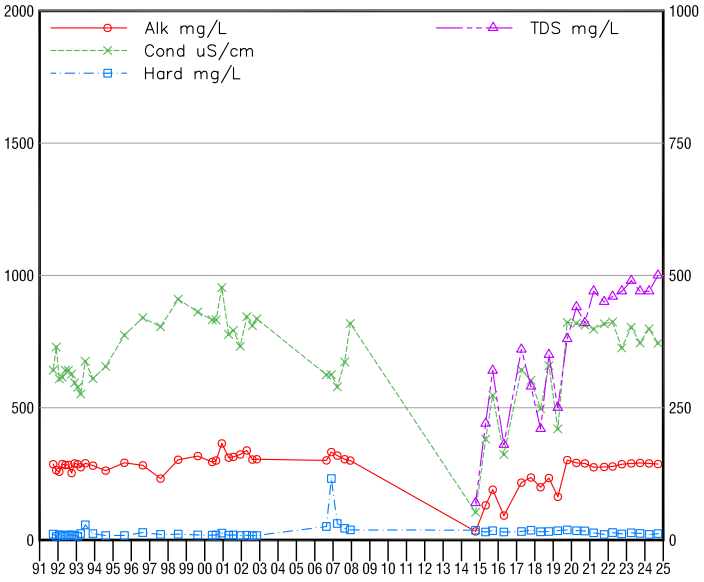
Deep Bedrock Unit

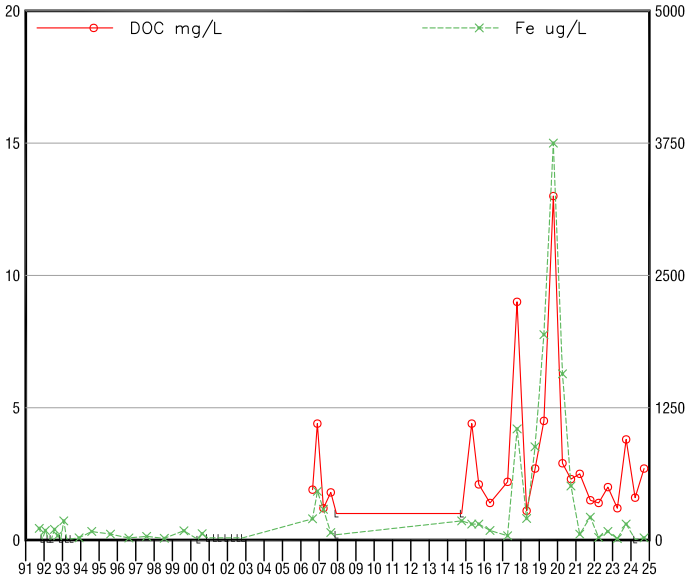
Stand Pipe Piezometer
Screen 183.8 - 183.0 masl

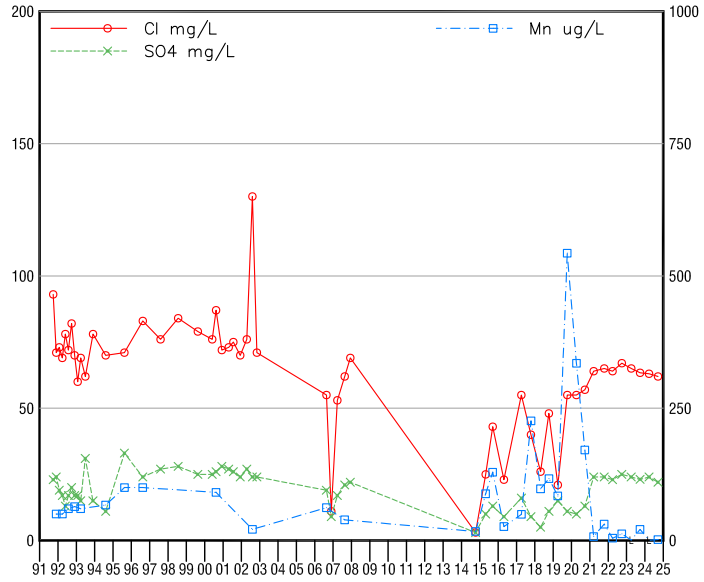


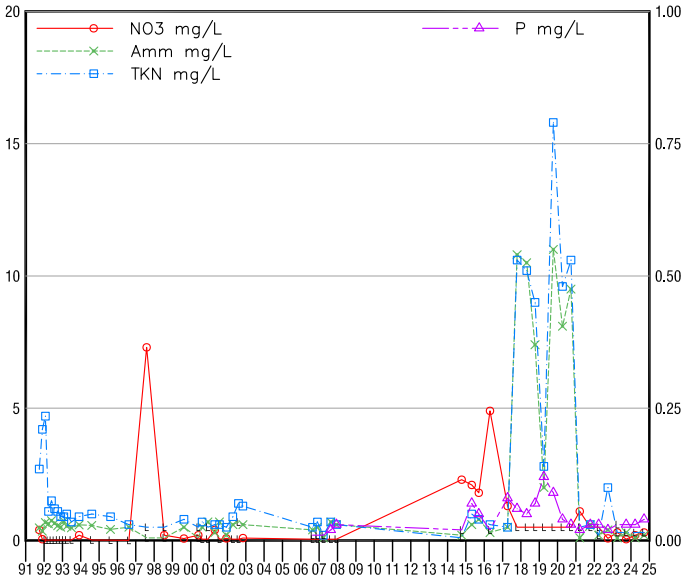
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW2804	280	6270	958	7.4	**2154**	57	190	117	**964**	30.0		0.034	0.001	4.27		-4.2
28-Nov-93	HGW2805	296	5270	927	7.4	**2170**	6	187	112	**1033**	29.0		0.3	0.002	5.87		-2.0
08-Aug-94	HGW2806	294	5100	930	7.6	**1794**	<5	182	116	**857**	30.0		0.017	<0.001	5.38		0.5
17-Aug-95	HGW2807	285	6590	937	7.6	**2160**	5	156	133	**1120**	27.0		<0.01	0.19	4.49		1.3
16-Aug-96	HGW2808	230	6494	962	7.5	**2351**	5	171	130	**1030**	29.0		<0.005	<0.006	4.1		-4.4
01-Aug-97	HGW2809	309	5760	867	8.0	**2156**	9	156	116	**1036**	25.5		0.2	<0.06	4		-2.9
23-Jul-98	HGW2810	280	6940	792	8.4	**2160**	1	139	108	**946**	32.2		<0.05	<0.06	4.4		-6.8
17-Aug-99	HGW2811	287	6570	858	8.0	**2180**	8	154	115	**958**	44.3		<0.05	<0.06	3.6		-5.6
11-Aug-00	HGW2812	255	6840	946	8.4	**2300**	3	171	126	**810**	50.1		<0.05	<0.06	4.6		-11.4
30-Jul-01	HGW2813	295	6540	938	7.7	**2500**	3	168	126	**1010**	28.6		<0.05	<0.06	4.1		-9.1
08-Aug-02	HGW2814	307	6790	913	8.0	**3200**	4	166	121	**946**	31.6		<0.05	<0.06	3.5		-23.0
18-Jul-06	37153	354	860	263		45	30	93	7.6	25	0.83	**5.2**	0.3	<0.05	0.1		-17.1
24-Jul-07	44091	192	436	201		17	24	73	4.6	16	0.87	**6.2**	1.3	<0.05	0.2		-1.5
01-Apr-08	48470	284	557	288		34	28	104	7.0	21	1.4	4.8	0.8	<0.1	<0.1	290	-4.1
16-Mar-09	54428	299	556	329	7.9	20	37	119	7.7	19	0.9	3.1	2.4	<0.1	<0.1	390	-0.4
06-Apr-10	61744	304	720	316	7.5	30	34	113	8.2	23	1.25	**5.8**	0.2	<0.05	0.1	426	-1.8
06-Apr-11	67366	284	758	343	7.6	36	38	125	7.4	19	0.57	**6.7**	0.9	<0.05	0.1	436	0.7
25-Apr-12	74223	296	738	330	7.5	33	38	120	7.3	31	1.02	**9**	0.7	<0.05	0.1	440	1.8
20-Mar-13	81110	247	597	244	7.7	26	31	88	5.6	23	1	**5.3**	1.5	<0.05	<0.1	340	-4.4
27-Oct-14	93274	260	7070	944	7.7	**2210**	44	182	119	**771**	25.1	1	<0.05	<0.05	9.8	3890	-12.0
08-Apr-15	96184	279	8660	1058	7.8	**2850**	38	188	143	**1010**	35.8	1.3	<0.5	<0.5	4.4	4230	-13.3
05-Apr-16	103416	265	8600	1036	7.8	**2870**	25	240	106	**1340**	38.8	<1	0.2	<0.05	5	4390	-3.8
27-Mar-17	111813	277	8240	1184	7.5	**2680**	20	230	148	**1150**	39.3	<1	<0.05	<0.05	4.8	4830	-4.2
26-Mar-18	121017	262	8530	1093	7.5	**2390**	8	205	141	**1190**	31.0	1.1	<0.5	<0.5	5	4580	1.3
09-Apr-19	130969	237	8920	1052	7.7	**2630**	3	192	139	**1080**	38.0	<1	<0.5	<0.5	5.2	4860	-6.5
16-Apr-20	140289	253	9160	1246	7.9	**2380**	17	235	160	**1150**	36.9	1.7	<0.5	<0.5	5.1	4850	2.5
25-Mar-21	148773	247	9150	1122	7.6	**2520**	6	197	153	**1200**	30.7	<1	<0.5	<0.5	5.2	4230	-0.2
22-Mar-22	159167	238	9100	1045	7.3	**2570**	1	191	138	**948**	31.9	<1	<0.5	<0.5	5.6	5500	-9.9
20-Mar-23	168877	279	9820	1097	7.4	**2400**	23	205	142	**989**	32.6	<1	<0.5	<0.5	5.3	4710	-5.4
20-Mar-24	179421	279	7930	1080	7.5	**2580**	23	191	146	**903**	28.7	<1	<0.5	<0.5	5.3	4530	11.7
TOTAL SAMPLES		39	39	39	36	39	39	39	39	39	39	19	39	39	39	17	
AVERAGE 2024																	

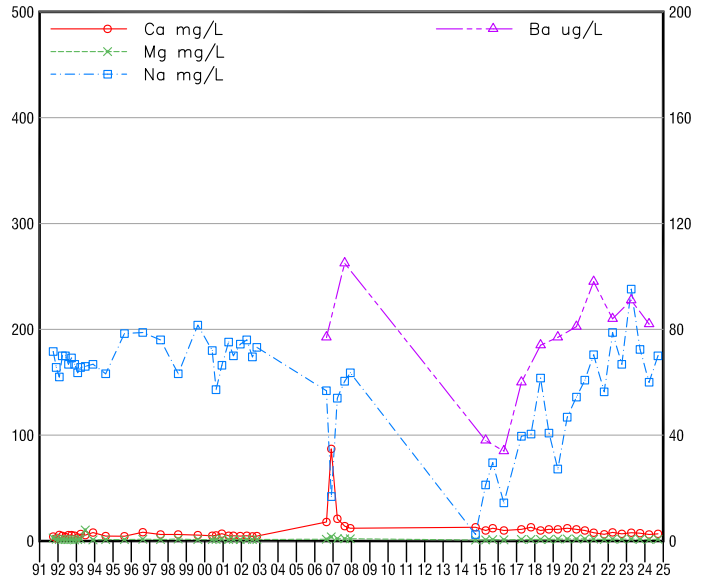
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-63-I

Shallow Lower Bedrock

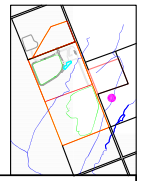
Screen 171.5 - 170.8 masl

CA008825	wsp	F424019
24 Mar 25		

BH-63-I

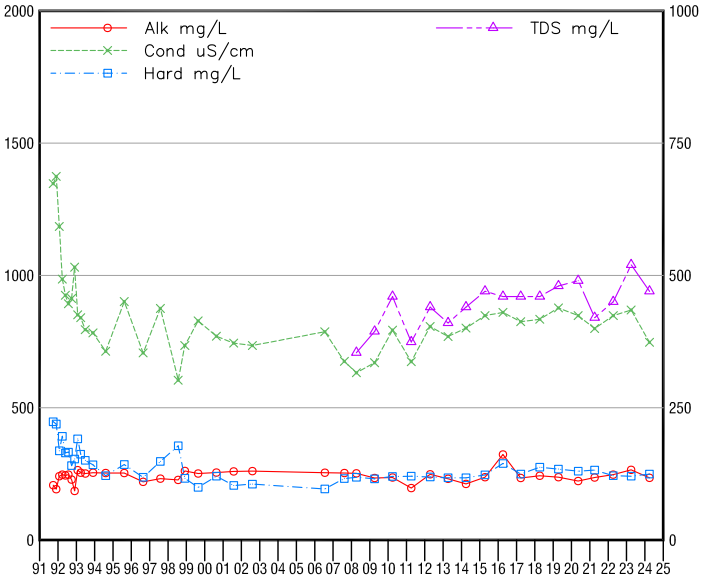
Shallow Lower Bedrock

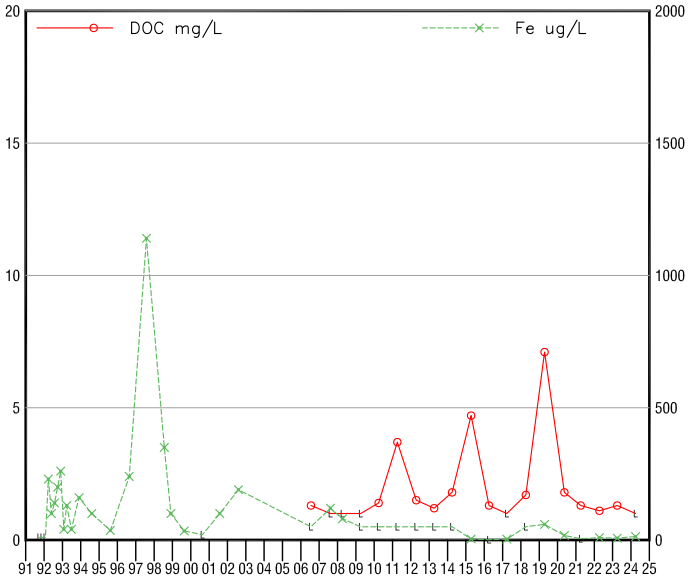
Stand Pipe Piezometer
Screen 171.5 - 170.8 masl

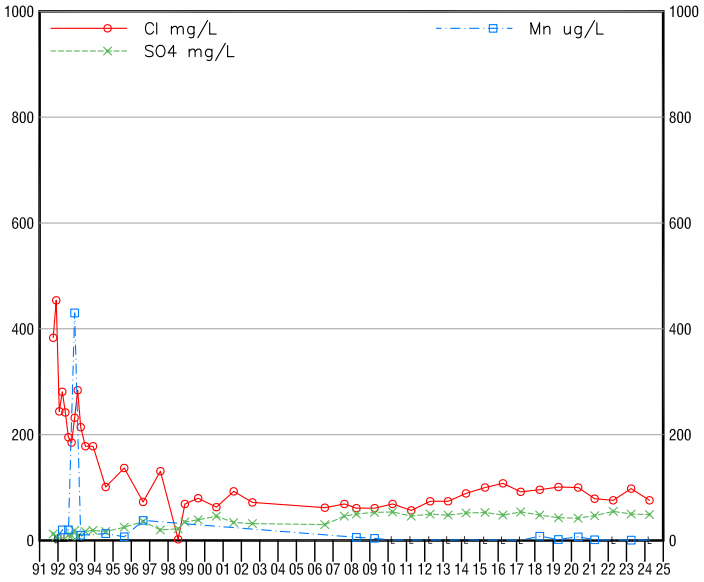


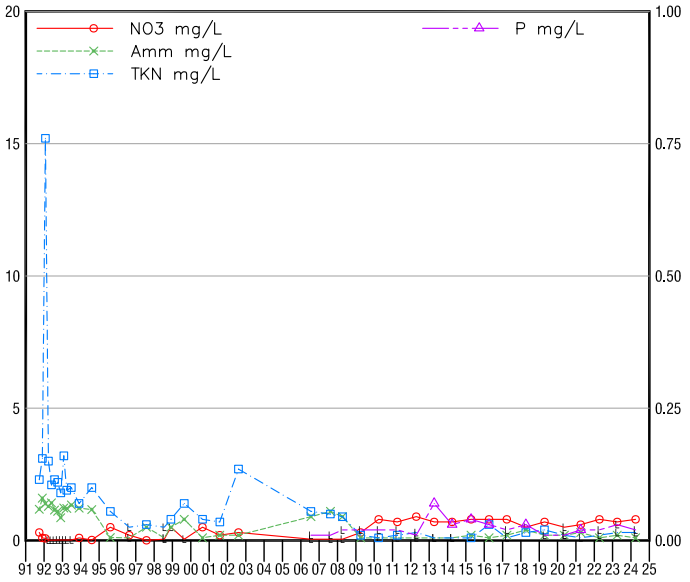
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
26-Jul-01	HGW2875	314	792	19	8.3	75	26	5.0	1.5	175	4.48		<0.05	<0.06	0.7		-4.6
10-Dec-01	HGW2876	323	732	17	8.2	70	24	4.7	1.3	186	3.36		0.08	<0.06	0.2		-2.3
18-Apr-02	HGW2877	338	844	18	8.4	76	27	4.9	1.5	190	3.43		<0.05	<0.06	0.6		-3.8
08-Aug-02	HGW2878	304	810	16	8.4	130	24	4.4	1.3	174	3.23		<0.05	<0.06	<0.7		-12.4
04-Nov-02	HGW2879	305	836	17	8.2	71	24	4.6	1.4	183	4.55		0.09	<0.06	0.6		-0.8
21-Aug-06	37824	301	624	51		55	19	18	1.7	142	3.63	1.9	<0.05	<0.05	0.4		-4.1
27-Nov-06	39743	332	625	232		11	9	87	3.9	42	1.44	4.4	<0.05	<0.05	0.5		-4.1
26-Mar-07	41937	319	579	62		53	17	21	2.2	135	4.07	1.2	<0.05	<0.05	0.1		-6.4
20-Aug-07	44588	305	673	44		62	21	14	2.1	151	4.17	1.8	<0.05	<0.05	0.7		-4.1
10-Dec-07	46641	300	818	38		69	22	12	2.1	159	4.23	<1	<0.05	<0.05	0.6		-3.4
08-Oct-14	92865	32	105	37	7.1	3	3	13	0.9	6.1	4.6	<1	2.3	<0.05	0.2	70	9.9
27-Apr-15	96616	131	381	30	8.1	25	10	10	1.0	53	4.7	4.4	2.1	<0.05	0.6	220	-8.9
14-Sep-15	99619	190	546	35	8.1	43	13	12	1.3	74	7.5	2.1	1.8	0.09	0.8	320	-13.0
24-Apr-16	103847	92	323	30	7.8	23	9	10	1.1	36	9.3	1.4	4.9	<0.05	0.3	180	-10.4
09-Apr-17	112159	217	643	32	8.2	55	16	11	1.5	99	6.4	2.2	1.3	0.14	0.5	360	-9.9
17-Oct-17	117246	236	603	37	7.9	40	9	13	1.5	101	7.3	**9**	<0.5	<0.5	10.8	290	0.8
25-Apr-18	121903	199	496	31	7.7	26	5	10	1.5	154	5.7	1.1	<0.5	<0.5	10.5	210	26.1
09-Oct-18	126926	234	659	32	8.2	48	11	11	1.4	102	6.6	2.7	<0.5	<0.5	7.4	350	-3.8
03-Apr-19	130812	163	420	35	8.2	21	15	11	1.8	68	7.7	4.5	<0.5	<0.5	2	250	-1.1
08-Oct-19	135881	302	822	38	7.9	55	11	12	1.9	117	9	**13**	<0.5	<0.5	11	380	-5.5
08-Apr-20	140092	291	819	35	7.9	55	10	11	1.9	136	7.9	2.9	<0.5	<0.5	8.1	440	-0.9
23-Sep-20	144447	289	812	34	8.0	57	13	10	1.9	152	6.8	2.3	<0.5	<0.5	9.5	410	3.1
17-Mar-21	148590	275	797	27	7.9	64	24	7.8	1.8	176	4.2	2.5	1.1	<0.5	0.1	470	2.6
13-Oct-21	154614	276	817	21	8.3	65	24	6.3	1.4	141	3.6	1.5	<0.5	<0.5	0.6	450	-8.0
29-Mar-22	159328	278	824	28	8.2	64	23	8.1	1.8	197	4.6	1.4	<0.5	<0.5	0.2	460	8.2
28-Sep-22	164703	286	726	23	8.3	67	25	6.7	1.6	167	3.8	2	0.08	<0.05	0.4	470	-1.6
04-Apr-23	169372	289	804	27	8.2	65	24	7.8	1.9	**238**	3.6	1.2	0.3	<0.05	0.1	490	14.9
27-Sep-23	2023A032	291	745	24.8	8.2	63.4	23.1	7.4	1.54	181	4.2	3.8	0.05	<0.05	0.3	470	3.6
25-Mar-24	179554	289	798	21	8.3	63	24	6.2	1.4	150	3.1	1.6	0.2	<0.05	0.1	470	5.7
18-Sep-24	184587	287	744	24	8.0	62	22	6.8	1.6	175	4	2.7	0.3	<0.05	0.2	500	2.6
TOTAL SAMPLES		52	52	52	47	52	52	52	52	52	52	25	52	52	52	20	
AVERAGE 2024		288	771	23	8.2	63	23	6.5	1.5	163	4	2.2	0.3	<0.05	0.2	485	

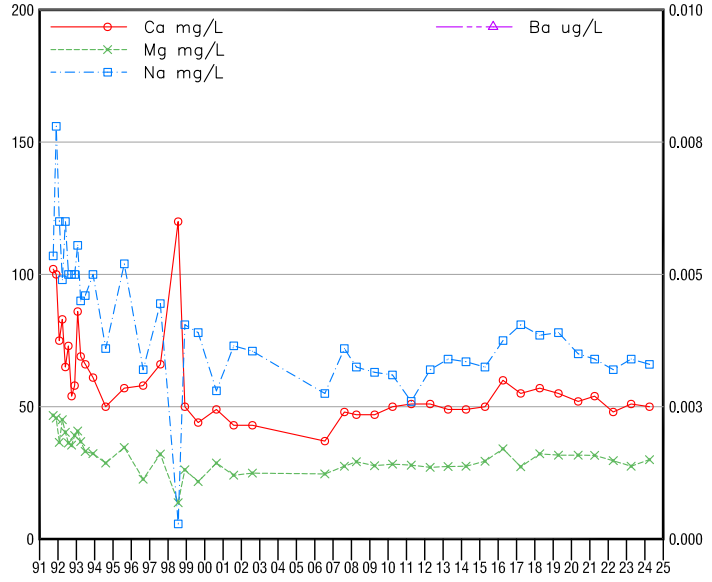
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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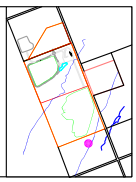
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-64-I

Shallow Lower Bedrock

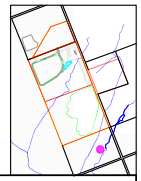
Screen 183.6 - 182.9 masl

CA008825 24 Mar 25	wsp	F424020

BH-64-I

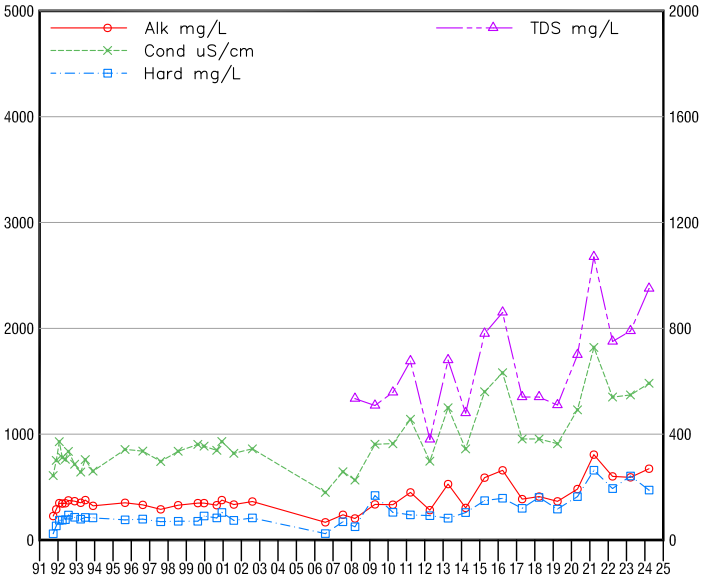
Shallow Lower Bedrock

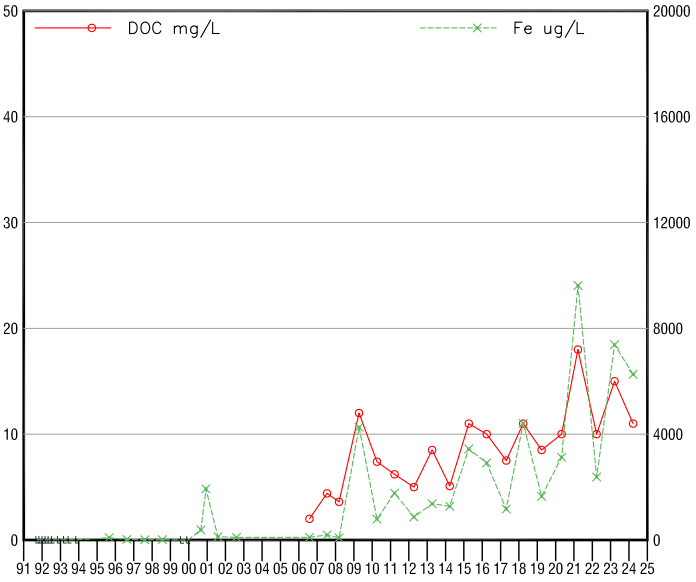
Stand Pipe Piezometer
Screen 183.6 - 182.9 masl

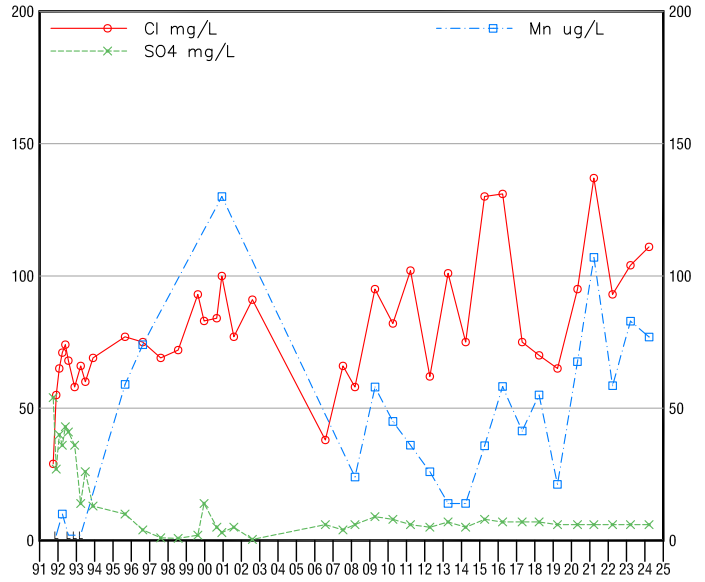


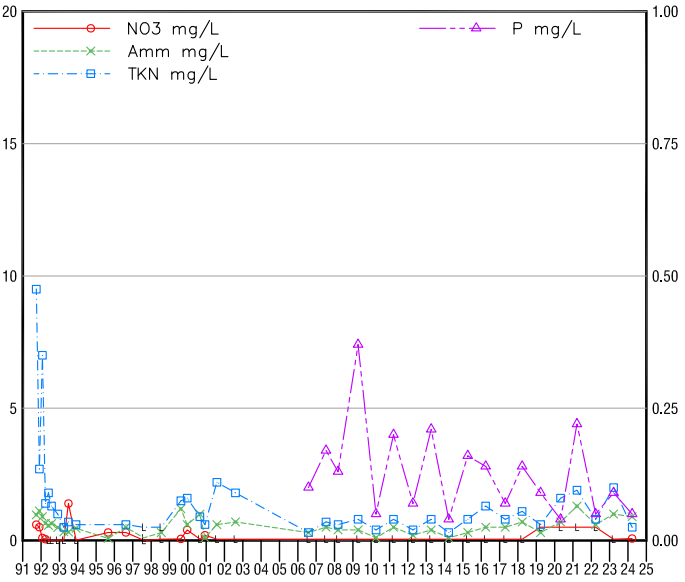
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-93	HGW2933	254	783	284	7.6	178	19	61	32.3	100	7.74		0.1	0.004	1.22		-0.7
08-Aug-94	HGW2934	253	713	243	7.6	101	17	50	28.7	72	8.13		0.020	0.018	1.17		0.1
14-Aug-95	HGW2935	253	901	285	7.8	137	25	57	34.6	104	8.4		0.5	0.02	0.11		4.8
24-Aug-96	HGW2936	220	707	237	8.0	73	36	58	22.6	64	5.51		0.2	<0.006	<0.1		2.9
01-Aug-97	HGW2937	232	875	297	8.1	131	20	66	32.1	89	7.23		0.007	<0.006	0.5		7.0
23-Jul-98	HGW2938	227	604	356	7.9	2	22	120	13.7	5.7	1.28		<0.05	<0.06	<0.1		18.8
01-Dec-98	HGW2939	261	735	233	7.8	69	35	50	26.2	81	10.5		<0.5	<0.6	0.5		3.7
24-Aug-99	HGW2940	251	828	199	8.5	80	39	44	21.7	78	12.3		<0.05	<0.06	0.8		-2.2
22-Aug-00	HGW2941	255	770	241	8.1	63	46	49	28.7	56	12.3		0.5	<0.06	0.1		-1.8
01-Aug-01	HGW2942	259	744	206	8.0	93	34	43	24.1	73	6.95		0.2	<0.06	0.2		-6.5
08-Aug-02	HGW2943	260	735	211	8.2	72	32	43	24.9	71	6.61		0.3	<0.06	0.2		-2.7
20-Jul-06	37176	254	787	193		62	30	37	24.6	55	7	1.3	<0.05	<0.05	0.9		-6.9
13-Aug-07	44448	253	675	232		69	46	48	27.5	72	7.83	<1	<0.05	<0.05	1.1		0.6
09-Apr-08	48637	252	632	237		61	50	47	29.2	65	7.54	<1	<0.05	<0.1	0.9	354	0.2
06-Apr-09	54900	234	670	231	7.8	61	53	47	27.7	63	7.6	<1	0.3	<0.1	0.1	394	0.4
29-Mar-10	61623	236	793	240	7.8	69	54	50	28.3	62	7.72	1.4	0.8	<0.05	<0.1	460	-0.8
06-Apr-11	67368	196	674	241	7.8	57	46	51	27.9	52	7.84	3.7	0.7	<0.05	<0.1	374	5.3
18-Apr-12	74086	248	807	238	7.8	74	50	51	27.1	64	7.68	1.5	0.9	<0.05	<0.1	440	-2.6
09-Apr-13	81505	231	769	235	7.9	74	48	49	27.4	68	7.39	1.2	0.7	<0.05	<0.1	410	0.6
01-Apr-14	88813	212	801	235	8.0	89	52	49	27.5	67	7.1	1.8	0.7	<0.05	<0.1	440	-0.5
14-Apr-15	96323	237	848	246	8.1	100	53	50	29.4	65	7.2	4.7	0.8	<0.05	0.2	470	-4.5
07-Apr-16	103504	323	860	289	7.8	108	48	60	34.1	75	7.6	1.3	0.8	<0.05	0.1	460	-6.8
27-Mar-17	111807	234	825	249	7.9	92	54	55	27.3	81	7.6	<1	0.8	<0.05	0.2	460	1.5
09-Apr-18	121425	243	834	275	7.8	96	48	57	32.2	77	9.3	1.7	<0.5	<0.5	0.4	460	3.0
16-Apr-19	131146	237	877	268	8.1	101	43	55	31.7	78	8	**7.1**	0.7	<0.5	0.2	480	2.4
14-May-20	140894	223	848	260	8.0	100	42	52	31.7	70	7.2	1.8	<0.5	<0.5	0.2	490	2.0
06-Apr-21	149001	236	799	264	7.8	79	47	54	31.6	68	8	1.3	0.6	<0.5	0.3	420	3.1
12-Apr-22	159788	247	848	243	7.7	76	55	48	29.6	64	7.7	1.1	0.8	<0.5	0.1	450	-2.7
03-Apr-23	169324	265	869	241	7.7	98	50	51	27.5	68	6.6	1.3	0.7	<0.05	0.2	520	-6.9
02-Apr-24	179740	235	747	249	7.3	76	49	50	30.0	66	7.6	<1	0.8	<0.05	0.1	470	1.8
TOTAL SAMPLES		41	41	41	38	41	41	41	41	41	41	19	41	41	41	17	
AVERAGE 2024																	

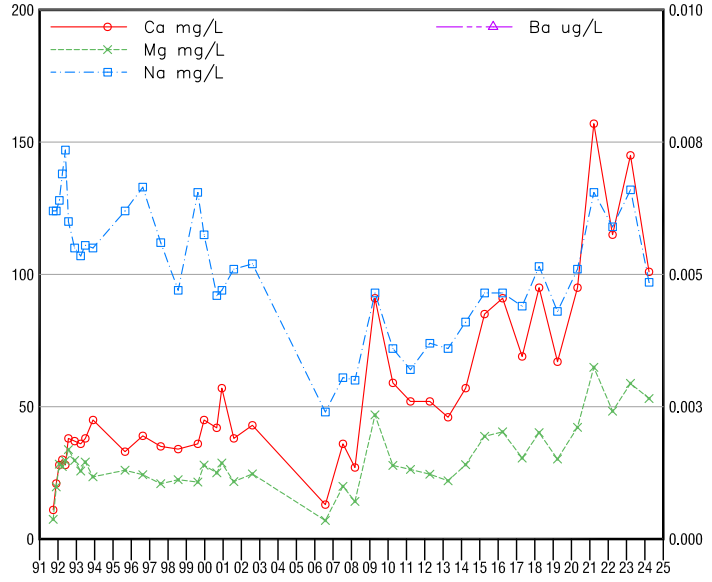
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



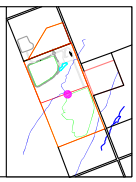








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-66-I

Shallow Lower Bedrock

Screen 185.3 - 184.5 masl

CA008825 24 Mar 25	wsp	F424021

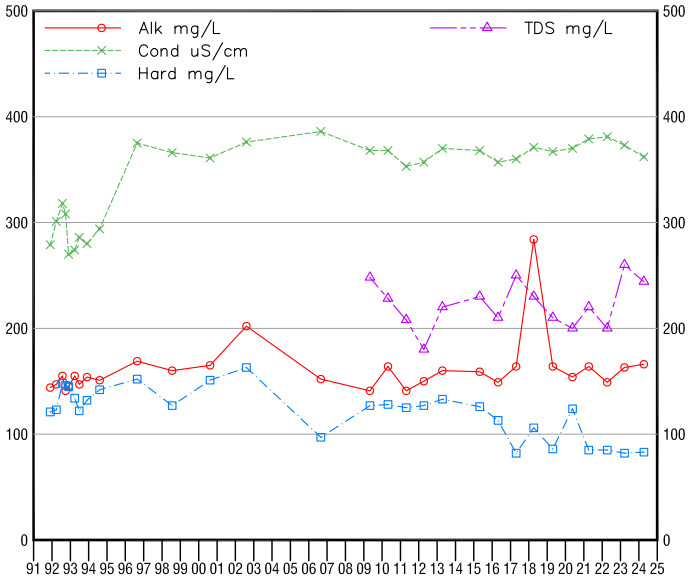
BH-66-I

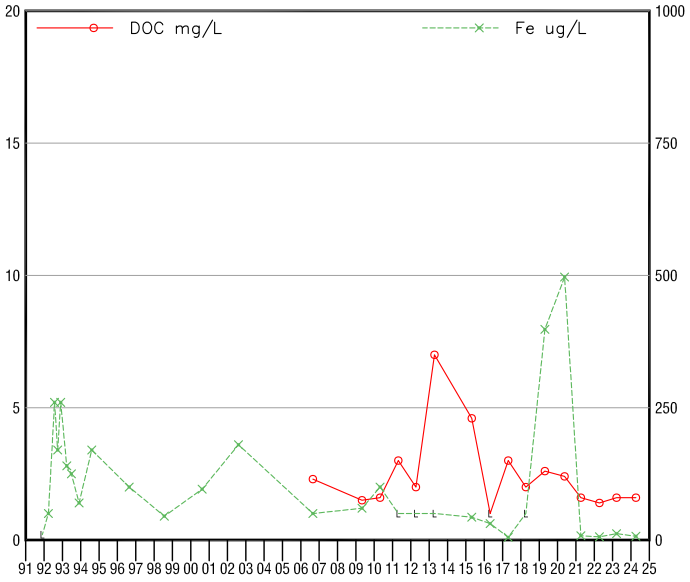
Shallow Lower Bedrock

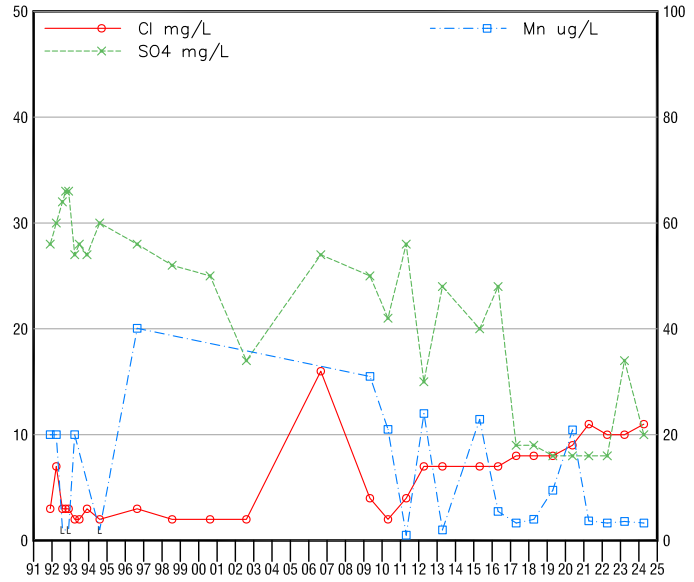
Stand Pipe Piezometer
Screen 185.3 - 184.5 masl

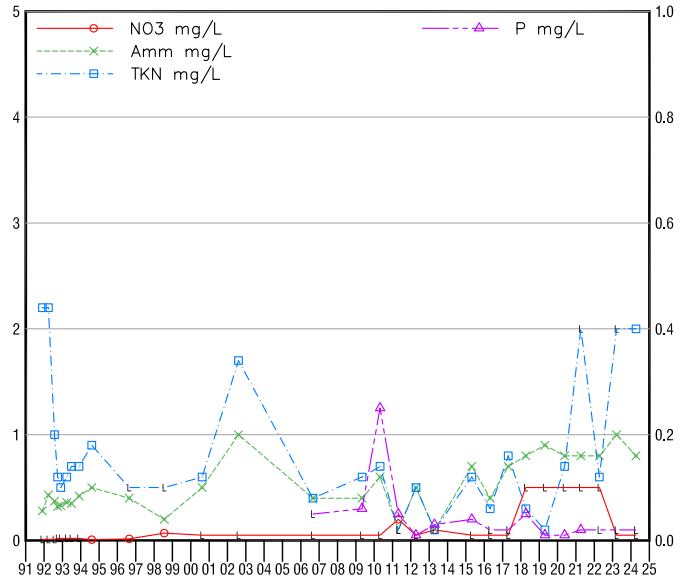
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-93	HGW3029	323	650	209	8.1	69	13	45	23.5	110	4		<0.01	0.004	0.46		2.5
30-Aug-95	HGW3030	352	855	190	7.7	77	10	33	26.0	124	5.6		0.3	<0.03	0.08		-0.4
16-Aug-96	HGW3031	332	840	197	8.4	75	4	39	24.3	133	6.36		0.3	<0.006	0.5		5.7
08-Aug-97	HGW3032	289	742	173	8.1	69	1	35	20.9	112	6.52		<0.005	0.022	<0.1		4.6
23-Jul-98	HGW3033	329	838	177	8.3	72	0.8	34	22.4	94	7.52		<0.05	<0.06	0.3		-4.5
17-Aug-99	HGW3034	349	903	177	8.5	93	2	36	21.5	131	10.9		0.06	<0.06	1.2		-0.1
20-Dec-99	HGW3035	349	886	226	8.5	83	14	45	27.9	115	10.9		0.4	<0.06	0.6		1.0
29-Aug-00	HGW3036	328	847	208	8.2	84	5	42	25.0	92	11.0		<0.05	<0.06	1		-2.8
08-Dec-00	HGW3037	377	930	260	8.0	100	3	57	28.7	94	12.6		0.2	<0.06	0.1		-3.7
03-Aug-01	HGW3038	335	819	185	7.9	77	5	38	21.7	102	5.36		<0.05	<0.06	0.6		-3.8
08-Aug-02	HGW3039	363	861	208	8.1	91	0.4	43	24.6	104	5.28		<0.05	<0.06	0.7		-5.2
31-Jul-06	37418	167	449	60		38	6	13	7.0	48	1.89	2	<0.05	<0.05	0.3		-14.6
16-Jul-07	43946	238	645	172		66	4	36	19.9	61	3.55	4.4	<0.05	<0.05	0.5		-3.9
12-Mar-08	48143	203	566	125		58	6	27	14.2	60	2.79	3.6	<0.05	<0.05	0.4	534	-5.5
15-Apr-09	55049	336	904	420	7.4	95	9	91	46.9	93	4.83	**12**	<0.05	<0.1	0.4	508	14.2
06-Apr-10	61746	333	910	261	7.2	82	8	59	27.8	72	3.35	**7.4**	<0.05	<0.05	0.1	558	-3.8
21-Mar-11	67072	450	1140	237	7.5	102	6	52	26.3	64	3.64	**6.2**	<0.05	<0.05	0.5	676	-21.6
11-Apr-12	73927	282	744	230	7.5	62	5	52	24.5	74	3.68	5	<0.05	<0.05	0.2	380	3.1
09-Apr-13	81507	528	1250	206	7.1	101	7	46	22.0	72	3.44	**8.5**	<0.05	<0.05	0.4	680	-29.3
24-Mar-14	88627	303	861	259	7.4	75	5	57	28.1	82	3.8	**5.1**	<0.05	<0.05	0.1	480	3.5
07-Apr-15	96143	589	1400	372	7.1	130	8	85	38.8	93	4.4	**11**	<0.05	<0.05	0.3	780	-14.2
29-Mar-16	103224	658	1580	394	7.4	131	7	91	40.5	93	4.5	**10**	<0.05	<0.05	0.5	860	-16.5
23-Apr-17	112538	386	955	299	7.3	75	7	69	30.6	88	4.2	**7.5**	<0.05	<0.05	0.5	540	0.1
26-Mar-18	121013	410	955	402	7.3	70	7	95	40.2	103	4.7	**11**	<0.05	<0.5	0.7	540	10.9
28-Mar-19	130676	365	909	292	7.3	65	6	67	30.2	86	4.1	**8.5**	<0.5	<0.5	0.3	510	2.7
29-Apr-20	140550	482	1230	410	7.2	95	6	95	42.2	102	4.9	**10**	<0.5	<0.5	0.7	700	1.9
22-Mar-21	148687	807	1820	659	6.9	137	6	157	64.9	131	6.2	**18**	<0.5	<0.5	1.3	1070	-1.6
29-Mar-22	159336	601	1350	486	7.0	93	6	115	48.3	118	5.7	**10**	<0.5	<0.5	0.6	750	1.2
21-Mar-23	168980	592	1370	604	7.0	104	6	145	58.8	132	6.6	**15**	<0.05	<0.05	1	790	10.3
25-Mar-24	179561	673	1480	471	7.1	111	6	101	53.1	97	5.7	**11**	0.07	<0.05	0.9	950	7.9
TOTAL SAMPLES		39	39	39	36	39	39	39	39	39	39	19	39	39	39	17	
AVERAGE 2024																	

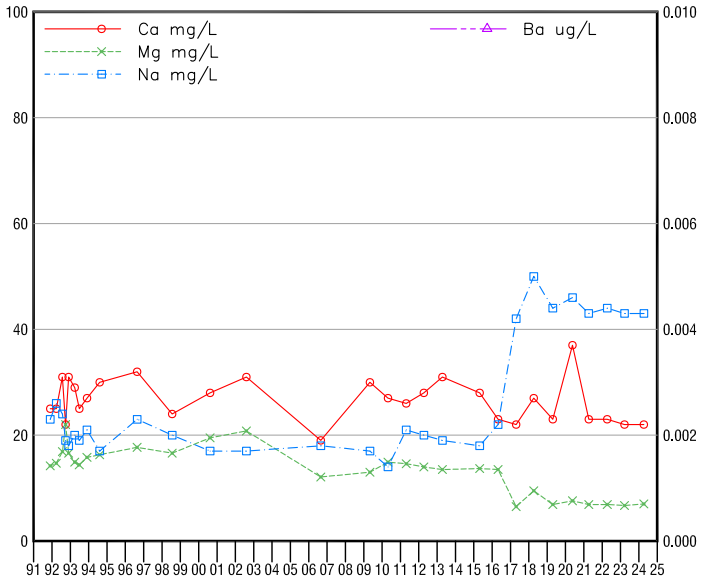
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



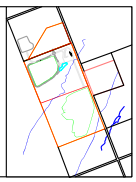








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-70-I

Shallow Bedrock Unit

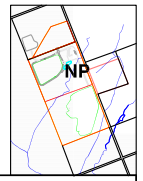
Screen 173.6 - 172.8 masl

CA008825 24 Mar 25	wsp	F424022

BH-70-I

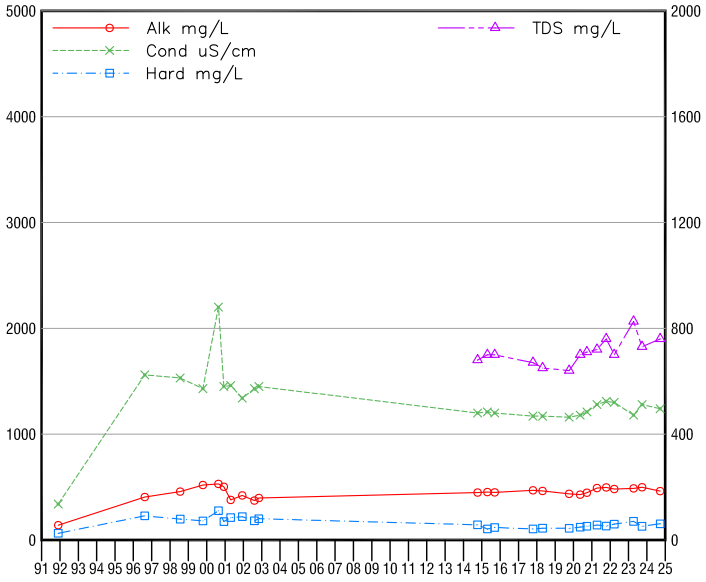
Shallow Bedrock Unit

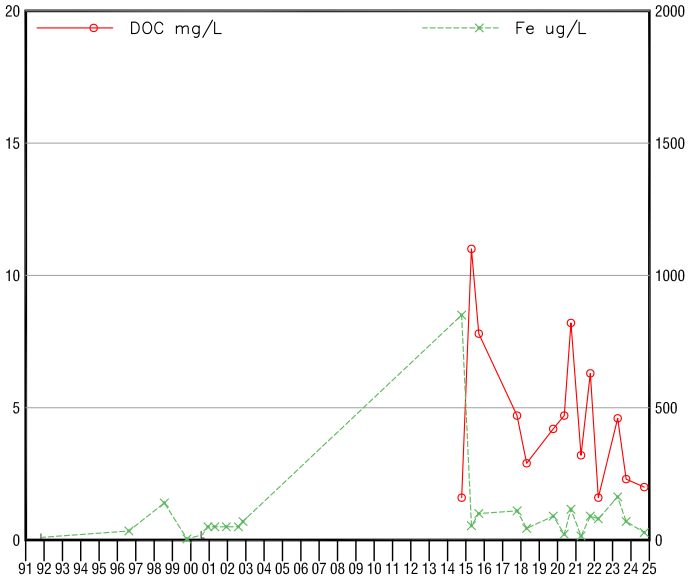
Stand Pipe Piezometer
Screen 173.6 - 172.8 masl

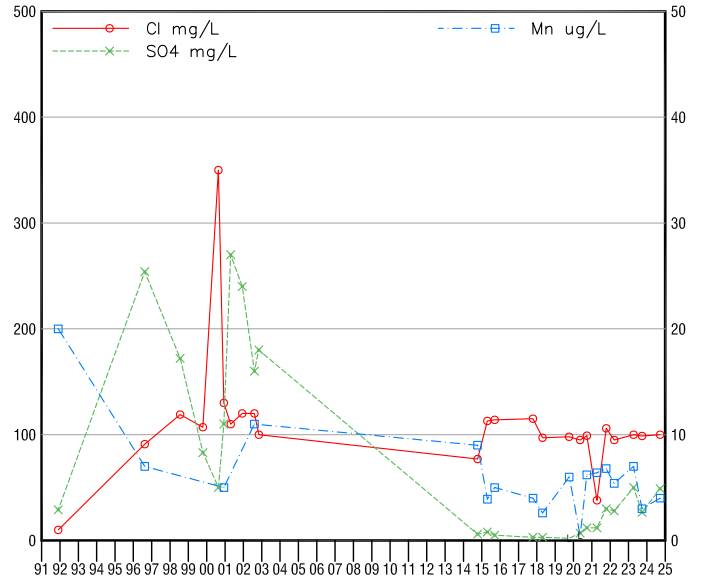


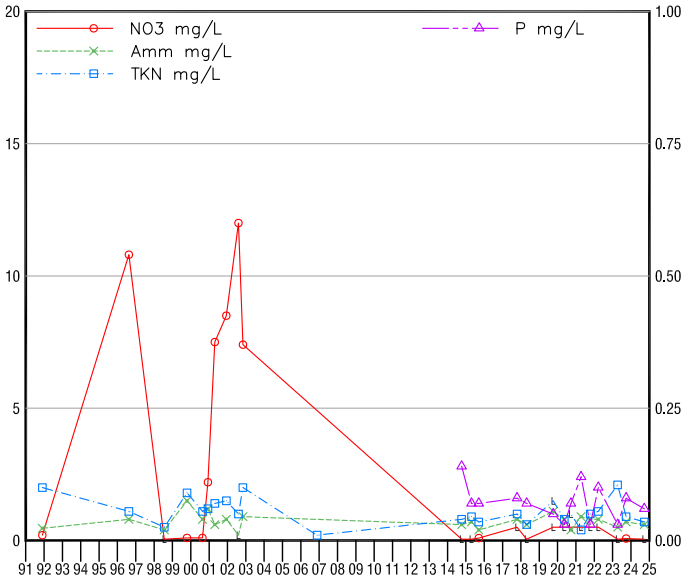
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-91	HGW3100	144	279	121	8.1	3	28	25	14.2	23	2.12		<0.01	<0.001	0.28		-1.1
28-Mar-92	HGW3101	147	301	123	7.5	7	30	25	14.7	26	3.33		<0.01	<0.001	0.43		-0.4
28-Jul-92	HGW3102	155	318	148	8.0	3	32	31	16.9	24	2.86		<0.01	<0.001	0.37		3.4
28-Sep-92	HGW3103	141	308	146	8.1	3	33	22	22.0	19	2.11		<0.02	<0.001	0.32		3.1
28-Nov-92	HGW3104	145	270	145	8.0	3	33	31	16.6	18	2.35		<0.02	<0.001	0.33		1.4
28-Mar-93	HGW3105	155	274	134	7.8	2	27	29	14.9	20	2		<0.02	<0.001	0.36		-1.4
28-Jun-93	HGW3106	147	286	122	7.7	2	28	25	14.4	19	2.14		<0.02	<0.001	0.35		-3.3
28-Nov-93	HGW3107	154	280	132	7.9	3	27	27	15.8	21	2.29		<0.02	0.002	0.42		-1.4
08-Aug-94	HGW3108	151	294	142	7.8	2	30	30	16.3	17	2.54		0.007	<0.001	0.5		-0.5
24-Aug-96	HGW3109	169	375	152	8.1	3	28	32	17.7	23	2.76		0.015	<0.006	0.4		1.0
23-Jul-98	HGW3110	160	366	127	8.2	2	26	24	16.6	20	2.7		0.07	<0.06	0.2		-4.5
15-Aug-00	HGW3111	165	361	151	8.3	2	25	28	19.5	17	3.66		<0.05	<0.06	0.5		0.3
08-Aug-02	HGW3112	202	376	163	8.2	2	17	31	20.8	17	2.08		<0.05	<0.06	1		-3.7
29-Aug-06	37984	152	386	97		16	27	19	12.1	18	2.09	2.3	<0.05	<0.05	0.4		-18.2
04-May-09	55530	141	368	127	7.7	4	25	30	13.0	17	2.11	1.5	<0.05	<0.1	0.4	248	-1.4
28-Apr-10	62147	164	368	128	8.0	2	21	27	14.9	14	2.31	1.6	<0.05	<0.05	0.6	228	-7.1
26-Apr-11	67649	141	353	125	7.8	4	28	26	14.6	21	2.68	3	0.2	<0.05	<0.1	208	-0.6
12-Apr-12	73950	150	357	127	7.9	7	15	28	14.0	20	2.82	2	<0.05	<0.05	0.5	180	0.4
16-Apr-13	81637	160	370	133	8.0	7	24	31	13.5	19	2.53	**7**	0.1	<0.05	<0.1	220	-4.2
28-Apr-15	96632	159	368	126	8.1	7	20	28	13.7	18	2.5	4.6	<0.05	<0.05	0.7	230	-5.1
28-Apr-16	103946	149	357	113	7.9	7	24	23	13.5	22	2.5	<1	<0.05	<0.05	0.4	210	-5.1
23-Apr-17	112533	164	360	82	8.4	8	9	22	6.5	42	5	3	<0.05	<0.05	0.7	250	-1.0
09-Apr-18	121419	284	371	106	8.4	8	9	27	9.5	50	5.8	2	<0.5	<0.5	0.8	230	-15.0
23-Apr-19	131253	164	367	86	8.4	8	8	23	6.9	44	4.9	2.6	<0.5	<0.5	0.9	210	2.4
20-May-20	141022	154	370	124	8.4	9	8	37	7.6	46	5.3	2.4	<0.5	<0.5	0.8	200	14.6
08-Apr-21	149081	164	379	85	8.4	11	8	23	6.9	43	5.1	1.6	<0.5	<0.5	0.8	220	0.4
12-Apr-22	159790	149	381	85	8.4	10	8	23	6.9	44	5	1.4	<0.5	<0.5	0.8	200	5.1
21-Mar-23	168977	163	373	82	8.3	10	17	22	6.7	43	4.9	1.6	<0.05	<0.05	1	260	-3.0
10-Apr-24	179981	166	362	83	7.9	11	10	22	7.0	43	5.2	1.6	<0.05	<0.05	0.8	244	0.1
TOTAL SAMPLES		29	29	29	28	29	29	29	29	29	29	16	29	29	29	15	
AVERAGE 2024																	

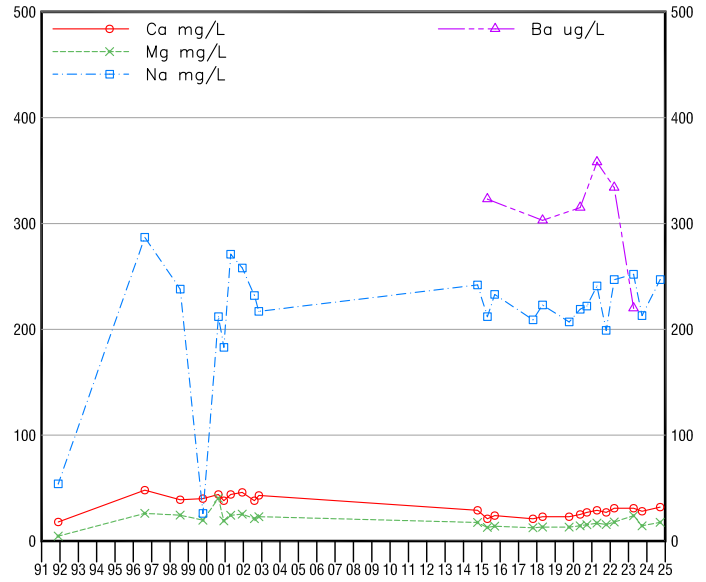
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



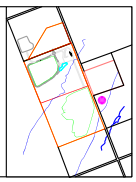








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-75-I

Shallow Bedrock Unit

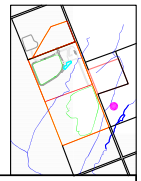
Screen 182.1 - 181.3 masl

CA008825 24 Mar 25	wsp	F424023

BH-75-I

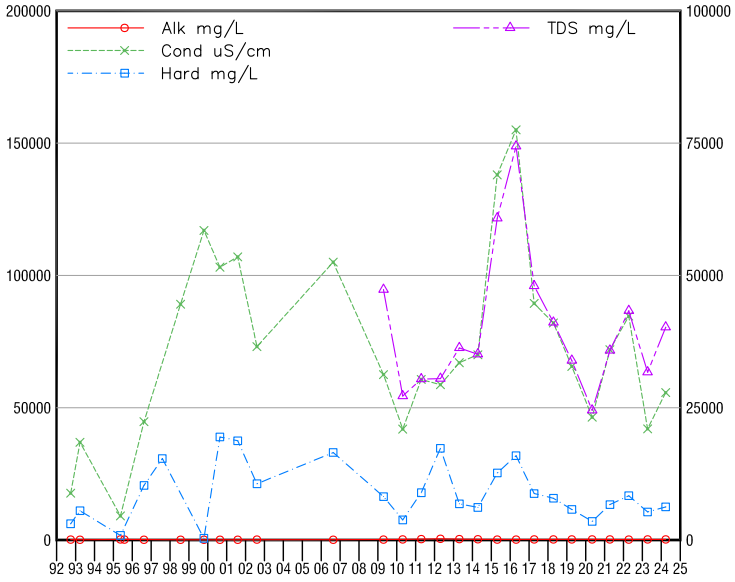
Shallow Bedrock Unit

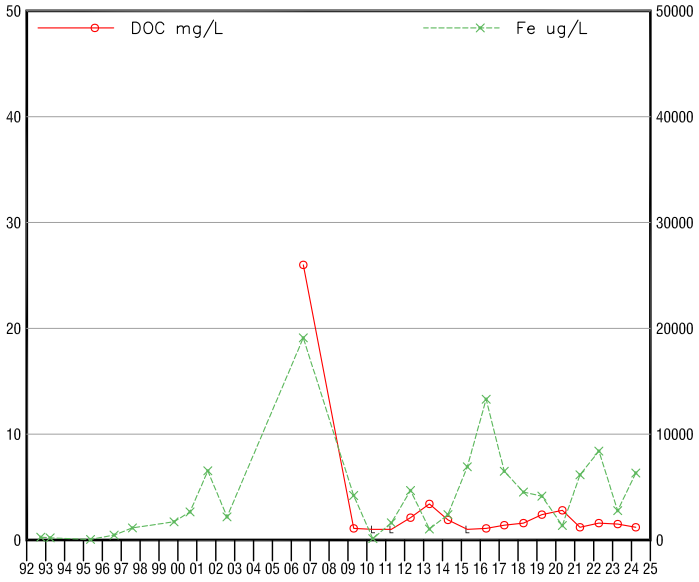
Stand Pipe Piezometer
Screen 182.1 - 181.3 masl

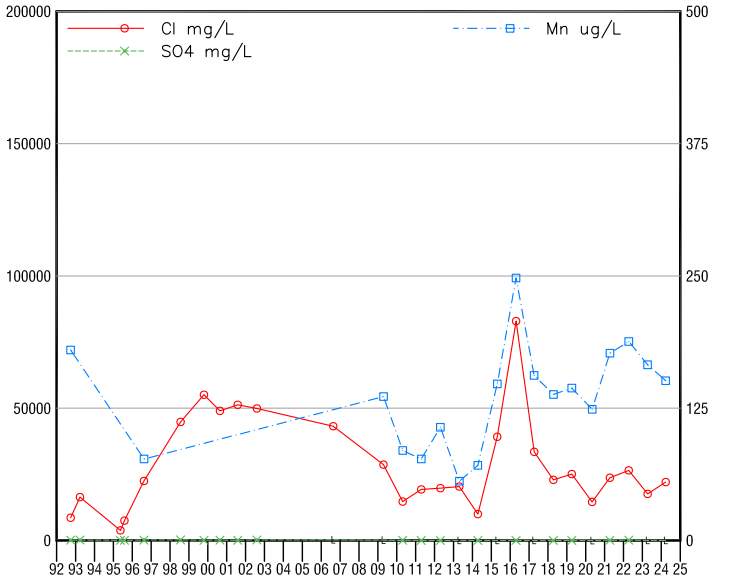


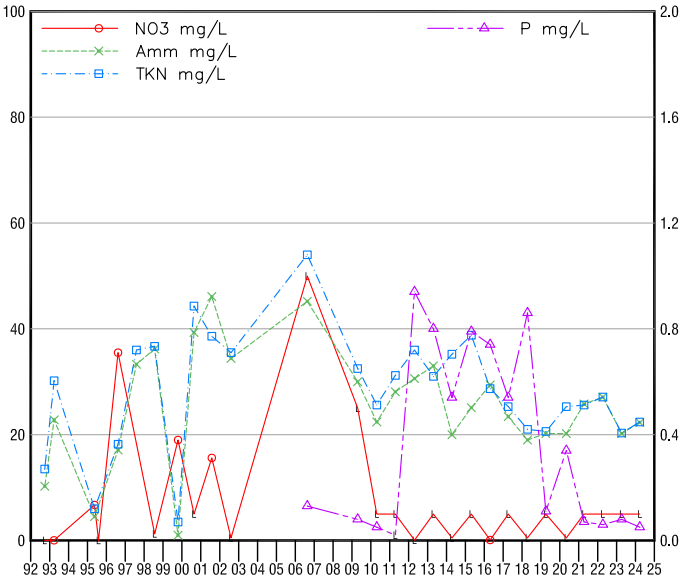
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Nov-91	HGW3443	139	339	63	8.4	10	29	18	4.6	54	4.44		0.2	0.002	0.46		0.8
16-Aug-96	HGW3444	405	1560	228	8.0	91	254	48	26.1	**287**	9.02		**10.8**	0.36	0.8		1.8
23-Jul-98	HGW3445	457	1531	197	8.7	119	172	39	24.4	**238**	14.8		<0.05	<0.06	0.4		-4.5
18-Oct-99	HGW3446	519	1430	180	8.4	107	83	40	19.7	26	20.5		0.1	<0.06	1.5		-47.8
22-Aug-00	HGW3447	530	2200	276	8.3	**350**	50	44	40.3	**212**	23.3		0.1	<0.06	0.8		-16.6
08-Dec-00	HGW3448	502	1450	174	8.6	130	110	38	19.1	183	20.9		2.2	<0.06	1.2		-14.5
23-Apr-01	HGW3449	379	1460	211	8.2	110	270	44	24.3	**271**	9.73		7.5	0.08	0.6		-1.6
10-Dec-01	HGW3450	421	1340	220	8.0	120	240	46	25.4	**258**	9.84		8.5	<0.06	0.8		-4.4
08-Aug-02	HGW3451	372	1430	181	8.4	120	160	38	21.1	**232**	9.16		**12.0**	<0.06	<0.2		-3.7
04-Nov-02	HGW3452	396	1450	201	8.0	100	180	43	23.0	**217**	13.1		7.4	<0.06	0.9		-4.0
08-Oct-14	92868	448	1200	143	8.1	77	6	29	17.5	**242**	10.1	1.6	<0.05	<0.05	0.6	680	9.9
22-Apr-15	96520	452	1210	104	8.1	113	8	21	12.8	**212**	8	**11**	<0.05	<0.05	0.7	700	-3.4
14-Sep-15	99617	449	1200	118	7.9	114	5	24	14.0	**233**	8.3	**7.8**	0.09	<0.05	0.4	700	1.7
17-Oct-17	117243	469	1170	104	8.1	115	3	21	12.5	**209**	7.7	4.7	<0.5	<0.5	0.8	670	-5.2
25-Apr-18	121901	463	1170	111	8.0	97	3	23	13.2	**223**	8.3	2.9	<0.05	<0.05	0.6	650	0.5
07-Oct-19	135827	436	1160	110	8.0	98	<2	23	13.1	**207**	7.6	4.2	<0.5	<0.5	1.1	640	0.1
13-May-20	140867	428	1180	121	8.3	95	7	25	14.4	**219**	7.9	4.7	<0.5	<0.5	0.8	700	3.5
23-Sep-20	144445	447	1210	130	8.1	99	12	27	15.4	**222**	8.7	**8.2**	<0.5	<0.5	0.4	710	2.2
13-Apr-21	149227	490	1280	141	7.9	38	12	29	16.9	**241**	9.1	3.2	<0.5	<0.5	0.9	720	10.0
13-Oct-21	154612	496	1310	131	8.0	106	30	27	15.5	199	8.2	**6.3**	<0.5	<0.5	0.8	760	-7.9
22-Mar-22	159173	482	1300	150	7.9	95	28	31	17.9	**247**	9.9	1.6	<0.5	<0.5	0.8	700	4.2
11-Apr-23	169534	487	1180	176	8.0	100	50	31	23.9	**252**	8.1	4.6	<0.05	<0.05	0.5	826	4.0
27-Sep-23	2023A030	498	1280	129	7.8	98.8	26.6	28.1	14.4	**213**	8.6	2.3	0.07	<0.05	0.7	730	3.3
23-Sep-24	184723	462	1240	153	7.9	100	49	32	17.6	**247**	8.8	2	<0.05	<0.05	0.6	760	5.0
TOTAL SAMPLES		24	24	24	24	24	24	24	24	24	24	14	24	24	24	14	
AVERAGE 2024																	

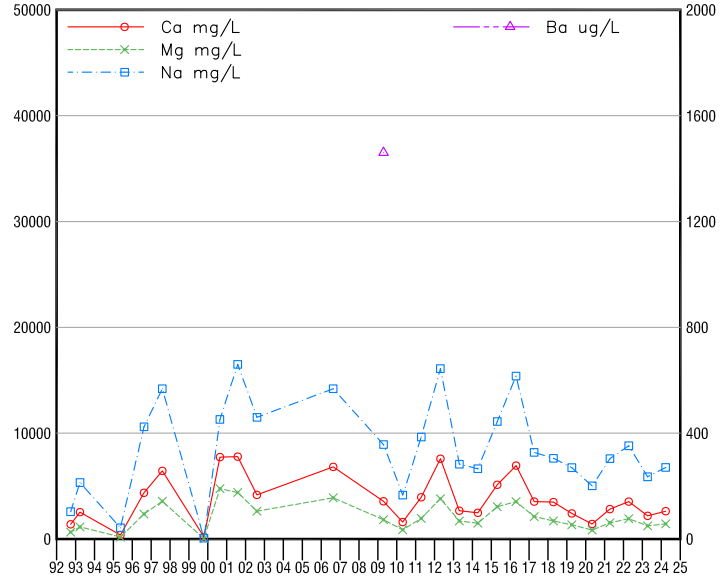
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



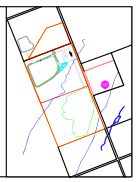








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-76-I

Deep Bedrock Unit

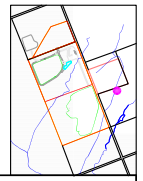
Screen 172.4 - 171.1 masl

CA008825 24 Mar 25	wsp	F424024

BH-76-I

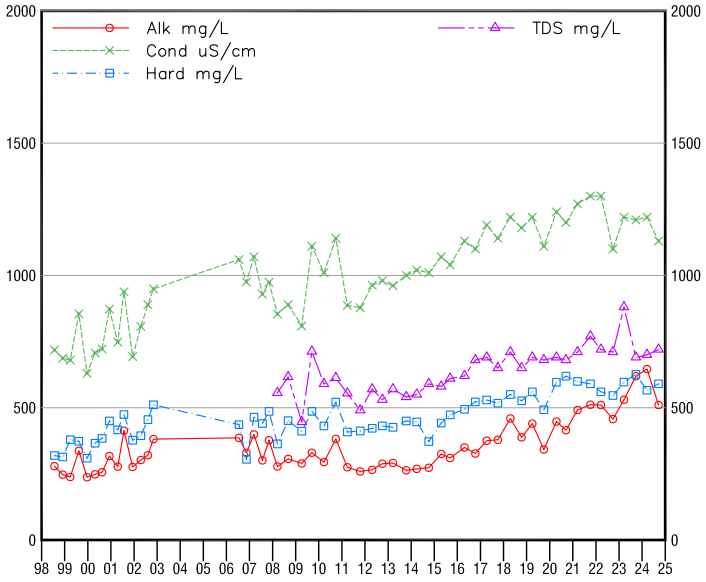
Deep Bedrock Unit

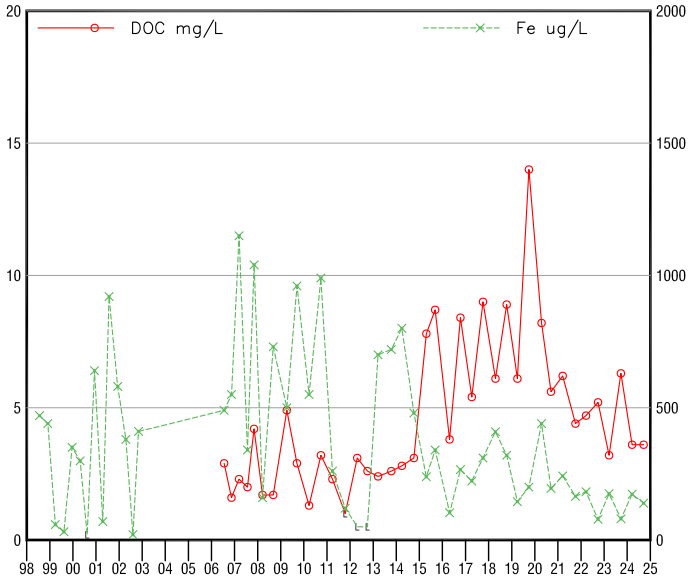
Stand Pipe Piezometer
Screen 172.4 - 171.1 masl

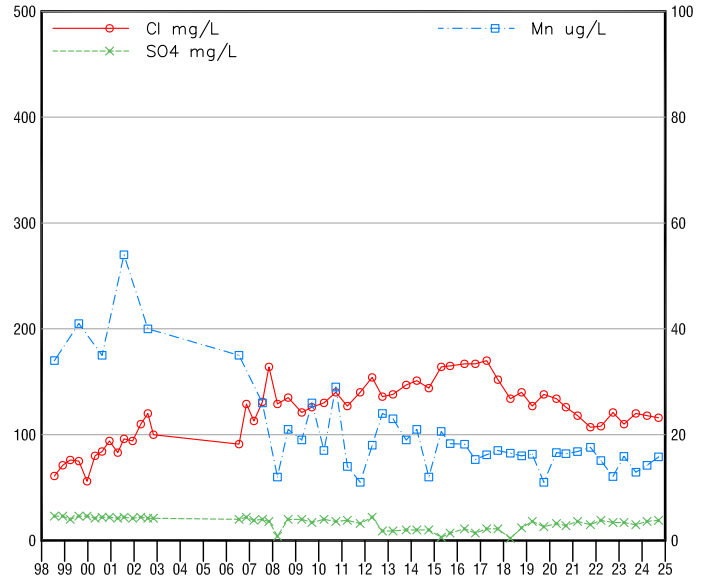


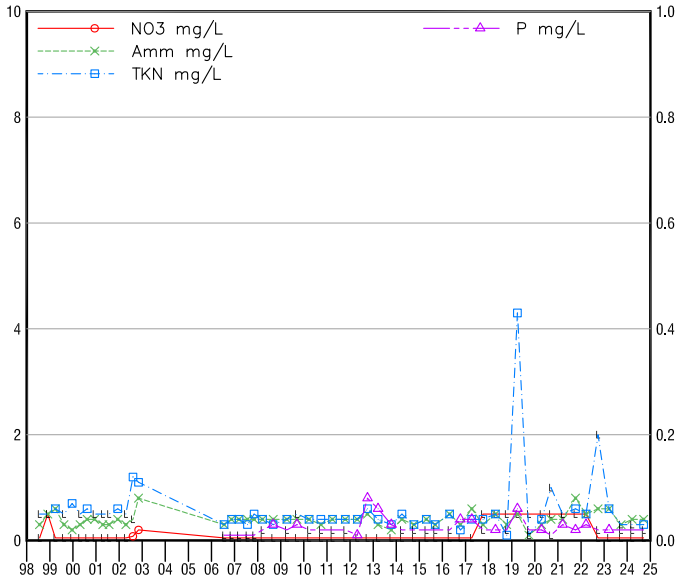
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Sep-92	HGW3479	124	17670	6133	7.5	**8611**	105	1389	647	**2583**	263		<0.02	0.038	10.24		-1.1
28-Mar-93	HGW3480	102	36900	11040	7.6	**16364**	159	2540	1141	**5333**	130		0.030	0.061	22.8		-1.0
18-May-95	HGW3481	180	9070	1712	7.6	**3790**	73	379	186	**1060**	32.2		6.7	<0.03	4.5		-16.0
03-Aug-95	HGW3482	139				**7500**	46						<0.03	<0.01			
16-Aug-96	HGW3483	103	44730	20630	7.3	**22489**	149	4370	2360	**10600**	178		**35.5**	<0.6	17.1		15.6
05-Aug-97	HGW3484			30782				6440	3570	**14200**	190				33.3		
23-Jul-98	HGW3485	100	89100		7.1	**44800**	219						<1.25	<1.5	36.2		
18-Oct-99	HGW3486	69	117000	622	7.1	**55100**	69	187	37.6	85	3.56		**19.0**	<3	1		-97.9
22-Aug-00	HGW3487	78	103100	38928	6.9	**49000**	120	7740	4760	**11300**	436		<5	<6	39.32		-3.8
01-Aug-01	HGW3488	72	107000	37505	6.6	**51300**	61	7780	4390	**16500**	296		**15.6**	<0.6	46.1		0.9
08-Aug-02	HGW3490	123	73100	21243	7.0	**49900**	200	4170	2630	**11500**	155		<0.5	<0.6	34.4		-20.6
21-Aug-06	37845	90	105000	33049		**43200**	<300	6820	3890	**14200**	261	**26**	<50	<50	45.2		2.7
20-Apr-09	55141	130	62500	16384	7.0	**28700**	<150	3560	1820	**8920**	208	1.1	<25	<50	30	47300	-5.8
26-Apr-10	62091	192	41900	7578	7.2	**14700**	51	1600	870	**4150**	125	<1	<5	<5	22.4	27200	-10.9
19-Apr-11	67564	337	60700	17868	7.1	**19300**	25	3940	1950	**9640**	229	<1	<5	<5	28.1	30400	17.4
23-Apr-12	74136	435	58700	34642	7.1	**19800**	11	7590	3810	**16100**	244	2.1	<0.05	0.12	30.6	30500	42.4
24-Apr-13	81860	319	67000	13668	7.1	**20400**	<30	2670	1700	**7070**	168	3.4	<5	<5	33	36300	0.5
16-Apr-14	89114	248	70000	12303	6.9	**9970**	2	2470	1490	**6640**	166	1.9	<0.5	<0.5	20	35100	30.8
27-Apr-15	96623	170	138000	25345	6.7	**39200**	<30	5120	3050	**11100**	191	<1	<5	<5	25.1	60800	-5.4
24-Apr-16	103870	120	155000	31841	6.6	**82900**	8	6930	3530	**15400**	218	1.1	0.1	<0.05	29.4	74400	-28.1
09-Apr-17	112152	202	89400	17545	7.1	**33500**	<20	3530	2120	**8180**	164	1.4	<5	<5	23.4	48000	-14.2
17-Apr-18	121645	218	82000	15756	7.1	**22900**	3	3490	1710	**7630**	160	1.6	<0.5	<0.5	19	41100	0.2
07-Apr-19	130912	216	65600	11536	7.0	**25100**	22	2410	1340	**6740**	139	2.4	<5	<5	20.2	33900	-14.8
05-May-20	140685	227	46400	7017	7.2	**14600**	<2	1420	843	**5020**	131	2.8	<0.5	<0.5	20.2	24500	-6.8
13-Apr-21	149230	187	71900	13367	6.8	**23700**	57	2830	1530	**7590**	161	1.2	<5	<5	25.8	35800	-5.5
12-Apr-22	159794	170	84600	16721	6.7	**26500**	109	3530	1920	**8810**	160	1.6	<5	<5	27.1	43300	-2.0
11-Apr-23	169536	209	42000	10575	7.1	**17600**	<20	2190	1240	**5880**	140	1.5	<5	<5	20.2	31700	-2.9
25-Mar-24	179558	184	55700	12500	7.0	**22100**	<20	2630	1430	**6760**	165	1.2	<5	<5	22.3	40200	6.4
TOTAL SAMPLES		27	26	26	25	27	27	26	26	26	26	17	27	27	27	16	
AVERAGE 2024																	

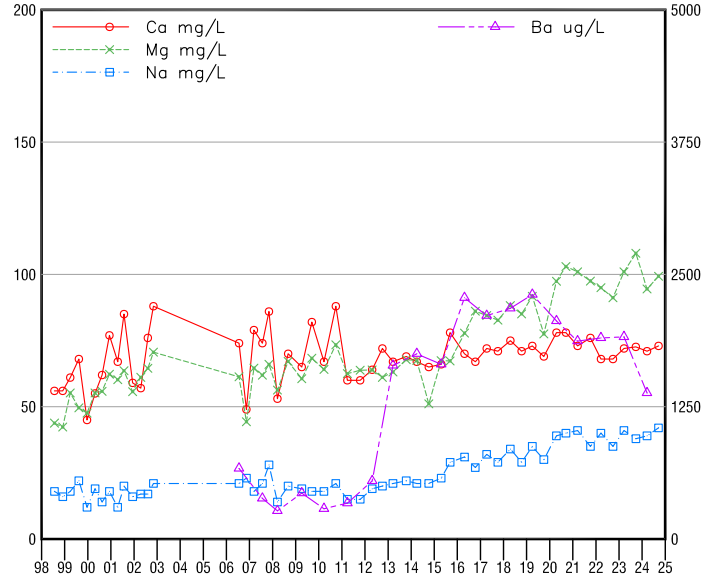
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-81-I

Shallow Bedrock Unit

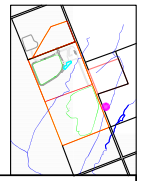
Screen 184.8 - 183.3 masl

CA008825 24 Mar 25	wsp	F424025

BH-81-I

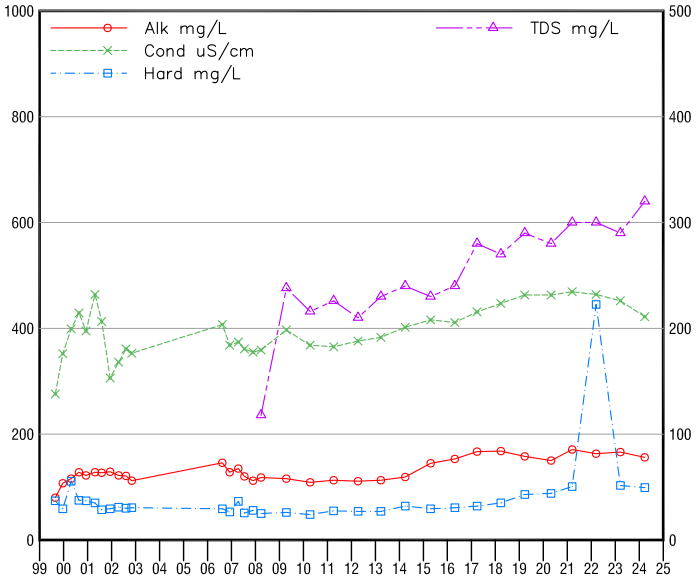
Shallow Bedrock Unit

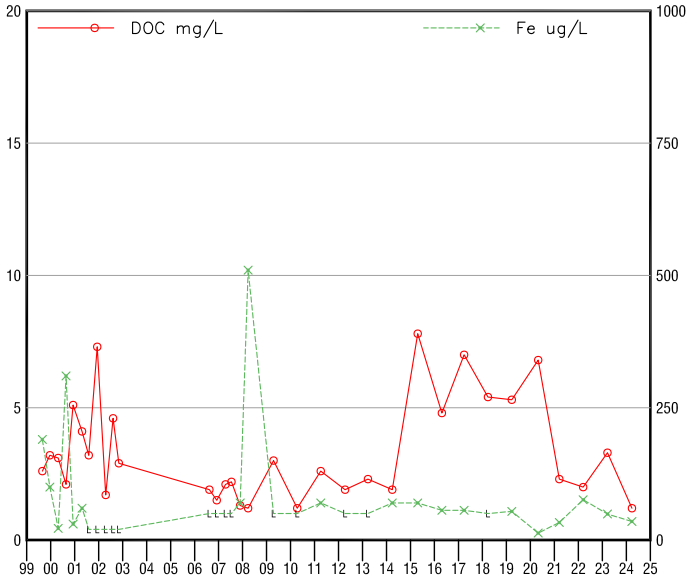
Stand Pipe Piezometer
Screen 184.8 - 183.3 masl

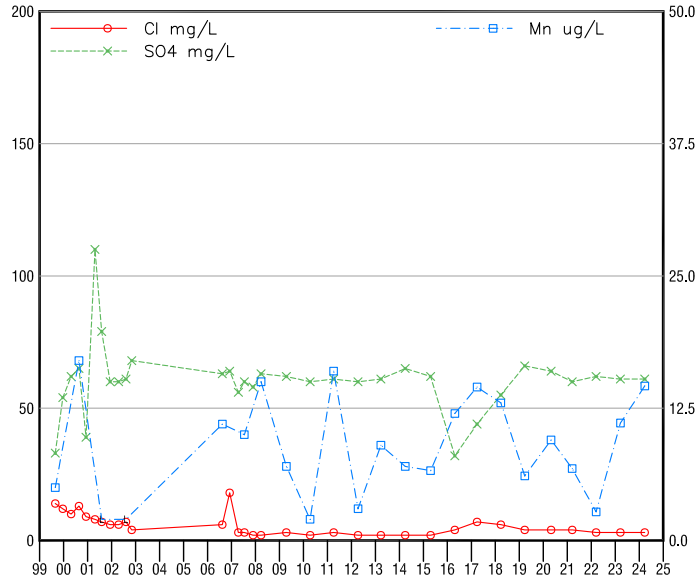


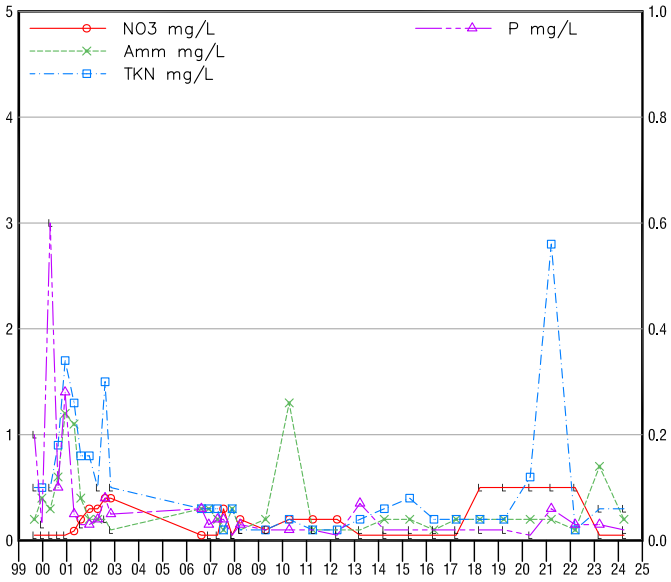
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61543	294	1010	431	7.7	130	20	67	64.1	18	3.32	1.3	<0.05	<0.05	0.4	590	-2.1
27-Sep-10	64385	382	1140	521	7.2	140	18	88	73.4	21	3.86	3.2	<0.05	<0.05	0.3	612	-2.1
29-Mar-11	67234	275	887	408	7.6	127	19	60	62.5	15	3.35	2.3	<0.05	<0.05	0.4	554	-3.0
18-Oct-11	71023	259	878	412	7.6	140	16	60	63.8	15	3.53	<1	<0.05	<0.05	0.4	490	-2.5
25-Apr-12	74217	265	963	422	7.7	154	22	64	63.9	19	4.22	3.1	<0.05	<0.05	0.4	570	-3.6
03-Oct-12	77704	288	980	431	7.6	136	9	72	61.1	20	5.15	2.6	<0.05	<0.05	0.5	530	-0.6
19-Mar-13	81048	291	961	426	7.6	138	9	67	63.1	21	4.96	2.4	<0.05	<0.05	0.3	570	-1.5
15-Oct-13	85688	263	1000	450	7.5	147	10	69	67.8	22	4.7	2.6	<0.05	<0.05	0.2	540	2.5
31-Mar-14	88762	269	1020	446	7.7	151	10	67	67.5	21	5.1	2.8	<0.05	<0.05	0.4	550	1.0
07-Oct-14	92843	273	1010	372	7.6	144	10	65	51.1	21	4.6	3.1	<0.05	<0.05	0.3	590	-6.7
21-Apr-15	96455	325	1070	442	7.5	164	3	66	67.4	23	4.8	**7.8**	<0.05	<0.05	0.4	580	-5.8
09-Sep-15	99515	310	1040	473	7.7	165	7	78	67.3	29	5.4	**8.7**	<0.05	<0.05	0.3	610	-0.4
24-Apr-16	103852	350	1130	494	7.8	167	11	70	77.8	31	7	3.8	<0.05	<0.05	0.5	620	-2.1
11-Oct-16	108019	327	1100	522	7.8	167	7	67	86.1	27	6.6	**8.4**	<0.05	<0.05	0.3	680	1.7
09-Apr-17	112153	375	1190	529	7.7	170	11	72	84.5	32	7.5	**5.4**	<0.05	<0.05	0.6	690	-1.4
03-Oct-17	116852	379	1140	517	7.5	152	11	71	82.7	29	6.2	**9**	<0.5	<0.5	0.3	650	-1.3
18-Apr-18	121704	459	1220	550	7.5	134	2	75	88.2	34	7.5	**6.1**	<0.5	<0.5	0.5	710	-1.0
14-Oct-18	127088	388	1180	526	7.4	140	12	71	85.1	29	6.2	**8.9**	<0.5	<0.5	0.3	650	0.1
01-Apr-19	130699	440	1220	560	7.5	127	18	73	91.7	35	7.2	**6.1**	<0.5	<0.5	0.5	690	0.8
30-Sep-19	135552	342	1110	492	7.2	138	13	69	77.5	30	5.6	**14**	<0.5	<0.5	0.1	680	1.3
16-Apr-20	140285	448	1240	596	7.6	134	16	78	97.4	39	6.7	**8.2**	<0.5	<0.5	0.3	690	2.8
13-Sep-20	144108	415	1200	619	7.4	126	14	78	103	40	6.8	**5.6**	<0.5	<0.5	0.4	680	8.2
16-Mar-21	148556	491	1270	599	7.6	118	18	73	101	41	7.2	**6.2**	<0.5	<0.5	0.4	710	1.6
06-Oct-21	154479	511	1300	590	7.6	107	15	76	97.5	35	7	4.4	<0.5	<0.5	0.8	770	0.1
21-Mar-22	159045	510	1300	560	7.4	108	19	68	95.0	40	6.8	4.7	<0.5	<0.5	0.5	720	-1.8
27-Sep-22	164662	457	1100	546	7.5	121	17	68	91.2	35	5.9	**5.2**	<0.05	<0.05	0.6	710	-1.0
20-Mar-23	168871	530	1220	597	7.4	110	17	72	101	41	6.8	3.2	<0.05	<0.05	0.6	880	-0.3
25-Sep-23	2023A015	619	1210	626	7.5	120	14.9	72.6	108	37.9	6.2	**6.3**	<0.05	<0.05	0.3	690	4.0
19-Mar-24	179373	646	1220	566	7.5	118	18	71	94.5	39	5.7	3.6	<0.05	<0.05	0.4	700	9.9
17-Sep-24	184547	510	1130	590	7.1	116	19	73	99.3	42	6.3	3.6	<0.05	<0.05	0.4	720	1.3
TOTAL SAMPLES		53	53	53	47	53	53	53	53	53	53	39	53	53	53	34	
AVERAGE 2024		578	1175	578	7.3	117	19	72	96.9	41	6.0	3.6	<0.05	<0.05	0.4	710	

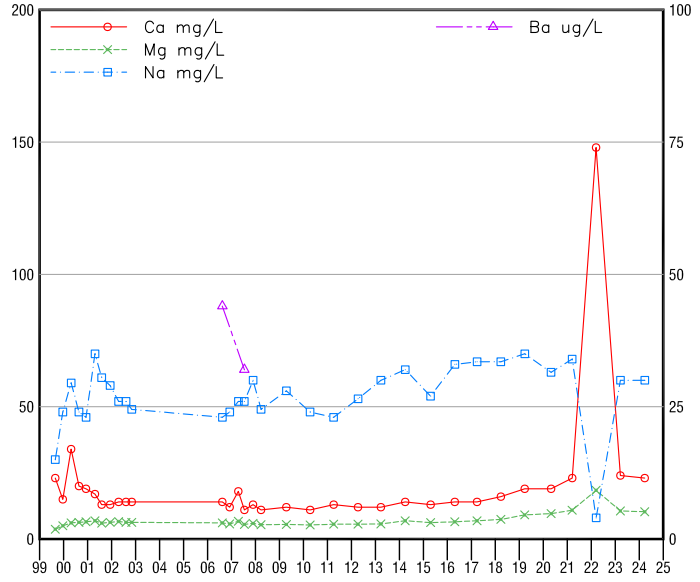
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



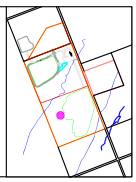








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-101-I

Shallow Bedrock Unit

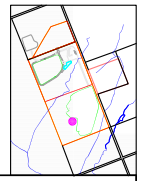
Screen 186.3 - 184.6 masl

CA008825 24 Mar 25	wsp	F424026

BH-101-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 186.3 - 184.6 masl



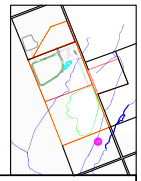
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Aug-00	HGW0037	128	429	75	8.1	13	65	20	6.3	48	6.93	2.1	<0.05	<0.06	0.6		-5.6
08-Dec-00	HGW0038	122	395	74	8.1	9	39	19	6.5	46	6.22	**5.1**	<0.05	<0.06	1.2		3.5
23-Apr-01	HGW0039	128	464	70	8.2	8	110	17	6.9	70	3.62	4.1	0.09	<0.06	1.1		-4.9
03-Aug-01	HGW0040	127	413	57	8.3	7	79	13	6.0	61	3.02	3.2	0.2	<0.06	0.4		-5.8
10-Dec-01	HGW0041	129	306	59	7.9	6	60	13	6.3	58	2.69	**7.3**	0.3	<0.06	0.2		-3.0
18-Apr-02	HGW0042	122	336	62	8.1	6	60	14	6.6	52	2.77	1.7	0.3	<0.06	0.2		-3.5
08-Aug-02	HGW0043	121	361	60	8.1	7	61	14	6.3	52	2.57	4.6	0.4	<0.06	<0.2		-5.2
04-Nov-02	HGW0044	112	353	61	7.7	4	68	14	6.3	49	2.87	2.9	0.4	<0.06	<0.1		-5.3
15-Aug-06	37694	146	407	59		6	63	14	6.1	46	2.53	1.9	0.05	<0.05	0.3		-14.6
05-Dec-06	39911	128	368	53		18	64	12	5.7	48	2.23	1.5	<0.05	<0.05	0.3		-15.3
16-Apr-07	42338	135	374	73		3	56	18	6.7	52	2.95	2.1	<0.05	<0.05	0.2		-1.9
16-Jul-07	43918	120	361	51		3	60	11	5.5	52	1.97	2.2	0.3	<0.05	0.1		-5.3
26-Nov-07	46381	112	355	56		2	58	13	5.9	60	2.08	1.3	<0.05	<0.1	0.3		4.0
26-Mar-08	48331	118	359	50		2	63	11	5.4	49	2.09	1.2	0.2	<0.1	<0.1	118	-7.9
16-Apr-09	55051	116	397	52	8.0	3	62	12	5.5	56	2.2	3	0.1	<0.1	0.2	238	-1.7
12-Apr-10	61849	109	368	48	7.9	2	60	11	5.3	48	2.33	1.2	0.2	<0.05	1.3	216	-4.2
05-Apr-11	67317	113	365	55	8.0	3	61	13	5.6	46	2.55	2.6	0.2	<0.05	0.1	226	-6.3
11-Apr-12	73919	111	376	54	7.7	2	60	12	5.6	53	2.82	1.9	0.2	<0.05	<0.1	210	-1.3
25-Mar-13	81159	113	383	54	8.0	2	61	12	5.7	60	2.69	2.3	<0.05	<0.05	<0.1	230	2.0
31-Mar-14	88759	119	402	64	7.7	2	65	14	6.9	64	2.8	1.9	<0.05	<0.05	0.2	240	4.8
21-Apr-15	96459	145	416	59	7.8	2	62	13	6.2	54	2.5	**7.8**	<0.05	<0.05	0.2	230	-8.4
24-Apr-16	103856	153	411	61	8.1	4	32	14	6.5	66	3.5	4.8	<0.05	<0.05	0.1	240	4.7
29-Mar-17	111924	167	431	64	7.9	7	44	14	6.9	67	3.5	**7**	<0.05	<0.05	0.2	280	-1.7
26-Mar-18	121007	168	447	70	7.8	6	55	16	7.4	67	3.5	**5.4**	<0.5	<0.5	0.2	270	-2.8
25-Mar-19	130609	158	463	86	7.7	4	66	19	9.1	70	4.3	**5.3**	<0.5	<0.5	0.2	290	2.6
29-Apr-20	140552	150	463	88	7.7	4	64	19	9.6	63	4.6	**6.8**	<0.5	<0.5	0.2	280	2.3
16-Mar-21	148559	171	469	101	8.0	4	60	23	10.9	68	4.4	2.3	<0.5	<0.5	0.2	300	3.2
16-Mar-22	158954	163	464	445	7.7	3	62	148	18.4	8.0	2.2	2	<0.5	<0.5	0.1	300	33.5
21-Mar-23	168982	166	452	103	7.9	3	61	24	10.6	60	4.2	3.3	<0.05	<0.05	0.7	290	1.7
26-Mar-24	179600	156	422	99	7.9	3	61	23	10.3	60	3.9	1.2	<0.05	<0.05	0.2	320	3.8
TOTAL SAMPLES		33	33	33	27	33	33	33	33	33	33	33	33	33	33	17	
AVERAGE 2024																	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-5-IV

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 182.5 - 181.8 masl



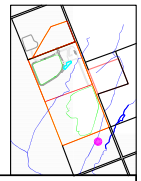
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Jan-92	HGW2305								**380**				<2					
28-May-92	HGW2306					<1	20	<2	**320**	<10	**150**	<20	<2		<10	<10	<40	7
28-Sep-92	HGW2308								120				<2					
28-Jan-93	HGW2309								280				<2					
28-Mar-93	HGW2310					<2	<10	10	**1890**	**30**	**640**	<10	<2		20	<10	<30	10
28-Jun-93	HGW2311								**580**				<2					
28-Nov-93	HGW2312								**340**				<2					
13-Apr-98	HGW2313								**6270**				10					
23-Jul-98	HGW2314								**5970**				11					
01-Dec-98	HGW2315								**3570**				7					
30-Mar-99	HGW2316								**6640**				14					
18-Oct-99	HGW2317								5				87					
23-Aug-00	HGW2318								**4920**				185					
03-Aug-01	HGW2319								<20				170					
08-Aug-02	HGW2320								**2860**				<2					
22-Aug-06	37849								**1310**				<1					
29-Mar-10	61620								**5940**		**100**		6					
24-Apr-12	74166								**5540**		**91**		10					
08-Apr-13	81445								**4820**		**100**		8					
01-Apr-14	88807								**4580**		**97**		14					
15-Apr-15	96363								**3130**		**69**		14					
20-Apr-16	103800								**2380**		**54.4**		5					
27-Mar-17	111809								**5230**		**103**		2					
26-Mar-18	121019								**4460**		**78**		2					
01-Apr-19	130705								**3340**		**75**		3					
19-May-20	140998								**2590**		**64.7**		10					
29-Mar-21	148822								**3160**		**69.7**		5					
21-Mar-22	159048								**4190**		**81**		3					
03-Apr-23	169326								**3050**		**65.2**		3					
02-Apr-24	179742								**3660**		**57**		<1					
TOTAL SAMPLES		0	0	0	0	8	8	8	41	8	22	8	41	0	7	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-5-V

Shallow Bedrock Unit

Stand Pipe Piezometer



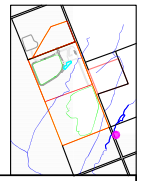
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
29-Mar-10	61621								**1550**		34		<1					
12-Oct-10	64594								**2390**		31		<1					
13-Apr-11	67479								**2170**		30		<1					
11-Oct-11	70806								**1720**		27		2					
24-Apr-12	74164								<50		28		<1					
03-Oct-12	77699								80		26		<1					
08-Apr-13	81446								<50		24		<1					
08-Oct-13	85579								**680**		19		<1					
01-Apr-14	88808								90		21		<1					
01-Oct-14	92762								**710**		16		<1					
15-Apr-15	96364								131		19.3		2					
09-Sep-15	99518								**380**		19.1		3					
20-Apr-16	103801								215		13.7		<1					
11-Oct-16	108022								107		12.1		1					
27-Mar-17	111810								37		10.8		<1					
03-Oct-17	116860								90		12		<1					
26-Mar-18	121020								<50		2		<1					
14-Oct-18	127091								**330**		16		<1					
01-Apr-19	130706								11		1.7		<1					
01-Oct-19	135645								300		12		<1					
19-May-20	140999								28		2.1		2					
21-Sep-20	144374								**337**		13.3		1					
29-Mar-21	148823								16		1.9		<1					
12-Oct-21	154579								**356**		17.8		1					
21-Mar-22	159049								7		1		<1					
26-Sep-22	164643								297		24.8		<1					
03-Apr-23	169327								22		0.7		<1					
25-Sep-23	2023A022								**431**		30.5		<1					
02-Apr-24	179743								39		0.6		<1					
23-Sep-24	184715								153		10.7		<1					
TOTAL SAMPLES		0	0	0	0	0	0	0	39	0	34	0	39	0	0	0	0	0
AVERAGE 2024									96		5.7		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-16A

Shallow Bedrock Unit

Stand Pipe Piezometer



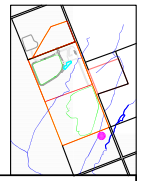
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Jun-93	HGW0254								<5				<2					
28-Nov-93	HGW0255								<5				<2					
11-Aug-95	HGW0257					<0.5	<2	<2	<10	1	27	<2	<1		<1	<2	<2	11
16-Aug-96	HGW0258					<2	<4	<3	<3	<2	<1	<7	26		<4	<10	<8	<4
01-Aug-97	HGW0259								37				2					
23-Jul-98	HGW0260								28				<2					
19-Aug-99	HGW0261								63				6					
14-Aug-00	HGW0262								250				5					
26-Jul-01	HGW0263								**440**				<2					
08-Aug-02	HGW0264								<20				<2					
22-Aug-06	37848								<50				<1					
07-Aug-07	44334								<50									
28-Aug-07	44757												<1					
01-Apr-08	48466								<50		7		<1					
11-Mar-09	54361								80		15		<1					
12-Apr-10	61853								50		12		<1					
11-Apr-11	67418								<50		14		<1					
16-Apr-12	74002								<50		<1		<1					
15-Apr-13	81579								<50		<1		<1					
25-Mar-14	88670								<50		<1		<1					
07-Apr-15	96145								2		<0.5		<1					
05-Apr-16	103412								<1		<0.5		2					
03-Apr-17	112045								16		0.6		<1					
26-Mar-18	121022								<50		1		<1					
07-Apr-19	130906								<1		6.4		<1					
05-May-20	140689								<5		<0.5		<1					
29-Mar-21	148821								5		<0.5		1					
21-Mar-22	159052								7		<0.5		<1					
27-Mar-23	169146								<5		<0.5		<1					
02-Apr-24	179751								<5		3.5		<1					
TOTAL SAMPLES		0	0	0	0	13	13	13	71	13	30	13	52	0	13	13	13	13
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-17-I

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 179.9 - 179.1 masl



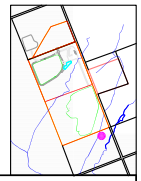
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Sep-22	164657								**760**		**206**		15					
03-Apr-23	169330	<250	**9300**	<5	5470	<1	<5	<5	**26700**	<5	**714**	10.2	15		850	<20		<50
25-Sep-23	2023A021								**4550**		**107**		1					
20-Mar-24	179415	<25	**1930**	<0.5	1950	<0.1	<0.5	0.7	**5240**	<0.5	**161**	3.4	<1		161	5		<5
09-Oct-24	185174								**1120**		45							
TOTAL SAMPLES		2	2	2	2	2	2	2	5	2	5	2	4	0	2	2	0	2
AVERAGE 2024									3180		103							

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**

BH-17A

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.3 - 183.9 masl



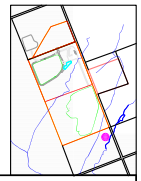
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
30-Aug-88	HGW0318								**1080**									
05-Oct-88	HGW0319								**790**									
03-Nov-88	HGW0320								**1000**									
01-Dec-88	HGW0321								**770**									
26-Jan-89	HGW0322								**1400**									
06-Mar-89	HGW0323								**730**									
30-Mar-89	HGW0324								**510**									
27-Apr-89	HGW0325								**460**									
01-Jun-89	HGW0326								**2500**									
27-Nov-89	HGW0327								230									
27-Jun-90	HGW0328					<2	<10	<10	**410**	<10	**250**	500	20		<10	<10	<300	<10
28-Jan-91	HGW0329								**650**				19					
28-Mar-91	HGW0330					<1	20	<2	**10710**	**70**	**170**	<20	60		20	50	<40	30
28-May-91	HGW0331								**4550**				40					
14-Aug-95	HGW0332					<0.5	5	<2	**5500**	0.7	**110**	<2	11		59	25	<2	14
16-Aug-96	HGW0333					<0.5	<1	<1	<1	<2	8	<2	43		3	<1	<8	<1
01-Aug-97	HGW0334								**740**				4					
23-Jul-98	HGW0335								270				4					
12-Aug-99	HGW0336								**1040**				<2					
11-Aug-00	HGW0337								**1050**				4					
30-Jul-01	HGW0338								**590**				17					
08-Aug-02	HGW0339								**1930**				49					
19-Jul-06	37150								**1300**				<1					
30-Jul-07	44199								**940**									
27-Aug-07	44713												<1					
27-Sep-22	164658								**1160**		30.2		<1					
03-Apr-23	169331	<25	**1010**	<0.5	280	<0.1	<0.5	<0.5	**3960**	<0.5	**295**	<0.5	2		26	5		<5
25-Sep-23	2023A018								**2280**		**94.2**		<1					
20-Mar-24	179412	<25	489	<0.5	60	<0.1	<0.5	<0.5	**1500**	<0.5	45.9	<0.5	<1		11.8	<2		<5
17-Sep-24	184549								**1570**		48.4		<1					
TOTAL SAMPLES		2	2	2	2	6	6	6	46	6	9	6	19	0	6	6	4	6
AVERAGE 2024									1535		47.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-18A

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.1 - 183.8 masl



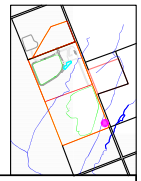
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
14-Sep-09	57915								110		5		<1					
06-Apr-10	61738	<20	227	<1	140	<1	<2	<5	140	<20	6	<5	<1		<2	<5		<30
27-Sep-10	64389								100		5		<1					
13-Apr-11	67476	20	297	<1	200	<1	<2	<5	**3720**	<20	**138**	<5	<1			<5		<30
18-Oct-11	71017								100		7		5					
24-Apr-12	74162	<20	279	<1	140	<0.3	<2	<5	**2290**	<1.5	**97**	<5	2			<5		<30
03-Oct-12	77701								80		10		<1					
24-Apr-13	81856	<20	191	<1	130	<1	<2	<5	140	<10	7	<5	<1		<2	<5		<10
08-Oct-13	85581								100		31		<1					
14-Apr-14	89055	<20	236	<1	150	<1	<2	<5	**4220**	<10	**152**	<5	1		<2	<5		<30
07-Oct-14	92837								140		<1		<1					
15-Apr-15	96367	<25	233	<0.1	99.5	<0.1	<0.5	<0.5	210	<0.5	8.2	0.6	<1		<0.1	<2		<0.5
09-Sep-15	99510								110		6.9		4					
05-Apr-16	103409	<25	139	<0.1	52	<0.1	<0.5	<0.5	209	<0.5	8.1	0.8	<1		<0.1	<2		1.4
11-Oct-16	108011								117		5.4		<1					
03-Apr-17	112038	<25	252	<0.1	173	<0.1	<0.5	<0.5	92	<0.5	5.3	<0.5	<1		<0.1	<2		0.6
03-Oct-17	116862								60		6		<1					
25-Apr-18	121898	<25	380	<0.1	220	<0.1	<0.5	<0.5	**6120**	<0.5	**213**	<0.5	<1		0.1	2		<0.5
14-Oct-18	127083								**350**		20		<1					
09-Apr-19	130961	<25	492	<0.5	284	<0.1	<0.5	<0.5	**10300**	<0.5	**265**	0.6	2		<0.5	7		1.1
07-Oct-19	135823								300		13		<1					
16-Apr-20	140282	<25	640	<0.5	296	<0.1	<0.5	<0.5	**9160**	<0.5	**215**	<0.5	<1		<0.5	6		0.5
13-Sep-20	144105								**368**		18.9		2					
06-Apr-21	148999	<25	286	<0.5	112	<0.1	<0.5	<0.5	**722**	<0.5	34.7	0.5	1		<0.5	<2		<0.5
12-Oct-21	154581								**342**		16.5		<1					
06-Apr-22	159594	<25	500	<0.5	260	<0.1	<0.5	<0.5	**5360**	<0.5	**142**	<0.5	<1		<0.5	5		<0.5
27-Sep-22	164660								261		16.1		<1					
29-Mar-23	169224	<25	464	<0.5	259	<0.1	<0.5	<0.5	**5290**	<0.5	**155**	<0.5	<1		<0.5	5		<5
18-Mar-24	179273	<25	439	<0.5	275	<0.1	<0.5	<0.5	**4600**	<0.5	**113**	0.6	<1		<0.5	4		<5
23-Sep-24	184716								253		11.4		<1					
TOTAL SAMPLES		19	19	19	19	40	41	40	107	40	56	40	84	0	38	42	23	42
AVERAGE 2024									2427		62		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-19A

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 185.2 - 184.5 masl



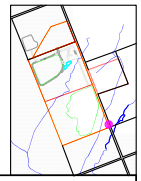
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
29-Mar-10	61625								**9690**		**281**		<1					
12-Oct-10	64596								**15200**		**211**		<1					
11-Apr-11	67420								**9510**		**263**		<1					
18-Oct-11	71021								**600**		**184**		<1					
25-Apr-12	74224								**8630**		**119**		<1					
09-Oct-12	77779								**14300**		**153**		<1					
20-Mar-13	81108								**10600**		**536**		<1					
15-Oct-13	85687								**16700**		**268**		<1					
25-Mar-14	88672								**3570**		**397**		1					
07-Oct-14	92839								**15900**		**183**		<1					
15-Apr-15	96371	<25	715	<0.1	85.9	<0.1	<0.5	<0.5	**10100**	<0.5	**572**	<0.5	<1		0.7	4		1.2
09-Sep-15	99512								**19400**		**301**		4					
07-Apr-16	103502	<25	**1840**	<0.1	170	<0.1	<0.5	<0.5	**15200**	<0.5	**380**	<0.5	1		0.4	6		1.4
11-Oct-16	108014								**20900**		**163**		3					
29-Mar-17	111931	<25	**2210**	<0.1	163	<0.1	<0.5	<0.5	**14800**	<0.5	**456**	<0.5	<1		1.7	8		1.1
03-Oct-17	116855								**17500**		**193**		<1					
18-Apr-18	121702	<25	**3500**	<0.1	158	<0.1	<0.5	<0.5	**16700**	1.6	**300**	<0.5	<1		1.3	13		1.7
14-Oct-18	127086								**19300**		**203**		<1					
01-Apr-19	130702	<25	**3780**	<0.5	225	<0.1	<0.5	<0.5	**18800**	<0.5	**315**	<0.5	2		1.3	18		1.7
30-Sep-19	135555								**13700**		**215**		<1					
05-May-20	140693	<25	**3400**	<0.5	267	<0.1	<0.5	0.7	**12700**	<0.5	**182**	<0.5	1		1	18		1.5
21-Sep-20	144375								**18400**		**166**		2					
23-Mar-21	148726	<25	**3720**	<0.5	279	<0.1	<0.5	<0.5	**12000**	<0.5	**166**	<0.5	3		0.9	24		1.5
12-Oct-21	154583								**17900**		**224**		2					
07-Apr-22	159618	<25	**2720**	<0.5	220	<0.1	<0.5	0.6	**9190**	<0.5	**137**	<0.5	<1		1.3	16		1.6
26-Sep-22	164645								**17200**		**132**		<1					
20-Mar-23	168874	<25	**2690**	<0.5	200	<0.1	<0.5	0.6	**8870**	<0.5	**142**	<0.5	2		1.3	18		<5
26-Sep-23	2023A024								**21600**		**167**		<1					
20-Mar-24	179416	<25	**3750**	<0.5	342	<0.1	<0.5	<0.5	**11900**	<0.5	**175**	<0.5	<1		1.4	34		<5
23-Sep-24	184719								**20200**		**119**		<1					
TOTAL SAMPLES		10	10	10	10	25	25	24	95	24	48	25	69	0	25	24	14	24
AVERAGE 2024									16050		147		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-20A

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.1 - 183.9 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
11-Aug-00	HGW0881					<5	<20	<5	120	8	**180**	<20	3		<10	<10	<2	96
08-Dec-00	HGW0882								**930**				<2					
18-Apr-01	HGW0883								**400**				2					
12-Jul-01	HGW0884					<5	<20	<5	**1860**	<0.2	**140**	<20	<2		30	<20	<2	<10
10-Dec-01	HGW0885								**1280**				2					
18-Apr-02	HGW0886								**680**				<2					
08-Aug-02	HGW0887					<5	<20	<5	**1480**	<0.2	**120**	<20	<2		20	<20	<2	<10
04-Nov-02	HGW0888								**2080**				<2					
18-Jul-06	37155	<20	485	<1	80	<1	<2	<5	**670**	<20	**75**	<5	<1		<2	<5	<2	<30
13-Nov-06	39476								**350**				<1					
02-Apr-07	42093								**1820**				<1					
24-Jul-07	44084	<20	653	<1	90	<1	<2	<5	**710**	<20	**100**	<5			<2	<5	<2	<30
26-Nov-07	46384								**1640**				<1					
15-Apr-08	48710								**1160**		**82**		<1					
07-Apr-09	54928								**1700**		**85**		<1					
06-Apr-10	61743								**1900**		**100**		<1		<2			
13-Apr-11	67482								**1750**		**82**		<1					
25-Apr-12	74222								**1480**		**95**		<1					
20-Mar-13	81112								**2450**		**127**		<1					
14-Apr-14	89058								**1590**		**77**		<1					
15-Apr-15	96366								**2200**		**98**		<1					
19-Apr-16	103706								**1740**		**85.6**		<1					
09-Apr-17	112145								**1950**		**86.1**		<1					
17-Apr-18	121644								**1980**		**80**		<1					
09-Apr-19	130964								**473**		**82.9**		<1					
16-Apr-20	140288								**1840**		**68.8**		<1					
30-Mar-21	148867								**3040**		**115**		2					
06-Apr-22	159613								**1730**		**81**		<1					
27-Mar-23	169148								**2320**		**92.7**		<1					
20-Mar-24	179420								**1820**		**88.5**		<1					
TOTAL SAMPLES		2	2	2	2	24	24	24	97	24	41	24	72	0	25	28	24	27
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-41-I

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 180.7 - 179.9 masl

DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
19-Mar-90	HGW1588					<2	<10	30	**880**	**70**	**480**	<10	19		<100	60		40
15-Oct-90	HGW1589								200				9					
24-Aug-99	HGW1590								**4130**				22					
16-Aug-00	HGW1591								**3650**				2					
27-Jul-01	HGW1592								**2640**				18					
08-Aug-02	HGW1593								**2680**				<2					
08-Aug-06	37587								**4070**				<1					
29-Aug-07	44830								**3580**				<1					
29-Apr-08	49013								**1680**		**74**		<1		<2			
14-Apr-09	55013								**3620**		**58**		3					
12-Apr-10	61847								**2530**		47		<1					
05-Apr-11	67322								**3990**		**72**		<1					
11-Apr-12	73925								**3970**		**73**		<1					
09-Apr-13	81503								**1550**		**66**		<1					
14-Apr-14	89060								**3230**		23		<1					
14-Apr-15	96319								**6080**		**72**		3					
26-Apr-16	103886								**2730**		**65.6**		3					
09-Apr-17	112150								**969**		**54.6**		<1					
09-Apr-18	121423								**9230**		**75**		3					
14-Apr-19	131081								**2080**		**63.6**		2					
05-May-20	140687								**6140**		**73.3**		3					
08-Apr-21	149077								**3650**		**76.8**		4					
11-Apr-22	159721								**6320**		**66.5**		<1					
22-Mar-23	169035								**3470**		30		<1					
26-Mar-24	179598								**1240**		23		<1					
TOTAL SAMPLES		0	0	0	0	1	1	1	25	1	18	1	25	0	2	1	0	1
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-41-II

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 185.2 - 184.4 masl

DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
15-Oct-90	HGW1594								30				8					
22-Apr-01	HGW1595								**420**				4					
27-Jul-01	HGW1596					<5	<20	<5	**340**	<0.2	10	<20	<2		40	<20	<2	<10
10-Dec-01	HGW1597								**400**				3					
18-Apr-02	HGW1598								230				8					
08-Aug-02	HGW1599					<5	<20	<10	**360**	<0.2	9	<20	<2		20	<20	96	<20
04-Nov-02	HGW1600								**360**				<2					
08-Aug-06	37584	<20	201	<1	<30	<1	<2	<5	**630**	<20	10	<5	<1		<2	<5	<2	<30
05-Dec-06	39909								**310**				<1					
24-Apr-07	42485								**360**				<1					
29-Aug-07	44825	40	220	<1	<30	<1	<2	<5	**440**	<20	9	<5	1		<2	<5	<2	<30
13-Nov-07	46173								**480**				<1					
29-Apr-08	49014								300		8		<1		<2			
14-Apr-09	55014								300		11		2					
12-Apr-10	61848								**430**		9		<1					
05-Apr-11	67323								**430**		9		<1					
11-Apr-12	73926								**400**		9		<1					
09-Apr-13	81504								**480**		10		<1					
14-Apr-14	89061								290		8		<1					
14-Apr-15	96320								**392**		8.6		<1					
26-Apr-16	103887								**435**		8.5		<1					
09-Apr-17	112151								**397**		8.4		<1					
09-Apr-18	121424								**440**		10		<1					
14-Apr-19	131082								**695**		10		<1					
05-May-20	140688								253		7.4		<1					
08-Apr-21	149078								**497**		10		1					
11-Apr-22	159722								**338**		8		<1					
22-Mar-23	169036								**307**		8.4		<1					
26-Mar-24	179599								**345**		8.8		<1					

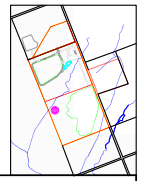
TOTAL SAMPLES	2	2	2	2	4	4	4	29	4	21	4	29	0	5	4	4	4
AVERAGE 2024																	

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-44-I

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 176.0 - 175.3 masl



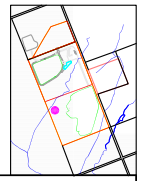
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Jul-92	HGW1660					**30**	<3	60	**900**	**290**	**160**	<20			190	210	<40	50
28-Sep-92	HGW1661								**310**				<2					
28-Nov-92	HGW1662					**30**	50	80	**600**	**150**	**140**	<20	<2		160	200	<40	29
28-Jan-93	HGW1663								**2770**				<2					
28-Mar-93	HGW1664					**20**	50	60	**1430**	**140**	**180**	<20	<2		130	110	<40	30
28-Jun-93	HGW1665								**4000**				<2					
23-Jul-98	HGW1666								**3850**				68					
24-Aug-99	HGW1667								**2000**				12					
16-Aug-00	HGW1668								**660**				6					
27-Jul-01	HGW1669								60				110					
08-Aug-02	HGW1670								**550**				<2					
15-Aug-06	37703								**4240**				<1					
29-Aug-07	44829								**4750**				5					
22-Apr-08	48847								**1360**		**61**		9					
29-Apr-09	55451								**2670**		42		13					
14-Apr-10	61888								**4840**		**58**		4					
26-Apr-11	67646								**630**		29		3					
18-Apr-12	74083								**420**		**68**		5					
02-Apr-13	81303								**1460**		**81**		3					
14-Apr-14	89062								**4030**		**64**		6					
27-Apr-15	96619								**4080**		**93**		10					
26-Apr-16	103888								**409**		**125**		12					
23-Apr-17	112541								**1730**		**100**		4					
17-Apr-18	121639								**1980**		**133**		7					
09-Apr-19	130965								**1320**		**111**		13					
13-May-20	140869								**1120**		**113**		11					
12-Apr-21	149196								**1720**		**116**		8					
12-Apr-22	159785								**836**		**120**		7					
04-Apr-23	169368								**408**		**103**		6					
04-Apr-24	179817								210		**88**		8					
TOTAL SAMPLES		0	0	0	0	10	10	10	47	10	27	10	45	0	10	10	10	10
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-44-II

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 180.8 - 180.0 masl



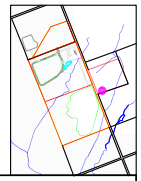
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Jun-93	HGW1689								**675**				<2					
16-Aug-00	HGW1690					<5	<20	<5	**1590**	3	13	<20	4		<10	<10	<2	<10
22-Apr-01	HGW1691								**700**				4					
27-Jul-01	HGW1692					<5	<20	<5	**900**	<0.2	14	<20	<2		<10	<20	<2	<10
10-Dec-01	HGW1693								**830**				<2					
18-Apr-02	HGW1694								**680**				4					
08-Aug-02	HGW1695					<5	<20	<10	**780**	<0.2	11	<20	<2		20	<20	98	<20
04-Nov-02	HGW1696								200				<2					
15-Aug-06	37689	30	170	<1	40	<1	<2	<5	**570**	<20	12	<5	<1		<2	<5	<2	<30
11-Dec-06	39999								**570**				<1					
30-Apr-07	42581								**750**				<1					
28-Aug-07	44752	<20	200	<1	60	<1	<2	<5	**870**	<20	12	<5	<1		<2	<5	<2	<30
19-Nov-07	46269								**1140**				<1					
22-Apr-08	48848								**590**		12		<1					
29-Apr-09	55452								**650**		9		<1					
14-Apr-10	61889								**790**		10		<1					
26-Apr-11	67647								**590**		9		<1					
18-Apr-12	74084								**600**		9		<1					
02-Apr-13	81304								**970**		14		<1					
14-Apr-14	89063								**490**		8		<1					
27-Apr-15	96620								**950**		11.8		<1					
26-Apr-16	103889								**579**		8.9		1					
23-Apr-17	112542								**619**		9.1		<1					
17-Apr-18	121640								**740**		11		<1					
09-Apr-19	130966								**637**		9.8		<1					
13-May-20	140870								**389**		6.3		2					
12-Apr-21	149197								**591**		8.9		<1					
12-Apr-22	159786								**406**		6.9		<1					
04-Apr-23	169369								**476**		7.9		<1					
04-Apr-24	179818								**574**		9.5		<1					
TOTAL SAMPLES		2	2	2	2	15	15	15	48	15	32	15	48	0	15	15	15	15
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-46-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 175.5 - 175.0 masl



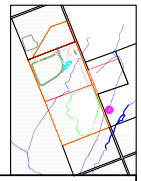
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Jan-93	HGW1792								<10				<2					
28-Mar-93	HGW1793					<1	<3	<2	<10	**40**	20	<20	<2		<10	<10	<40	10
28-Jun-93	HGW1794								75				<2					
28-Nov-93	HGW1795								20				<2					
17-Aug-95	HGW1796					1.7	4	<2	<10	0.5	4	7	6		<1	<2	3	26
16-Aug-96	HGW1797					4.7	<1	<1	120	2	7	<2	11		<1	<1	<8	<1
01-Aug-97	HGW1798								90				34					
23-Jul-98	HGW1799								**1020**				4					
12-Aug-99	HGW1800								**390**				7					
22-Aug-00	HGW1801								**560**				4					
30-Jul-01	HGW1802								50				10					
08-Aug-02	HGW1803								**860**				11					
15-Aug-06	37698								**1810**				2					
26-Mar-08	48329								**890**		**57**		<1		<2			
09-Mar-09	54304								<50		23		4					
15-Mar-10	61253								**1000**		**205**		<1					
21-Mar-11	67065								70		40		<1					
16-Apr-12	73998								100		9		2					
03-Apr-13	81360								110		20		<1					
31-Mar-14	88756								**1060**		15		<1					
21-Apr-15	96462								**430**		15		2					
24-Apr-16	103859								232		30.5		<1					
19-Apr-17	112410								**602**		23.8		<1					
21-Mar-18	120949								**1270**		**118**		2					
20-Mar-19	130488								**894**		12.5		2					
31-Mar-20	139938								104		**54.5**		<1					
25-Mar-21	148775								**570**		13.1		2					
30-Mar-22	159375								**825**		17.3		<1					
27-Mar-23	169143								**670**		24		<1					
02-Apr-24	179745								**900**		33		<1					
TOTAL SAMPLES		0	0	0	0	10	10	10	46	10	27	10	46	0	11	10	9	10
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-50-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 183.2 - 182.6 masl



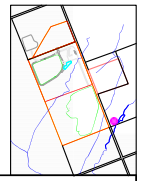
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Aug-94	HGW2343					<1	<3	<2	200	<10	8	<20	<1		<10	<10	<40	4
14-Aug-95	HGW2344					<0.5	2	<2	55	0.1	13	<2	<1		<1	<2	<2	<2
16-Aug-96	HGW2345					2.4	<1	3	200	<2	9	<2	<2		<1	<1	<8	<1
05-Aug-97	HGW2346								40				<2					
23-Jul-98	HGW2347								36				<2					
17-Aug-99	HGW2348								25				2					
15-Aug-00	HGW2349					<5	<20	<5	**740**	**48**	10	<20	<2		<10	<10	<2	<10
08-Dec-00	HGW2350					<5	<20	5	180	<0.2	11	<20	<2		<10	<20	<2	<10
01-Aug-01	HGW2351								70				<2					
08-Aug-02	HGW2352								100				<2					
21-Aug-06	37846								90				<1					
14-Aug-07	44475								60									
28-Aug-07	44767												<1					
01-Apr-08	48467								90		7		<1					
23-Mar-09	54640								90		9		2					
14-Apr-10	61885								<50		7		<1					
21-Mar-11	67069								<50		12		<1					
17-Apr-12	74037								<50		8		<1					
09-Apr-13	81497								<50		8		<1					
01-Apr-14	88810								<50		6		<1					
22-Apr-15	96517								86		7.5		2					
24-Apr-16	103862								86		7.2		1					
19-Apr-17	112404								82		5.9		1					
03-Apr-18	121267								50		8		1					
07-Apr-19	130909								12		5.6		<1					
13-May-20	140872								142		13.7		<1					
06-Apr-21	149005								115		14		2					
11-Apr-22	159714								9		4		<1					
28-Mar-23	169185								31		22.2		<1					
09-Apr-24	179938								143		32.3		<1					
TOTAL SAMPLES		0	0	0	0	16	16	15	51	16	33	16	51	0	16	16	16	16
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-52-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 182.4 - 181.8 masl



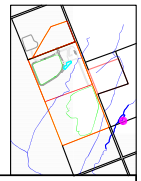
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW2515								**3150**				6					
23-Apr-01	HGW2516								**1340**				<2					
03-Aug-01	HGW2517					<5	<20	<5	**3140**	<2	**120**	<20	15		<10	<20	<2	<10
10-Dec-01	HGW2518								**5310**				8					
18-Apr-02	HGW2519								190				7					
08-Aug-02	HGW2520					<5	<20	<5	**3030**	<0.2	**76**	<20	<2		10	<20	<2	<10
04-Nov-02	HGW2521								**1220**				<2					
22-Aug-06	37828	<20	314	<1	320	<1	<2	<5	**810**	<20	**67**	<5	<1		<2	<5	<2	<30
21-Nov-06	39650								<50				<1					
16-Apr-07	42341								90				<1					
07-Aug-07	44326	<20	433	<1	380	<1	<2	<5	200	<20	**89**	<5			<2	<5	<2	<30
28-Aug-07	44770												<1					
10-Dec-07	46635								160				<1					
30-Apr-08	49009								120		**63**		2		<2			
04-May-09	55534								**2000**		**58**		<1					
13-Apr-10	61859								**2840**		**85**		<1					
20-Apr-11	67591								**4030**		**114**		2					
16-Apr-12	74003								**4640**		**110**		<1					
17-Apr-13	81657								**4080**		**124**		<1					
16-Apr-14	89112								**4310**		**122**		3					
08-Apr-15	96182								**4810**		**134**		1					
19-Apr-16	103707								**4960**		**177**		<1					
03-Apr-17	112040				540				**615**		**84.9**		<1					
09-Apr-18	121417								**1900**		**69**		<1					
16-Apr-19	131144								**1210**		**90.1**		<1					
19-May-20	141002								**3380**		**67.2**		2					
12-Apr-21	149199								**992**		**51.8**		<1					
11-Apr-22	159717								**4730**		**108**		<1					
04-Apr-23	169371								**1280**		**53.2**		<1					
09-Apr-24	179937								**947**		**93**		<1					
TOTAL SAMPLES		2	2	2	3	17	17	17	57	17	34	17	56	0	18	18	17	17
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-53-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.7 - 184.3 masl



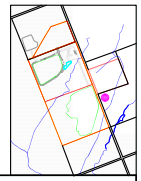
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW2574								**430**				<2					
08-Aug-94	HGW2575					<1	<3	<2	**720**	<10	21	<20	<2		<10	<10	<40	8
03-Aug-95	HGW2576					<5	<2	<2	<10	<0.1	<2	<2	<1		<1	<2	<2	<2
16-Aug-96	HGW2577					1.2	<1	<1	<1	<2	4	<2	<2		<1	<1	<8	<1
01-Aug-97	HGW2578								41				3					
23-Jul-98	HGW2579								**740**				2					
19-Aug-99	HGW2580								**700**				<2					
22-Aug-00	HGW2581								**750**				2					
31-Jul-01	HGW2582								**810**				<2					
08-Aug-02	HGW2583								**780**				<2					
22-Aug-06	37835								**920**				<1					
07-Aug-07	44329								**860**									
28-Aug-07	44772												<1					
15-Apr-08	48712								**930**		25		<1					
11-Mar-09	54363								**950**		19		1					
13-Apr-10	61857								**950**		21		<1					
13-Apr-11	67485								**1050**		22		<1					
17-Apr-12	74039								**1070**		23		<1					
15-Apr-13	81580								**1030**		19		<1					
25-Mar-14	88674								**1310**		22		<1					
07-Apr-15	96147								**1250**		20.9		<1					
05-Apr-16	103414								**1360**		19.3		3					
03-Apr-17	112043								**1170**		18.9		<1					
09-Apr-18	121415								**1250**		20		2					
07-Apr-19	130907								**1140**		19.2		<1					
05-May-20	140691								**1130**		18.1		<1					
29-Mar-21	148819								**1050**		18.8		<1					
22-Mar-22	159170								**629**		21		<1					
03-Apr-23	169323								148		16.1		<1					
09-Apr-24	179935								**927**		19.9		<1					
TOTAL SAMPLES		0	0	0	0	13	13	12	50	13	30	13	50	0	13	13	12	13
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-61-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 173.8 - 173.0 masl



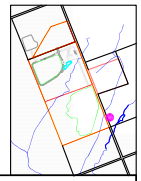
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW2719								<10				<2					
08-Aug-94	HGW2720					<1	<3	<2	40	<10	13	<20	<2		<10	<10	<40	8
03-Aug-95	HGW2721					<5	<2	<2	<10	0.2	4	<2	7		<1	<2	<2	9
16-Aug-96	HGW2722					<0.5	<1	<1	12	<2	5	<2	<2		<1	<1	<8	6
05-Aug-97	HGW2723								6				<2					
23-Jul-98	HGW2724								20				<2					
17-Aug-99	HGW2725								33				<2					
14-Aug-00	HGW2726								40				<2					
26-Jul-01	HGW2727					<5	<20	<5	<20	<0.2	<2	<20	<2		30	<20	<2	<10
08-Aug-02	HGW2728								<20				<2					
15-Aug-06	37700								<50				<2					
13-Aug-07	44444	<20	80	<1	350	<1	<2	<5	<50	<20	6	<5			<2	<5	<2	<30
29-Aug-07	44833												<1					
18-Mar-08	48238								<50		4		<1					
24-Mar-09	54688								<50		5		2					
15-Mar-10	61256								<50		3		<1					
28-Mar-11	67212								<50		3		<1					
17-Apr-12	74040								<50		5		2					
15-Apr-13	81582								<50		4		<1					
25-Mar-14	88676								<50		3		<1					
22-Apr-15	96514								5		1.7		1					
24-Apr-16	103865								2		0.9		<1					
19-Apr-17	112407								4		11.9		<1					
21-Mar-18	120953								<50		1		<1					
03-Apr-19	130815								<1		4.7		<1					
02-Apr-20	139977								10		11.3		<1					
15-Apr-21	149266								<5		4.6		1					
31-Mar-22	159429								<5		2.7		<1					
28-Mar-23	169182								<5		2.4		<1					
02-Apr-24	179748								<5		2.4		<1					
TOTAL SAMPLES		1	1	1	1	10	10	10	40	10	27	10	40	0	10	10	10	10
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-62-IR

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 183.8 - 183.0 masl



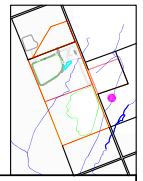
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW2805								**600**				<2					
08-Aug-94	HGW2806			<2		<1	<3	70	280	<10	<2	<10	<2		<10	<10	<40	29
17-Aug-95	HGW2807			<5		1.4	4	2	<10	6	12	3	2		<1	2	3	80
16-Aug-96	HGW2808			<0.2		1.7	<1	3	110	<2	16	<2	11		<1	<1	<8	<1
01-Aug-97	HGW2809								**1780**				10					
23-Jul-98	HGW2810								**550**				<2					
17-Aug-99	HGW2811								51				8					
11-Aug-00	HGW2812								<20				6					
30-Jul-01	HGW2813								**600**				21					
08-Aug-02	HGW2814								90				<2					
18-Jul-06	37153								90				<1					
24-Jul-07	44091								<50									
27-Aug-07	44725												<1					
01-Apr-08	48470								<50		<1		<1					
16-Mar-09	54428								<50		28		<1					
06-Apr-10	61744								<50		**71**		<1		<2			
06-Apr-11	67366								<50		5		<1					
25-Apr-12	74223								<50		**54**		1					
20-Mar-13	81110								<50		<1		<1					
27-Oct-14	93274								**610**		35		<1					
08-Apr-15	96184								300		40		<1					
05-Apr-16	103416								**2320**		**54.2**		5					
27-Mar-17	111813								251		41.8		<1					
26-Mar-18	121017								**600**		29		<1					
09-Apr-19	130969								**1010**		26.2		2					
16-Apr-20	140289								**492**		28.4		<1					
25-Mar-21	148773								229		21		<1					
22-Mar-22	159167								**1750**		18.2		<1					
20-Mar-23	168877								91		27.9		<1					
20-Mar-24	179421								213		25.2		<1					
TOTAL SAMPLES		0	0	7	0	7	7	7	39	7	24	7	39	0	8	7	7	7
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-63-I

Shallow Lower Bedrock

Stand Pipe Piezometer
Screen 171.5 - 170.8 masl



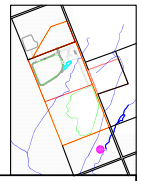
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
10-Dec-01	HGW2876								<20				<2					
18-Apr-02	HGW2877								<20				2			<20		
08-Aug-02	HGW2878			<1		<5	<20	<5	<20	<0.2	21	<20	<2		<10	<20	<2	<10
04-Nov-02	HGW2879								<20				<2					
21-Aug-06	37824	<20	77	<1	550	<1	<2	<5	200	<20	**62**	6	<1		<2	<5	<2	<30
27-Nov-06	39743								**460**				<1					
26-Mar-07	41937								290				<1					
20-Aug-07	44588	**250**	105	<1	630	<1	<2	<5	70	<20	39	<5			<2	<5	<2	<30
29-Aug-07	44836												<1					
10-Dec-07	46641								<50				<1					
08-Oct-14	92865								180		17		2					
27-Apr-15	96616	<25	38	<0.1	190	<0.1	<0.5	<0.5	150	<0.5	**88.3**	<0.5	<1		<0.1	<2		<0.5
14-Sep-15	99619								150		**129**		<1					
24-Apr-16	103847	<25	34	<0.1	124	<0.1	<0.5	<0.5	90	<0.5	26.3	<0.5	<1		<0.1	<2		2.8
09-Apr-17	112159	<25	60	<0.1	379	<0.1	<0.5	<0.5	40	<0.5	49.4	<0.5	<1		<0.1	<2		<0.5
17-Oct-17	117246								**1050**		**226**		63					
25-Apr-18	121903	<25	74	<0.1	453	<0.1	<0.5	<0.5	203	<0.5	**97.7**	<0.5	1		<0.1	<2		<0.5
09-Oct-18	126926								**880**		**117**		<1					
03-Apr-19	130812	**2840**	77	<0.5	266	0.1	0.7	1.6	**1940**	1.9	**84.2**	0.6	<1		<0.5	<2		6.2
08-Oct-19	135881								**3750**		**543**		49					
08-Apr-20	140092	<25	81	<0.5	474	<0.1	<0.5	1.6	**1570**	<0.5	**335**	<0.5	<1		<0.5	<2		1.8
23-Sep-20	144447								**510**		**171**		1					
17-Mar-21	148590	<25	98	<0.5	660	<0.1	<0.5	1.4	55	<0.5	7.5	<0.5	<1		<0.5	<2		1.2
13-Oct-21	154614								215		30.9		1					
29-Mar-22	159328	<25	84	<0.5	600	<0.1	<0.5	<0.5	24	<0.5	4.3	<0.5	<1		<0.5	<2		<0.5
28-Sep-22	164703								80		12.5		<1					
04-Apr-23	169372	<25	91	<0.5	616	<0.1	<0.5	0.5	12	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
27-Sep-23	2023A032								150		21		<1					
25-Mar-24	179554	<25	82	<0.5	630	<0.1	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
18-Sep-24	184587								20		1.7		<1					
TOTAL SAMPLES		12	12	22	12	22	22	22	52	22	32	22	52	0	22	23	12	22
AVERAGE 2024									10		0.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-64-I

Shallow Lower Bedrock

Stand Pipe Piezometer
Screen 183.6 - 182.9 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Aug-94	HGW2934			<2		<1	<3	<2	100	<10	13	<10	<1		<10	<10	<40	8
14-Aug-95	HGW2935			<5		<0.5	14	<2	36	0.1	7	<2	<1		<1	<2	<2	5
24-Aug-96	HGW2936			<0.2		<0.5	<1	<1	240	<2	37.9	<2	<2		<1	<1	<8	<1
01-Aug-97	HGW2937								**1140**				2					
23-Jul-98	HGW2938								**350**				17					
01-Dec-98	HGW2939								100				<2					
24-Aug-99	HGW2940								34				24					
22-Aug-00	HGW2941								<20				<2					
01-Aug-01	HGW2942								100				<2					
08-Aug-02	HGW2943								190				<2					
20-Jul-06	37176								<50				<1					
13-Aug-07	44448								120									
30-Aug-07	44869												<1					
09-Apr-08	48637								80		6		<1					
06-Apr-09	54900								<50		4		<1					
29-Mar-10	61623								<50		<1		<1					
06-Apr-11	67368								<50		<1		<1					
18-Apr-12	74086								<50		<1		<1					
09-Apr-13	81505								<50		<1		<1					
01-Apr-14	88813								<50		<1		<1					
14-Apr-15	96323								4		<0.5		<1					
07-Apr-16	103504								<1		<0.5		3					
27-Mar-17	111807								3		<0.5		<1					
09-Apr-18	121425								<50		8		<1					
16-Apr-19	131146								59		1.8		<1					
14-May-20	140894								17		6.9		<1					
06-Apr-21	149001								<5		1.3		<1					
12-Apr-22	159788								9		<0.5		<1					
03-Apr-23	169324								7		0.6		<1					
02-Apr-24	179740								13		<0.5		<1					
TOTAL SAMPLES		0	0	8	0	8	8	8	41	8	25	8	41	0	8	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-66-I

Shallow Lower Bedrock

Stand Pipe Piezometer
Screen 185.3 - 184.5 masl

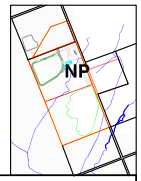
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
30-Aug-95	HGW3030			<5		0.5	2	<2	85	0.4	**59**	14	<1		<1	<2	<2	10
16-Aug-96	HGW3031			<0.2		1	<1	2	22	<2	**74**	<2	<2		<1	<1	<8	<1
08-Aug-97	HGW3032								9				5					
23-Jul-98	HGW3033								14				2					
17-Aug-99	HGW3034								<3				7					
20-Dec-99	HGW3035								<3				<2					
29-Aug-00	HGW3036								**380**				<2					
08-Dec-00	HGW3037			<1		**8**	<20	18	**1930**	8.2	**130**	<20	<2		<10	<20	3	40
03-Aug-01	HGW3038								120				<2					
08-Aug-02	HGW3039								100				<2					
31-Jul-06	37418								100				<1					
16-Jul-07	43946								190									
28-Aug-07	44774												<1					
12-Mar-08	48143								80		24		<1		<2			
15-Apr-09	55049								**4260**		**58**		2					
06-Apr-10	61746								**790**		45		<1		<2			
21-Mar-11	67072								**1770**		36		<1					
11-Apr-12	73927								**870**		26		<1					
09-Apr-13	81507								**1370**		14		<1					
24-Mar-14	88627								**1270**		14		<1					
07-Apr-15	96143								**3440**		35.8		<1					
29-Mar-16	103224								**2910**		**58.2**		1					
23-Apr-17	112538								**1170**		41.4		<1					
26-Mar-18	121013								**4410**		**55**		<1					
28-Mar-19	130676								**1650**		21.2		<1					
29-Apr-20	140550								**3120**		**67.6**		<1					
22-Mar-21	148687								**9620**		**107**		1					
29-Mar-22	159336								**2380**		**58.5**		<1					
21-Mar-23	168980								**7380**		**82.9**		<1					
25-Mar-24	179561								**6260**		**76.9**		<1					
TOTAL SAMPLES		0	0	8	0	8	8	8	39	8	25	8	39	0	10	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-70-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 173.6 - 172.8 masl



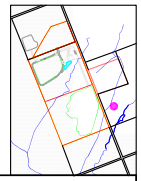
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-91	HGW3100			<2		<1	<3	<2	<10	<10	20	<10	<2		30	<10	<40	<10
28-Mar-92	HGW3101			<2		<1	<3	<2	50	<10	20	<10	<1		20	<10	<40	7
28-Jul-92	HGW3102			<2		<1	<3	<2	260	<10	<2	<20	<1		30	<10	<40	<1
28-Sep-92	HGW3103								170				<2					
28-Nov-92	HGW3104			<2		<1	<3	<2	260	<10	<2	<20	<2		<10	<10	<40	4
28-Mar-93	HGW3105			<2		<1	<3	<2	140	<10	20	<20	<2		<10	<10	<40	4
28-Jun-93	HGW3106								125				<2					
28-Nov-93	HGW3107								70				<2					
08-Aug-94	HGW3108			<2		<1	<3	<2	170	<10	<2	<20	<2		<10	<10	<40	8
24-Aug-96	HGW3109			100		<0.5	<1	<1	100	<2	40.1	<2	<2		2	<1	<8	<1
23-Jul-98	HGW3110								45				3					
15-Aug-00	HGW3111								96				<2					
08-Aug-02	HGW3112								180				<2					
29-Aug-06	37984								50				<1					
04-May-09	55530								60		31		<1					
28-Apr-10	62147								100		21		<1					
26-Apr-11	67649								<50		1		1					
12-Apr-12	73950								<50		24		3					
16-Apr-13	81637								<50		2		<1					
28-Apr-15	96632								43		22.9		<1					
28-Apr-16	103946								31		5.5		1					
23-Apr-17	112533								5		3.3		<1					
09-Apr-18	121419								<50		4		<1					
23-Apr-19	131253								**398**		9.5		3					
20-May-20	141022								**497**		20.9		<1					
08-Apr-21	149081								8		3.7		1					
12-Apr-22	159790								6		3.3		<1					
21-Mar-23	168977								12		3.6		<1					
10-Apr-24	179981								7		3.3		<1					
TOTAL SAMPLES		0	0	7	0	7	7	7	29	7	22	7	29	0	7	7	7	7
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-75-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 182.1 - 181.3 masl



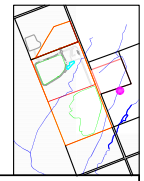
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-91	HGW3443			<2		<1	<3	60	<10	**30**	20	<10	<2		<10	<10	<40	10
16-Aug-96	HGW3444			<0.2		0.7	<1	<1	34	<2	7	<2	2		1	<1	<8	<1
23-Jul-98	HGW3445								140				6					
18-Oct-99	HGW3446								4				6					
22-Aug-00	HGW3447								<20				5					
08-Dec-00	HGW3448			<1		<5	<20	8	50	<0.2	5	<20			<10	<20	<2	<10
23-Apr-01	HGW3449								50				3					
10-Dec-01	HGW3450								50				<2					
08-Aug-02	HGW3451			<1		<5	<20	<5	50	0.2	11	<20	<2		160	<20	<2	<10
04-Nov-02	HGW3452								70									
08-Oct-14	92868								**850**		9		<1					
22-Apr-15	96520	<25	323	<0.1	1510	<0.1	<0.5	<0.5	54	<0.5	3.9	0.7	<1		<0.1	<2		1.4
14-Sep-15	99617								100		5		2					
17-Oct-17	117243								110		4		3					
25-Apr-18	121901	<25	303	<0.1	1450	<0.1	<0.5	<0.5	44	<0.5	2.6	0.5	<1		<0.1	<2		3.6
07-Oct-19	135827								90		6		2					
13-May-20	140867	<25	315	<0.5	1280	<0.1	<0.5	2.1	22	<0.5	<0.5	<0.5	<1		<0.5	<2		4.5
23-Sep-20	144445								116		6.2		2					
13-Apr-21	149227	<25	358	<0.5	1490	<0.1	<0.5	0.9	15	<0.5	6.4	<0.5	<1		<0.5	<2		5.9
13-Oct-21	154612								90		6.8		1					
22-Mar-22	159173	<25	334	<0.5	1720	<0.1	<0.5	0.5	80	<0.5	5.4	<0.5	<1		<0.5	<2		1.6
11-Apr-23	169534	<25	220	<0.5	1560	<0.1	<0.5	2.7	163	<0.5	7	0.7	<1		<0.5	2		<5
27-Sep-23	2023A030								70		3		<1					
23-Sep-24	184723								28		4		<1					
TOTAL SAMPLES		6	6	10	6	10	10	10	24	10	18	10	22	0	10	10	4	10
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-76-I

Deep Bedrock Unit

Stand Pipe Piezometer
Screen 172.4 - 171.1 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Sep-92	HGW3479			10		**30**	**70**	100	260	**170**	**180**	250	9		180		<40	
28-Mar-93	HGW3480								200				33			200		80
18-May-95	HGW3481								48				3			20		<5
16-Aug-96	HGW3483			<0.2		<0.5	<1	2	**460**	**27**	**77**	<2	<2		2	<1	<8	<1
05-Aug-97	HGW3484								**1140**				135					
23-Jul-98	HGW3485												66					
18-Oct-99	HGW3486								**1720**				12					
22-Aug-00	HGW3487								**2650**				358					
01-Aug-01	HGW3488								**6530**				280					
08-Aug-02	HGW3490								**2180**				14					
21-Aug-06	37845								**19100**				35					
20-Apr-09	55141	<20	**1460**	<1	35200	<1	<2	<5	**4200**	<50	**136**	<5	69		5	<5		<30
26-Apr-10	62091								130		**85**		6					
19-Apr-11	67564								**1620**		**77**		14					
23-Apr-12	74136								**4670**		**107**		63					
24-Apr-13	81860								**1030**		**56**		9					
16-Apr-14	89114								**2390**		**71**		12					
27-Apr-15	96623								**6920**		**148**		26					
24-Apr-16	103870								**13300**		**248**		38					
09-Apr-17	112152								**6490**		**156**		14					
17-Apr-18	121645								**4520**		**138**		8					
07-Apr-19	130912								**4140**		**144**		10					
05-May-20	140685								**1360**		**124**		9					
13-Apr-21	149230								**6160**		**177**		28					
12-Apr-22	159794								**8400**		**188**		28					
11-Apr-23	169536								**2770**		**166**		9					
25-Mar-24	179558								**6330**		**151**		9					

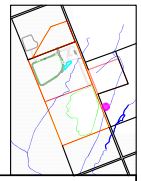
TOTAL SAMPLES	1	1	3	1	3	3	3	26	3	18	3	27	0	3	4	2	4
AVERAGE 2024																	

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-81-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.8 - 183.3 masl



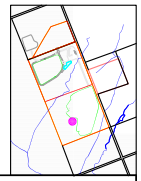
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Mar-10	61543	<20	286	<1	190	<1	<2	<5	**550**	<20	17	<5	<1			<5		<30
27-Sep-10	64385								**990**		29		<1					
29-Mar-11	67234	<20	339	<1	120	<1	<2	<5	260	<20	14	<5	1			<5		<30
18-Oct-11	71023								120		11		<1					
25-Apr-12	74217	<20	549	<1	210	0.4	<2	<5	<50	<1.5	18	<5	<1			<5		<30
03-Oct-12	77704								<50		24		<1					
19-Mar-13	81048	<20	**1640**	<1	300	<1	<2	<5	**700**	<10	23	<5	<1		<2	<5		<10
15-Oct-13	85688								**720**		19		<1					
31-Mar-14	88762	<20	**1750**	<1	280	<1	<2	<5	**800**	<10	21	<5	1		<2	<5		<30
07-Oct-14	92843								**480**		12		<1					
21-Apr-15	96455	<25	**1650**	<0.1	279	<0.1	<0.5	<0.5	239	<0.5	20.6	<0.5	3		<0.1	<2		1.2
09-Sep-15	99515								**340**		18.3		2					
24-Apr-16	103852	<25	**2280**	<0.1	392	<0.1	<0.5	0.5	103	<0.5	18.2	<0.5	<1		<0.1	<2		1.9
11-Oct-16	108019								266		15.3		<1					
09-Apr-17	112153	<25	**2110**	<0.1	436	<0.1	<0.5	<0.5	223	<0.5	16.2	0.6	<1		<0.1	<2		0.5
03-Oct-17	116852								**310**		17		<1					
18-Apr-18	121704	<25	**2180**	<0.1	332	<0.1	<0.5	<0.5	**409**	<0.5	16.5	0.7	<1		<0.1	<2		1.1
14-Oct-18	127088								**320**		16		<1					
01-Apr-19	130699	<25	**2310**	<0.5	359	<0.1	<0.5	<0.5	145	<0.5	16.3	0.5	1		<0.5	<2		1.6
30-Sep-19	135552								200		11		<1					
16-Apr-20	140285	<25	**2060**	<0.5	238	<0.1	<0.5	0.8	**440**	<0.5	16.6	0.6	<1		<0.5	<2		2.6
13-Sep-20	144108								195		16.4		1					
16-Mar-21	148556	<25	**1870**	<0.5	286	<0.1	<0.5	<0.5	242	<0.5	16.8	0.5	<1		<0.5	<2		1.4
06-Oct-21	154479								165		17.6		2					
21-Mar-22	159045	<25	**1900**	<0.5	288	<0.1	<0.5	<0.5	182	<0.5	15.1	0.5	<1		<0.5	<2		1
27-Sep-22	164662								78		12.1		<1					
20-Mar-23	168871	<25	**1910**	<0.5	233	<0.1	<0.5	<0.5	175	<0.5	15.9	0.5	<1		<0.5	<2		<5
25-Sep-23	2023A015								80		12.9		<1					
19-Mar-24	179373	<25	**1380**	<0.5	198	<0.1	<0.5	<0.5	173	<0.5	14.2	0.6	<1		<0.5	<2		<5
17-Sep-24	184547								139		15.8		<1					
TOTAL SAMPLES		19	19	24	19	24	25	24	53	24	41	24	53	0	21	25	7	24
AVERAGE 2024									156		15.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-101-I

Shallow Bedrock Unit

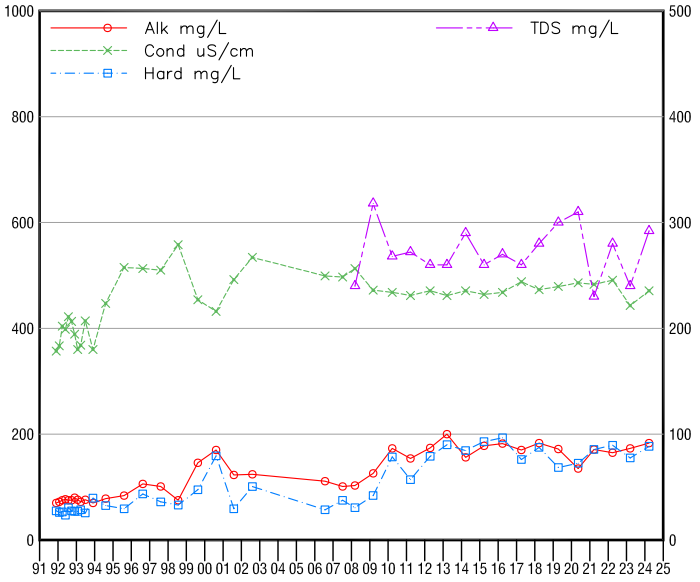
Stand Pipe Piezometer
Screen 186.3 - 184.6 masl

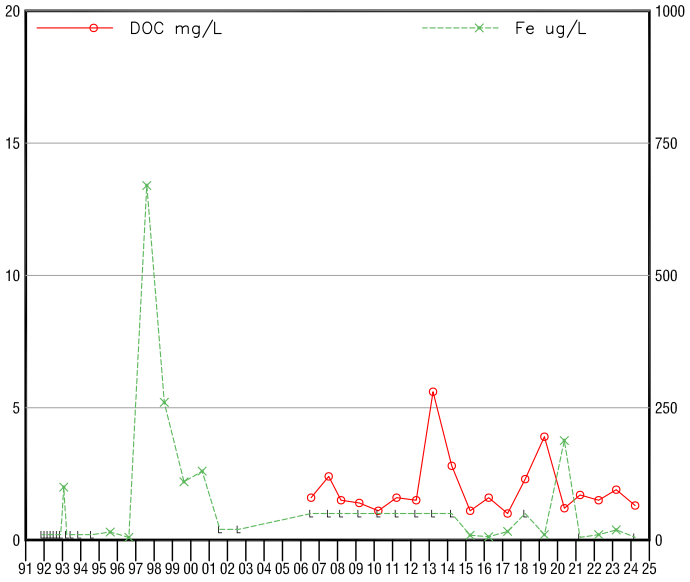


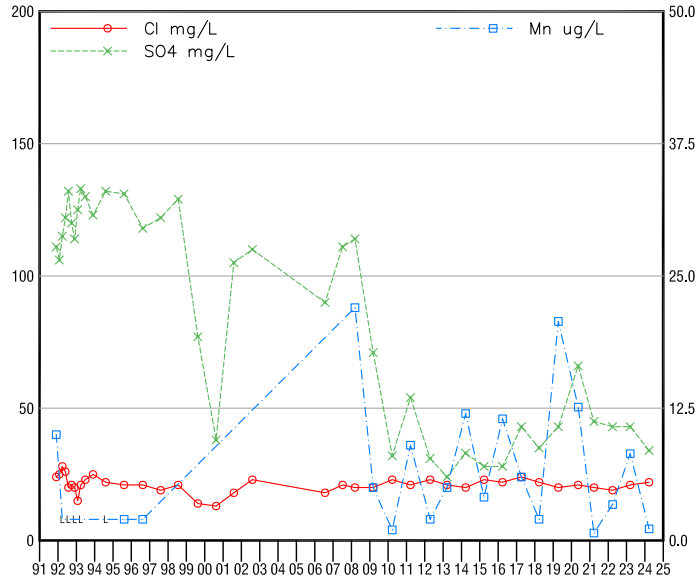
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
08-Dec-00	HGW0038								30				<2					
23-Apr-01	HGW0039								60				10					
03-Aug-01	HGW0040					<5	<20	<5	<20	<2	<2	<20	7		10	<20	<2	<10
10-Dec-01	HGW0041								<20				<2					
18-Apr-02	HGW0042								<20				<2					
08-Aug-02	HGW0043					<5	<20	<10	<20	<0.2	<2	<20	<2		20	<20	29	<20
04-Nov-02	HGW0044								<20				<2					
15-Aug-06	37694	20	44	<1	1190	<1	<2	<5	<50	<20	11	9	<1		<2	<5	<2	<30
05-Dec-06	39911								<50				<1					
16-Apr-07	42338								<50				<1					
16-Jul-07	43918	<20	32	<1	470	<1	<2	<5	<50	<20	10	11			<2	<5	<2	<30
28-Aug-07	44795												<1					
26-Nov-07	46381								70				<1					
26-Mar-08	48331								**510**		15		<1		<2			
16-Apr-09	55051								<50		7		1					
12-Apr-10	61849								<50		2		<1					
05-Apr-11	67317								70		16		<1					
11-Apr-12	73919								<50		3		<1					
25-Mar-13	81159								<50		9		<1					
31-Mar-14	88759								70		7		<1					
21-Apr-15	96459								70		6.6		1					
24-Apr-16	103856								56		12		<1					
29-Mar-17	111924				960				56		14.5		<1					
26-Mar-18	121007								<50		13		<1					
25-Mar-19	130609								54		6.1		1					
29-Apr-20	140552								13		9.5		<1					
16-Mar-21	148559								33		6.8		<1					
16-Mar-22	158954								76		2.7		<1					
21-Mar-23	168982								49		11.1		<1					
26-Mar-24	179600								35		14.6		<1					
TOTAL SAMPLES		2	2	2	3	6	6	6	33	6	23	6	33	0	7	6	6	6
AVERAGE 2024																		

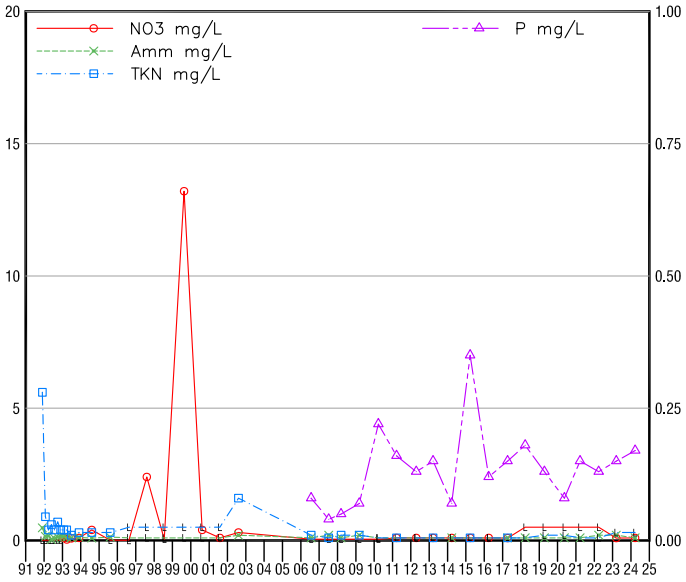
all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

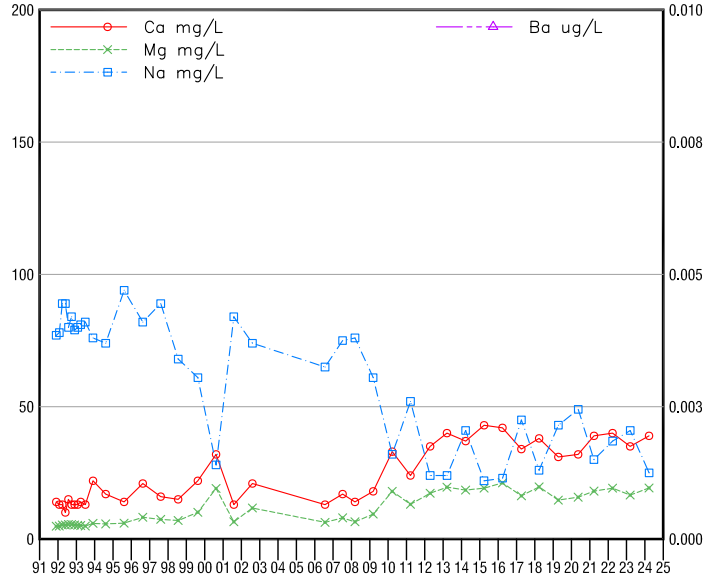
North Fill Area - Overburden Monitors



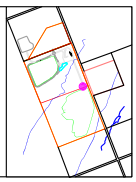








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-74-II

Overburden Formation

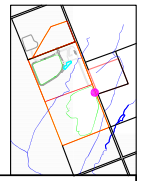
Screen 182.1 - 181.4 masl

CA008825 24 Mar 25	wsp	F124001

BH-74-II

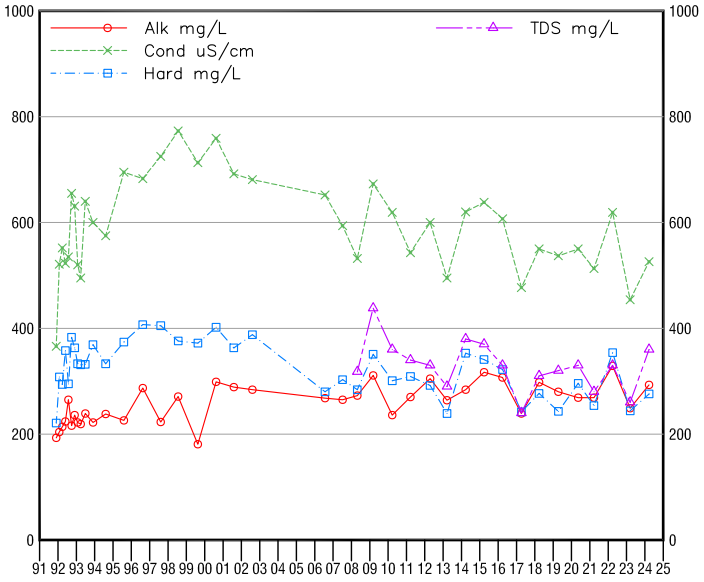
Overburden Formation

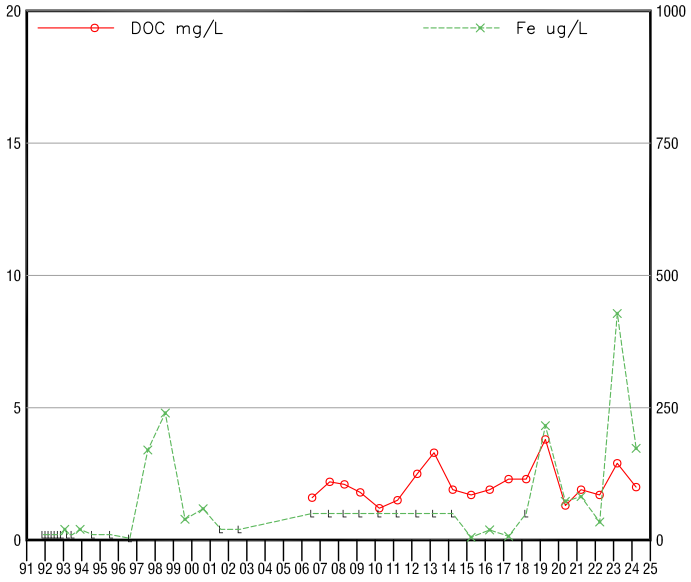
Stand Pipe Piezometer
Screen 182.1 - 181.4 masl

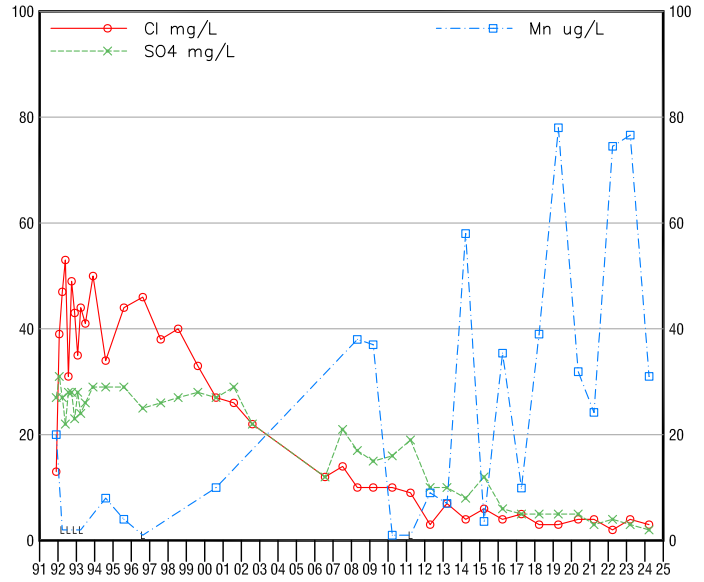


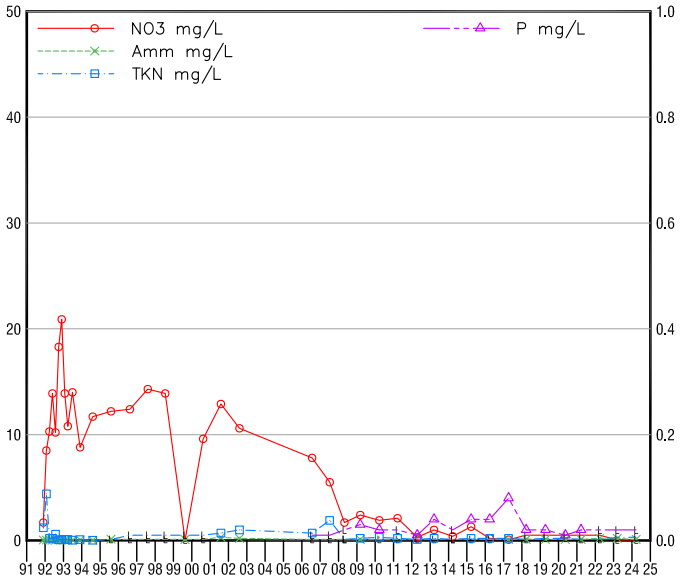
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW3412	76	414	51	7.9	23	130	13	4.9	82	1.79		0.08	0.007	0.1		-2.2
28-Nov-93	HGW3413	70	360	79	8.2	25	123	22	5.9	76	1.34		0.1	0.004	0.12		2.5
08-Aug-94	HGW3414	78	447	65	8.2	22	132	17	5.7	74	1.87		0.4	0.008	0.09		-4.3
11-Aug-95	HGW3415	84	515	59	8.3	21	131	14	6.0	94	1.3		<0.01	0.26	0.13		3.0
16-Aug-96	HGW3416	106	513	87	8.2	21	118	21	8.2	82	1.78		<0.005	<0.006	<0.1		1.7
08-Aug-97	HGW3417	101	510	72	7.8	19	122	16	7.4	89	2.26		2.4	0.006	<0.1		1.2
23-Jul-98	HGW3418	75	558	66	8.2	21	129	15	7.0	68	1.76		<0.05	<0.06	<0.1		-4.9
19-Aug-99	HGW3419	146	454	95	8.6	14	77	22	10.1	61	2.48		**13.2**	<0.06	<0.1		-11.6
15-Aug-00	HGW3420	170	432	159	8.3	13	38	32	19.1	28	3.37		0.4	<0.06	<0.1		-1.1
03-Aug-01	HGW3421	123	492	59	8.3	18	105	13	6.5	84	1.37		0.1	<0.06	<0.1		-3.0
08-Aug-02	HGW3422	124	534	101	8.2	23	110	21	11.7	74	1.52		0.3	<0.06	0.2		-1.3
25-Jul-06	37307	111	499	57		18	90	13	6.3	65	1.13	1.6	<0.05	<0.05	0.1		-6.8
09-Jul-07	43778	101	497	75		21	111	17	8.0	75	1.27	2.4	<0.05	<0.05	0.2		-1.1
12-Mar-08	48142	103	513	61		20	114	14	6.5	76	1.15	1.5	<0.05	<0.05	0.1	240	-4.9
09-Mar-09	54302	126	472	84	8.0	20	71	18	9.4	61	1.37	1.4	<0.05	<0.1	0.2	318	-1.9
24-Mar-10	61548	173	468	157	8.1	23	32	33	18.0	32	1.87	1.1	<0.05	<0.05	<0.1	268	-2.1
22-Mar-11	67104	154	462	114	7.8	21	54	24	13.1	52	1.52	1.6	0.1	<0.05	<0.1	272	-2.4
17-Apr-12	74043	174	471	158	8.1	23	31	35	17.3	24	1.97	1.5	0.1	<0.05	<0.1	260	-6.0
19-Mar-13	81081	200	462	180	8.2	21	24	40	19.6	24	1.91	**5.6**	0.1	<0.05	<0.1	260	-4.3
24-Mar-14	88629	156	471	169	7.8	20	33	37	18.5	41	1.9	2.8	0.1	<0.05	0.1	290	8.7
26-Mar-15	95966	178	464	186	8.3	23	28	43	19.2	22	1.8	1.1	0.1	<0.05	<0.1	260	-1.1
29-Mar-16	103226	182	468	193	8.2	22	28	42	21.2	23	1.9	1.6	0.1	<0.05	<0.1	270	0.4
09-Apr-17	112146	170	488	152	8.2	24	43	34	16.3	45	2	1	0.09	<0.05	0.1	260	0.9
26-Mar-18	121015	183	473	175	8.1	22	35	38	19.7	26	1.8	2.3	<0.5	<0.5	0.1	280	-3.6
14-Apr-19	131083	172	479	137	8.2	20	43	31	14.7	43	1.8	3.9	<0.5	<0.5	0.1	300	-2.6
14-May-20	140896	135	486	145	8.4	21	66	32	15.8	49	1.6	1.2	<0.5	<0.5	0.1	310	4.3
23-Mar-21	148728	171	483	171	8.2	20	45	39	18.1	30	1.8	1.7	<0.5	<0.5	0.1	230	-1.3
30-Mar-22	159373	165	491	179	8.1	19	43	40	19.2	37	2	1.5	<0.5	<0.5	0.2	280	5.1
15-Mar-23	168776	173	443	155	8.1	21	43	35	16.6	41	1.7	1.9	0.09	<0.05	0.2	240	0.0
25-Mar-24	179559	183	471	177	8.2	22	34	39	19.3	25	1.8	1.3	0.1	<0.05	0.1	292	2.1
TOTAL SAMPLES		39	39	39	36	39	39	39	39	39	39	19	39	38	39	17	
AVERAGE 2024																	

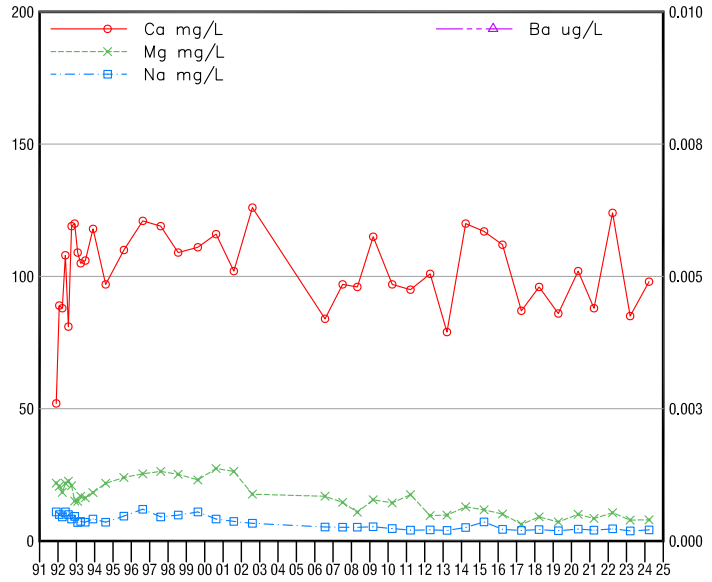
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



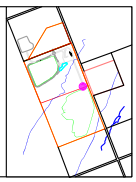








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-74-III

Shallow Overburden

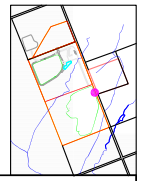
Screen 194.7 - 190.1 masl

CA008825 24 Mar 25	wsp	F124002

BH-74-III

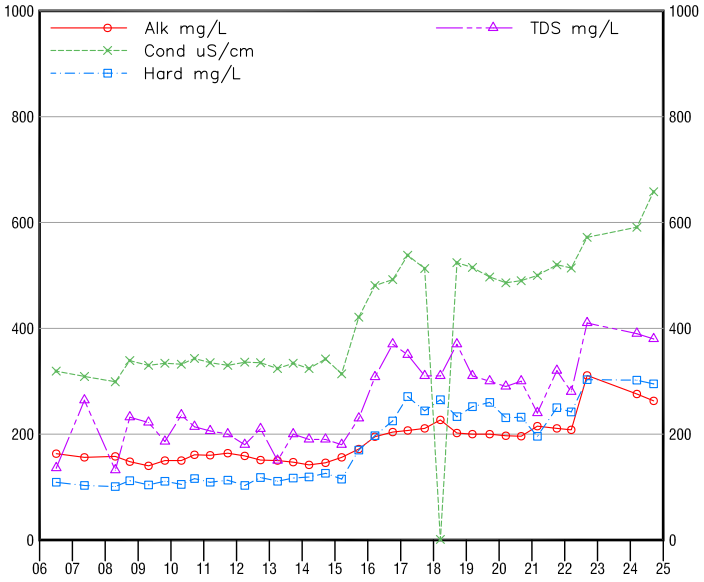
Shallow Overburden

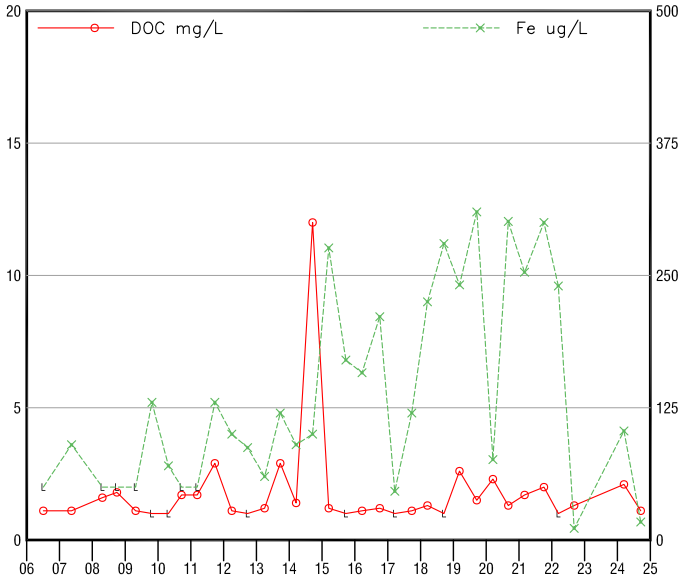
Monitoring Well
Screen 194.7 - 190.1 masl

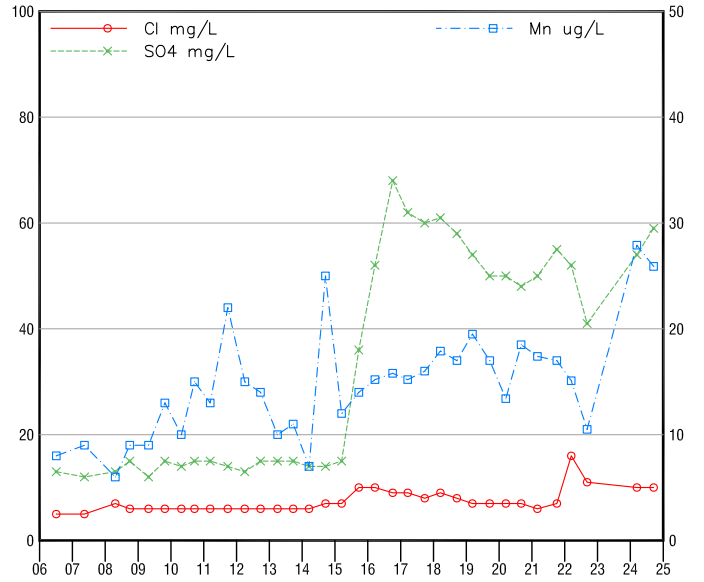


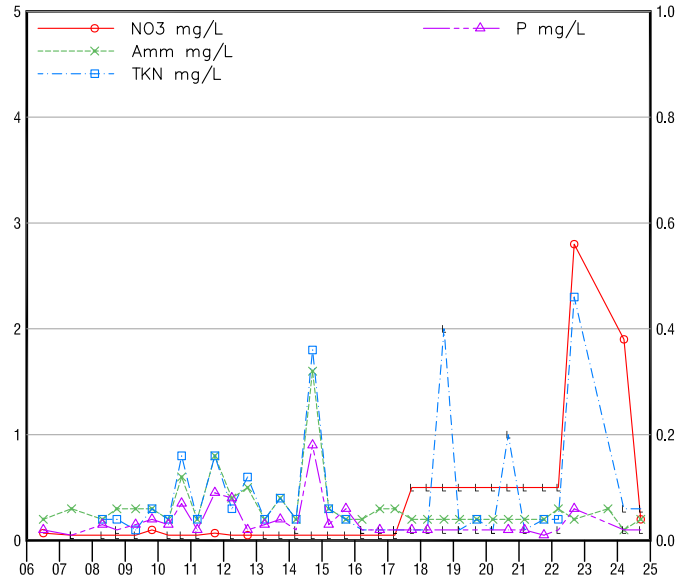
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Jun-93	HGW3432	239	640	332	7.5	41	26	106	16.3	7.1	1.42		**14.0**	<0.001	0.03		-3.4
28-Nov-93	HGW3433	222	600	369	7.6	50	29	118	18.3	8.3	0.67		8.8	0.004	0.05		4.6
08-Aug-94	HGW3434	238	575	333	7.5	34	29	97	21.8	7.1	1.65		**11.7**	0.008	0.02		-1.2
05-Aug-95	HGW3435	226	695	374	7.6	44	29	110	24.0	9.4	1.8		**12.2**	<0.01	0.12		4.7
16-Aug-96	HGW3436	287	683	407	7.6	46	25	121	25.4	12	1.79		**12.4**	<0.006	<0.1		1.4
08-Aug-97	HGW3437	223	725	405	7.7	38	26	119	26.3	9.1	1.92		**14.3**	0.008	<0.1		9.3
23-Jul-98	HGW3438	271	773	376	7.9	40	27	109	25.2	9.8	2.12		**13.9**	<0.06	<0.1		-0.6
19-Aug-99	HGW3439	181	713	372	8.2	33	28	111	23.1	11	2.38		<0.05	<0.06	0.1		22.0
15-Aug-00	HGW3440	299	759	402	8.1	27	27	116	27.4	8.3	1.66		9.6	<0.06	<0.1		2.8
03-Aug-01	HGW3441	289	692	363	7.8	26	29	102	26.3	7.4	1.43		**12.9**	<0.06	0.3		-2.6
08-Aug-02	HGW3442	284	681	388	8.1	22	22	126	17.7	6.7	0.83		**10.6**	<0.06	0.2		3.6
25-Jul-06	37312	268	652	280		12	12	84	16.9	5.3	1.09	1.6	7.8	<0.05	<0.1		-5.4
09-Jul-07	43779	265	594	303		14	21	97	14.6	5.2	0.65	2.2	5.5	<0.05	<0.1		-1.8
28-Apr-08	48970	273	532	284	7.7	10	17	96	10.9	5.2	0.54	2.1	1.7	<0.1	<0.1	318	-2.3
09-Mar-09	54303	311	673	351	7.6	10	15	115	15.6	5.4	0.7	1.8	2.4	<0.1	0.1	438	2.1
24-Mar-10	61549	236	619	301	7.8	10	16	97	14.4	4.7	0.68	1.2	1.9	<0.05	<0.1	360	6.5
22-Mar-11	67105	270	543	309	7.8	9	19	95	17.5	4.1	0.72	1.5	2.1	<0.05	<0.1	340	1.5
17-Apr-12	74045	305	600	292	7.4	3	10	101	9.6	4.2	<0.5	2.5	0.3	<0.05	<0.1	330	-3.2
19-Mar-13	81054	264	495	239	7.6	7	10	79	9.8	4.0	1.39	3.3	1.0	<0.05	<0.1	290	-7.0
24-Mar-14	88630	284	620	353	7.6	4	8	120	12.9	5.1	<0.5	1.9	0.4	<0.05	<0.1	380	9.7
26-Mar-15	95967	317	638	341	7.6	6	12	117	11.8	7.2	0.5	1.7	1.3	<0.05	<0.1	370	2.1
29-Mar-16	103227	307	607	322	7.9	4	6	112	10.2	4.4	<0.5	1.9	0.2	<0.05	<0.1	330	1.8
09-Apr-17	112147	239	477	242	7.8	5	5	87	6.3	4.0	1	2.3	0.07	<0.05	0.1	240	0.2
26-Mar-18	121016	298	550	277	7.5	3	5	96	9.1	4.3	<0.5	2.3	<0.5	<0.5	0.1	310	-3.6
14-Apr-19	131085	280	537	243	7.6	3	5	86	7.2	3.9	1.1	3.8	<0.5	<0.5	0.1	320	-6.7
14-May-20	140897	269	550	296	7.7	4	5	102	10.1	4.5	<0.5	1.3	<0.5	<0.5	0.1	330	4.7
23-Mar-21	148729	269	513	254	7.6	4	3	88	8.5	4.1	0.5	1.9	<0.5	<0.5	0.1	280	-2.5
30-Mar-22	159374	329	619	354	7.5	2	4	124	10.7	4.6	<0.5	1.7	<0.5	<0.5	0.2	330	4.1
15-Mar-23	168777	249	454	244	7.6	4	3	85	7.9	3.8	<0.5	2.9	<0.05	<0.05	0.2	260	-0.8
25-Mar-24	179560	293	526	276	7.6	3	2	98	8.0	4.2	<0.5	2	<0.05	<0.05	0.1	360	0.5
TOTAL SAMPLES		39	39	39	37	39	39	39	39	39	39	19	39	39	39	17	
AVERAGE 2024																	

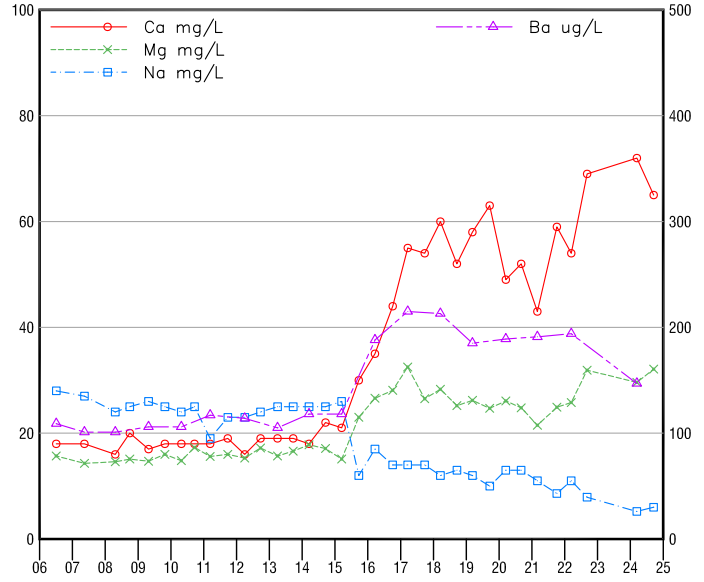
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



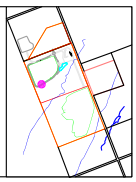








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-84-II

Shallow Overburden

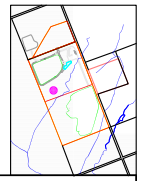
Screen 195.0 - 193.0 masl

CA008825 24 Mar 25	wsp	F124003

BH-84-II

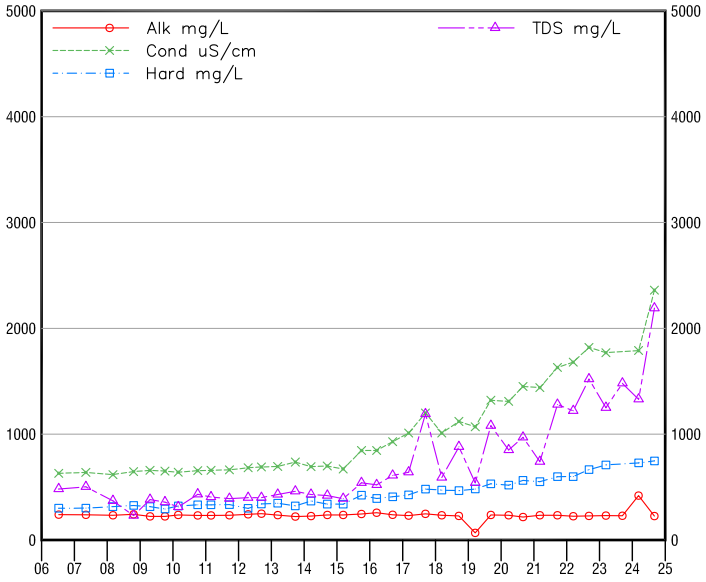
Shallow Overburden

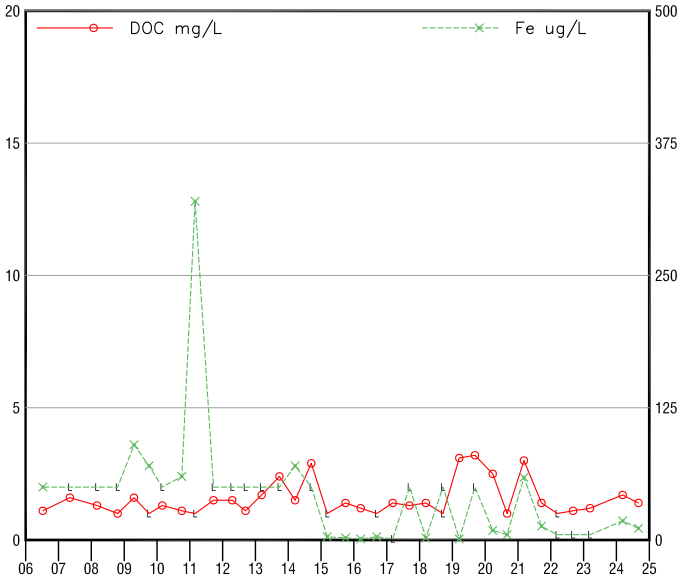
Monitoring Well
Screen 195.0 - 193.0 masl

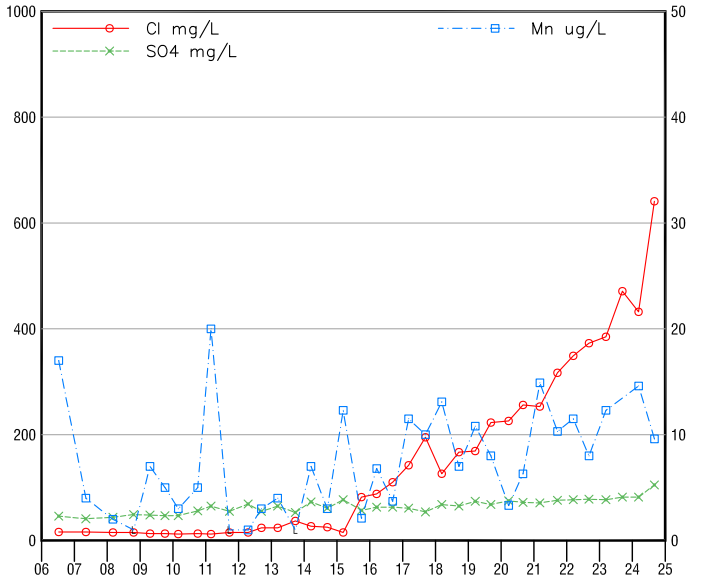


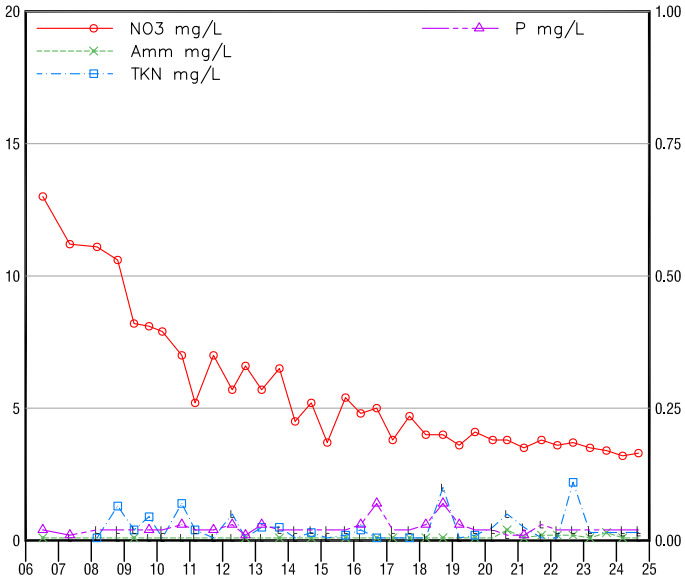
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
26-Oct-09	58830	150	334	111	7.9	6	15	18	16.0	25	1.01	<1	0.1	<0.05	0.3	186	-2.0
27-Apr-10	62093	150	332	105	8.0	6	14	18	14.8	24	0.92	<1	<0.05	<0.05	0.2	236	-4.1
21-Sep-10	64270	161	343	116	8.2	6	15	18	17.3	25	0.92	1.7	<0.05	<0.05	0.6	214	-3.2
14-Mar-11	66913	160	335	109	8.1	6	15	18	15.6	19	1.02	1.7	<0.05	<0.05	0.2	206	-9.4
26-Sep-11	70474	164	330	113	8.2	6	14	19	16.0	23	0.98	2.9	0.07	<0.05	0.8	200	-5.2
02-Apr-12	73789	159	336	103	8.1	6	13	16	15.3	23	0.91	1.1	<0.05	<0.05	0.4	180	-7.2
24-Sep-12	77496	151	335	118	7.9	6	15	19	17.2	24	0.94	<1	0.05	<0.05	0.5	210	-0.4
02-Apr-13	81307	150	324	111	8.1	6	15	19	15.7	25	1.02	1.2	<0.05	<0.05	0.2	150	-1.6
23-Sep-13	85305	147	334	117	8.2	6	15	19	16.6	25	0.9	2.9	<0.05	<0.05	0.4	200	0.8
18-Mar-14	88523	142	324	119	8.3	6	14	18	17.8	25	0.8	1.4	<0.05	<0.05	0.2	190	3.2
17-Sep-14	92470	146	342	126	7.9	7	14	22	17.1	25	1.6	**12**	<0.05	<0.05	1.6	190	4.8
16-Mar-15	95697	156	314	115	8.1	7	15	21	15.1	26	0.8	1.2	<0.05	<0.05	0.3	180	-2.3
23-Sep-15	99778	172	421	170	8.1	10	36	30	23.0	12	1	<1	<0.05	<0.05	0.2	230	-6.1
21-Mar-16	103104	195	481	197	8.1	10	52	35	26.6	17	1	1.1	<0.05	<0.05	0.2	308	-5.7
04-Oct-16	107874	204	492	225	8.0	9	68	44	28.1	14	1.2	1.2	<0.05	<0.05	0.3	370	-5.3
20-Mar-17	111708	207	538	271	7.8	9	62	55	32.5	14	1.2	<1	<0.05	<0.05	0.3	350	3.4
25-Sep-17	116641	211	513	244	8.0	8	60	54	26.5	14	1	1.1	<0.5	<0.5	0.2	310	-1.4
19-Mar-18	120815	227	1	265	7.8	9	61	60	28.3	12	1.2	1.3	<0.5	<0.5	0.2	310	-1.5
19-Sep-18	126252	202	524	233	8.0	8	58	52	25.2	13	1.2	<1	<0.5	<0.5	0.2	370	-1.9
11-Mar-19	130206	200	515	252	7.9	7	54	58	26.2	12	1.4	2.6	<0.5	<0.5	0.2	310	2.7
19-Sep-19	135284	200	497	260	8.0	7	50	63	24.7	10	1.4	1.5	<0.5	<0.5	0.2	300	4.2
16-Mar-20	139458	197	486	231	7.9	7	50	49	26.1	13	1.2	2.3	<0.5	<0.5	0.2	290	0.4
03-Sep-20	143906	196	490	232	7.9	7	48	52	24.8	13	1.3	1.3	<0.5	<0.5	0.2	300	1.4
03-Mar-21	148219	215	500	196	7.9	6	50	43	21.5	11	1.1	1.7	<0.5	<0.5	0.2	240	-11.0
05-Oct-21	154355	211	520	250	7.9	7	55	59	24.9	8.6	1.2	2	<0.5	<0.5	0.2	320	-1.0
14-Mar-22	158787	208	514	242	7.8	16	52	54	25.8	11	1.2	<1	<0.5	<0.5	0.3	280	-2.9
07-Sep-22	164089	311	572	303	7.9	11	41	69	31.9	7.9	1.6	1.3	2.8	<0.05	0.2	410	-8.0
18-Sep-23	174297				7.5										0.3		
13-Mar-24	179161	276	591	302	7.8	10	54	72	29.6	5.2	1.6	2.1	1.9	0.06	0.1	390	4.1
16-Sep-24	184495	263	658	295	7.5	10	59	65	32.1	6.0	1.7	1.1	0.2	<0.05	0.2	380	2.9
TOTAL SAMPLES		34	34	34	32	34	34	34	34	34	34	34	34	34	35	34	
AVERAGE 2024		270	625	299	7.7	10	57	69	30.9	5.6	1.7	1.6	1.1	<0.05	0.2	385	

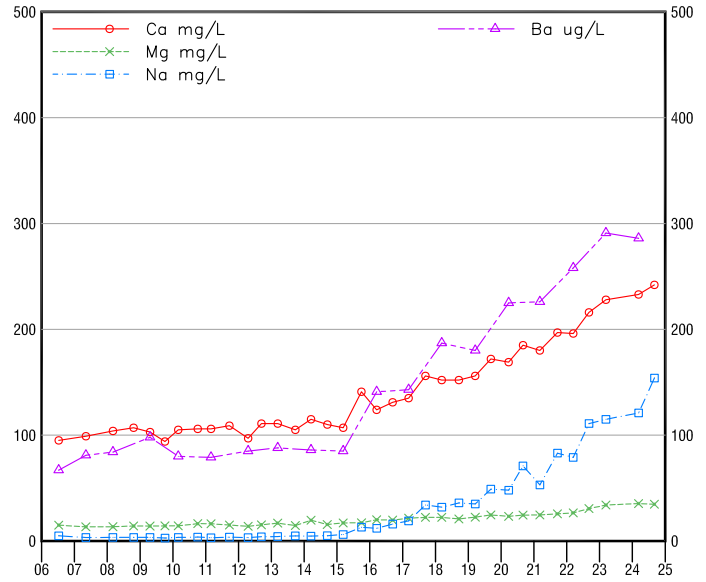
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



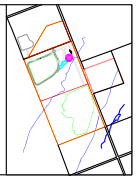








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-85-I

Lower Screened Overburden

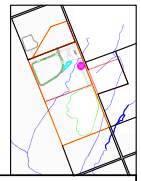
Screen 186.3 - 184.3 masl

CA008825 24 Mar 25	wsp	F124004

BH-85-I

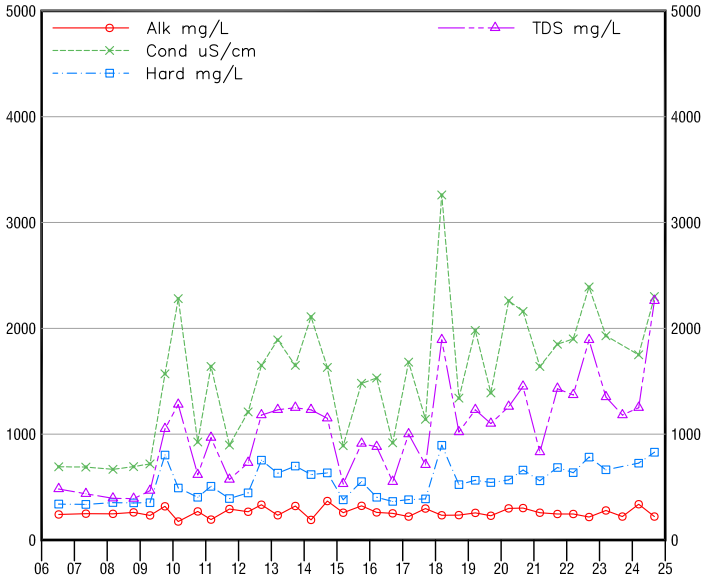
Lower Screened Overburden

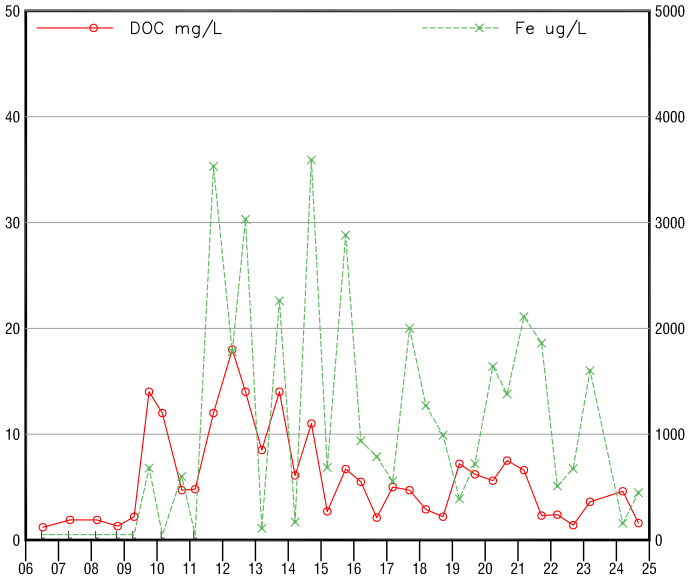
Stand Pipe Piezometer
Screen 186.3 - 184.3 masl

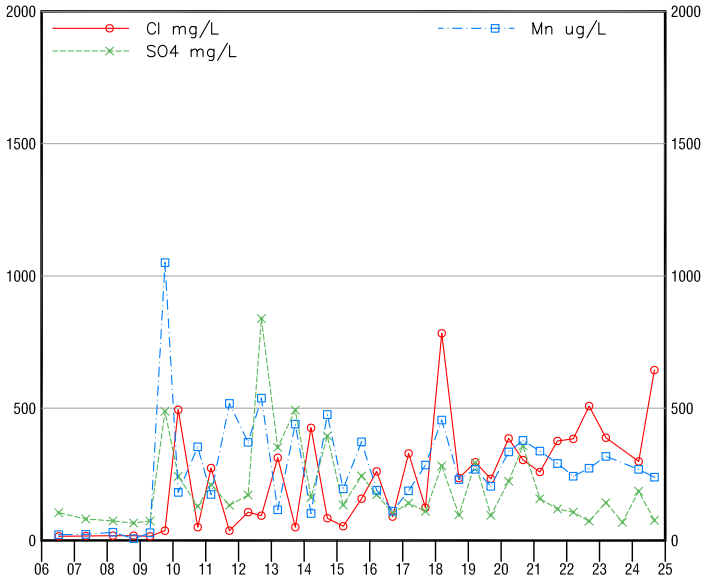


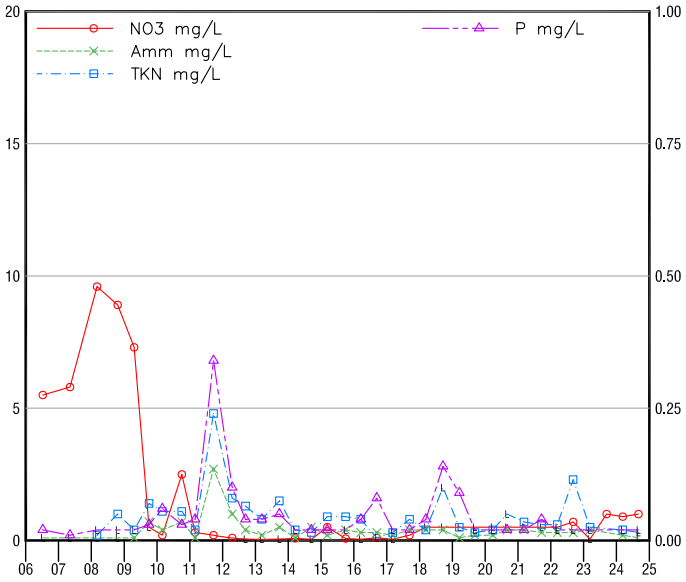
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
02-Mar-10	60955	237	640	321	7.7	12	47	105	14.3	3.4	2.93	1.3	7.9	<0.05	<0.1	312	0.0
04-Oct-10	64472	232	655	332	7.7	13	56	106	16.4	3.7	2.65	1.1	7.0	<0.05	<0.1	432	1.5
01-Mar-11	66691	232	658	332	7.6	12	65	106	16.3	3.1	2.72	<1	5.2	<0.05	<0.1	406	1.0
22-Sep-11	70446	233	663	334	7.7	15	55	109	15.1	3.6	2.74	1.5	7.0	<0.05	<0.1	390	1.4
17-Apr-12	74046	243	682	299	7.5	15	69	97	13.9	3.2	2.61	1.5	5.7	<0.05	<0.1	400	-7.1
12-Sep-12	77193	249	690	340	7.5	24	55	111	15.3	4.0	3.19	1.1	6.6	<0.05	0.1	400	-1.4
12-Mar-13	80842	235	694	347	7.8	24	65	111	16.9	4.2	2.76	1.7	5.7	<0.05	<0.1	430	0.4
24-Sep-13	85336	221	736	322	7.8	37	53	105	14.6	4.8	3.3	2.4	6.5	<0.05	0.1	460	-2.1
18-Mar-14	88525	226	693	368	7.6	27	73	115	19.6	4.6	3	1.5	4.5	<0.05	<0.1	430	3.5
15-Sep-14	92417	236	699	339	7.7	25	61	110	15.6	5.0	3	2.9	5.2	<0.05	0.1	420	0.1
11-Mar-15	95595	237	671	338	7.7	15	77	107	17.1	6.1	2.2	<1	3.7	<0.05	<0.1	390	0.4
01-Oct-15	99923	246	845	423	7.8	82	57	141	17.2	13	5.1	1.4	5.4	<0.05	0.1	540	1.9
18-Mar-16	103030	258	846	392	7.4	88	63	124	20.1	12	5.1	1.2	4.8	0.06	<0.1	520	-4.5
12-Sep-16	107309	238	929	408	7.5	110	63	131	19.7	16	7.1	<1	5.0	<0.05	0.1	610	-2.6
08-Mar-17	111348	230	1010	426	7.9	142	61	135	21.6	19	7	1.4	3.8	<0.05	0.1	640	-3.1
12-Sep-17	116273	247	1200	481	7.7	195	54	156	22.3	34	7.9	1.3	4.7	<0.05	0.1	1190	-2.5
12-Mar-18	120571	234	1010	471	7.6	126	68	152	22.3	32	6.9	1.4	4.0	<0.5	0.1	590	5.2
19-Sep-18	126249	227	1120	466	7.7	167	65	152	20.9	36	6.7	<1	4.0	<0.5	0.1	880	0.7
20-Mar-19	130486	67	1070	482	7.4	169	74	156	22.5	35	7	3.1	3.6	<0.5	<0.1	540	17.9
09-Sep-19	135000	237	1320	531	7.6	223	68	172	24.6	49	8	3.2	4.1	<0.5	0.1	1080	0.8
26-Mar-20	139771	234	1310	518	7.4	226	75	169	23.3	48	8.3	2.5	3.8	<0.5	<0.1	850	-0.9
01-Sep-20	143838	217	1450	563	7.5	**256**	72	185	24.5	71	10.7	1	3.8	<0.5	0.4	970	4.7
08-Mar-21	148383	234	1440	551	7.5	**253**	71	180	24.6	53	7	3	3.5	<0.5	0.1	740	-0.2
20-Sep-21	153826	233	1630	598	7.5	**317**	76	197	25.7	83	8.2	1.4	3.8	<0.5	0.2	1280	1.0
14-Mar-22	158788	225	1680	599	7.4	**349**	77	196	26.6	79	9.2	<1	3.6	<0.5	0.2	1220	-1.7
06-Sep-22	164052	227	1820	665	7.6	**373**	78	216	30.6	111	9.6	1.1	3.7	<0.05	0.2	1520	4.1
13-Mar-23	168684	230	1770	709	7.3	**385**	77	228	34.0	115	9.8	1.2	3.5	<0.05	0.1	1250	5.8
13-Sep-23	174176	229			7.3	**471**	82						3.4	<0.05	0.3	1480	
11-Mar-24	179070	420	1790	728	7.4	**432**	82	233	35.4	121	7.6	1.7	3.2	<0.05	0.1	1330	5.1
03-Sep-24	184146	226	2360	747	7.1	**641**	105	242	34.7	154	11.3	1.4	3.3	<0.5	<0.1	2190	6.1
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	35	36	36	36	36	
AVERAGE 2024		323	2075	738	7.3	537	94	238	35.1	138	9.5	1.6	3.3	<0.5	<0.1	1760	

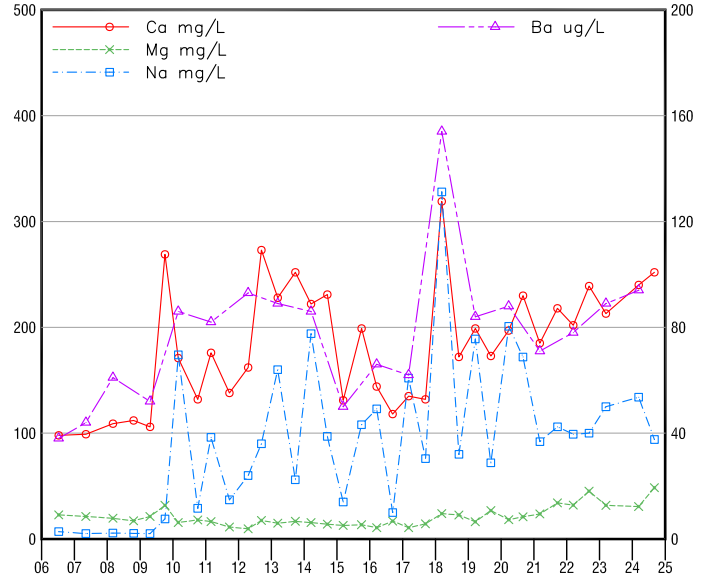
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



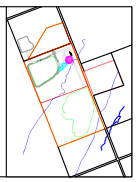








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-85-II

Shallow Overburden

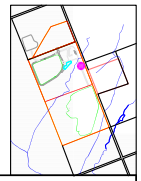
Screen 195.4 - 193.0 masl

CA008825 24 Mar 25	wsp	F124005

BH-85-II

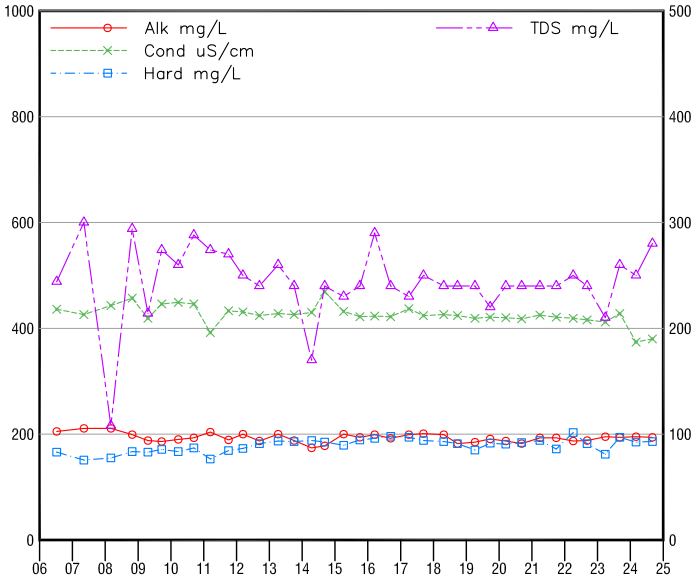
Shallow Overburden

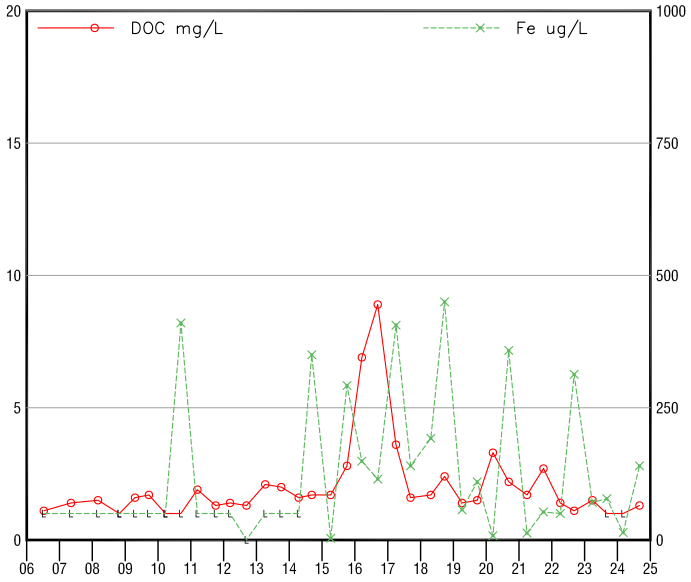
Monitoring Well
Screen 195.4 - 193.0 masl

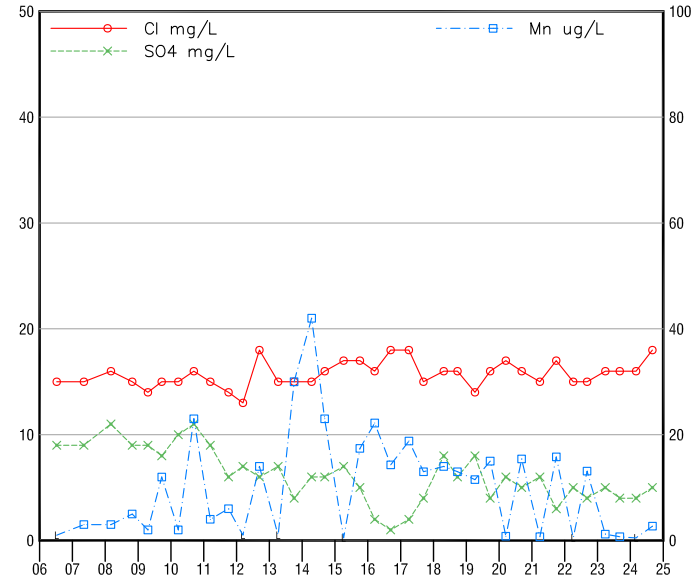


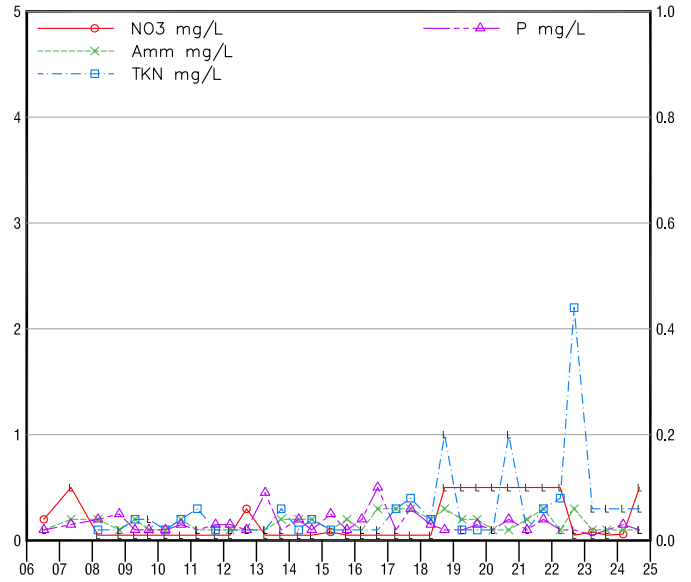
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
02-Mar-10	60956	175	2280	491	7.5	**494**	242	171	15.6	174	13.7	**12**	0.2	0.11	0.4	1280	-11.7
04-Oct-10	64473	269	926	404	7.6	50	129	132	18.0	29	6.37	4.7	2.5	0.34	0.7	616	-0.4
01-Mar-11	66692	193	1640	507	7.4	**274**	211	176	16.5	96	9.79	4.8	0.3	<0.05	0.1	966	-4.6
22-Sep-11	70447	293	897	391	7.4	37	133	138	11.3	37	8.75	**12**	0.2	<0.05	2.7	570	1.5
17-Apr-12	74047	267	1210	445	7.4	107	172	162	9.7	60	10.7	**18**	0.1	<0.05	1	730	-0.2
12-Sep-12	77194	333	1650	754	7.2	94	**839**	273	17.5	90	15.7	**14**	<0.05	<0.05	0.4	1180	-15.7
12-Mar-13	80843	234	1890	631	7.5	**313**	352	228	14.9	160	11.8	**8.5**	<0.05	<0.05	0.2	1230	-2.3
24-Sep-13	85337	321	1650	698	7.1	50	493	252	16.7	56	17.3	**14**	<0.05	<0.05	0.5	1250	-3.3
18-Mar-14	88526	189	2110	618	7.4	**426**	163	222	15.5	194	13.6	**6.1**	0.08	<0.05	0.1	1230	4.9
15-Sep-14	92418	368	1630	634	7.1	84	395	231	14.0	97	16.8	**11**	<0.05	<0.05	0.5	1150	-1.3
11-Mar-15	95596	257	891	380	7.6	54	134	131	12.8	35	7.8	2.7	0.5	0.09	0.2	530	-0.7
01-Oct-15	99924	322	1480	552	7.5	158	244	199	13.5	108	13.0	**6.7**	0.07	<0.05	0.4	910	0.7
18-Mar-16	103031	260	1530	404	7.3	**261**	173	144	10.7	123	10.9	**5.5**	<0.05	<0.05	0.3	880	-8.1
12-Sep-16	107310	251	918	364	7.5	90	103	118	16.9	25	7.6	2.1	0.1	<0.05	0.3	550	-5.9
08-Mar-17	111349	222	1680	381	7.9	**329**	141	135	10.7	152	11.7	5	<0.05	<0.05	0.2	1000	-6.7
12-Sep-17	116274	297	1140	388	7.6	124	110	132	14.3	76	9.4	4.7	0.2	<0.05	0.4	710	-1.3
12-Mar-18	120573	234	3260	895	7.3	**783**	282	319	24.0	**328**	15.8	2.9	<0.5	<0.5	0.4	1890	0.0
19-Sep-18	126250	235	1340	523	7.6	236	97	172	22.7	80	7.4	2.2	<0.5	<0.5	0.4	1020	2.9
20-Mar-19	130487	256	1980	564	7.5	**296**	293	199	16.3	189	11.5	**7.2**	<0.5	<0.5	0.1	1230	0.6
09-Sep-19	135001	229	1390	543	7.5	233	95	173	26.9	72	7.7	**6.2**	<0.5	<0.5	0.2	1100	3.9
26-Mar-20	139772	298	2260	567	7.3	**386**	224	197	18.2	**201**	10.3	**5.6**	<0.5	<0.5	0.2	1260	-2.6
01-Sep-20	143840	301	2160	661	7.3	**304**	358	230	21.0	172	11.8	**7.5**	<0.5	<0.5	0.4	1450	-2.3
08-Mar-21	148384	257	1640	560	7.4	**259**	158	185	23.7	92	8	**6.6**	<0.5	<0.5	0.4	830	-0.7
20-Sep-21	153827	245	1850	685	7.4	**376**	119	218	34.1	106	7	2.3	<0.5	<0.5	0.3	1430	1.6
14-Mar-22	158789	245	1900	636	7.3	**384**	107	202	32.0	99	6.8	2.4	<0.5	<0.5	0.3	1370	-2.1
06-Sep-22	164053	217	2390	783	7.4	**508**	73	239	45.2	100	6.4	1.4	0.7	0.11	0.3	1890	-0.1
13-Mar-23	168686	279	1930	663	7.2	**388**	143	213	31.8	125	8.4	3.6	<0.05	<0.05	0.4	1350	-1.3
13-Sep-23	174177	222			7.3		69						1.0	0.10		1180	
11-Mar-24	179071	338	1750	726	7.3	**299**	186	240	30.7	134	6.6	4.6	0.9	0.07	0.2	1250	4.2
03-Sep-24	184145	222	2300	829	7.4	**644**	76	252	48.5	94	6.3	1.6	1.0	<0.05	<0.1	2260	7.1
TOTAL SAMPLES		36	35	35	33	35	36	35	35	35	35	35	36	36	35	36	
AVERAGE 2024		280	2025	778	7.4	472	131	246	39.6	114	6.5	3.1	1.0	<0.05	0.1	1755	

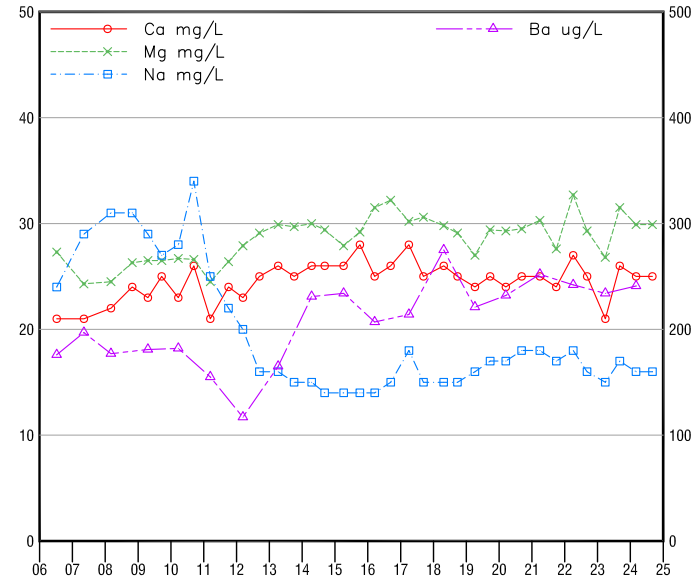
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



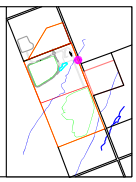








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-86-II

Lower Screened Overburden

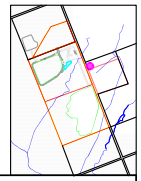
Screen 187.7 - 185.9 masl

CA008825 24 Mar 25	wsp	F124006

BH-86-II

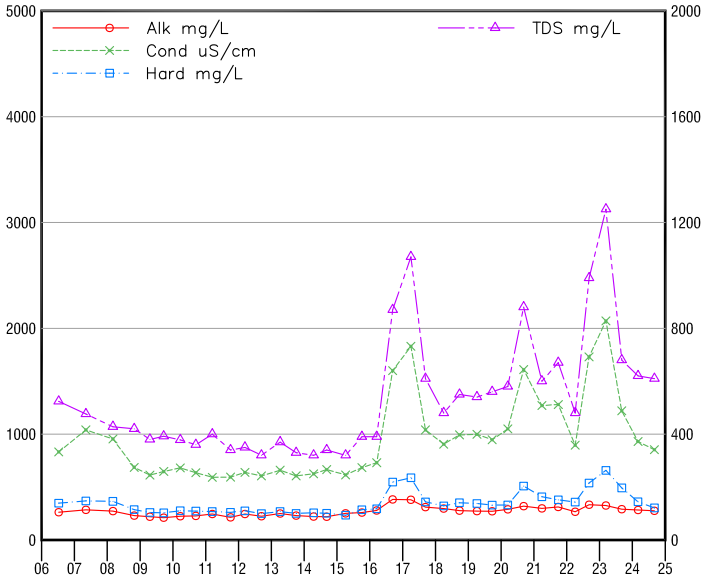
Lower Screened Overburden

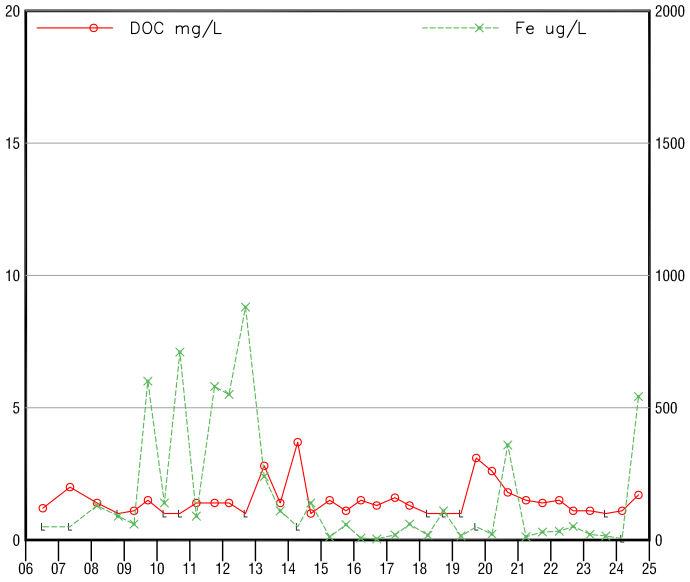
Stand Pipe Piezometer
Screen 187.7 - 185.9 masl

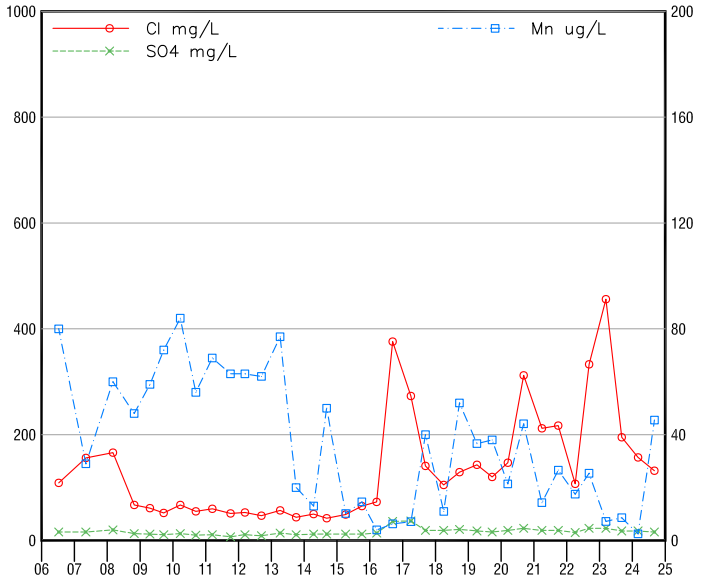


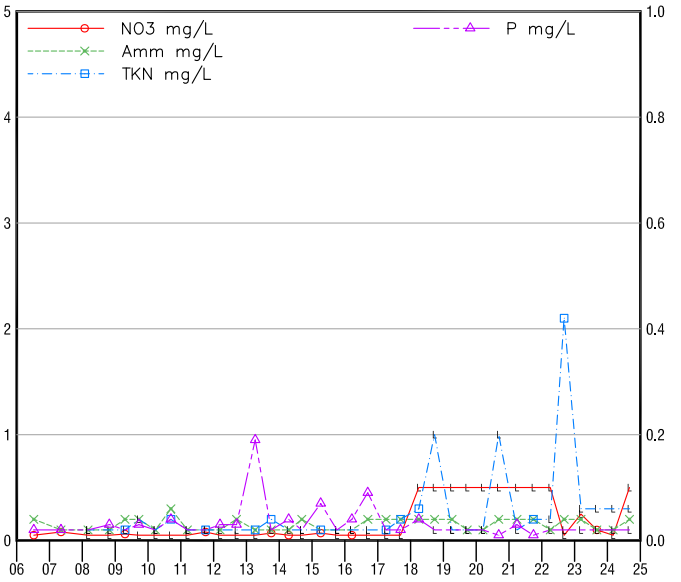
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61540	190	449	167	8.1	15	10	23	26.7	28	1.62	<1	<0.05	<0.05	0.1	260	1.6
13-Sep-10	64129	193	446	174	8.0	16	11	26	26.6	34	1.89	<1	<0.05	<0.05	0.2	288	5.4
15-Mar-11	66986	204	392	153	8.2	15	9	21	24.5	25	1.62	1.9	<0.05	<0.05	<0.1	274	-5.7
04-Oct-11	70625	189	433	169	7.9	14	6	24	26.4	22	1.88	1.3	<0.05	<0.05	<0.1	270	0.8
12-Mar-12	73368	200	431	173	8.2	13	7	23	27.9	20	1.77	1.4	<0.05	<0.05	0.1	250	-1.4
12-Sep-12	77190	187	424	182	7.8	18	6	25	29.1	16	1.85	1.3	0.3	<0.05	<0.1	240	-0.5
08-Apr-13	81439	200	428	187	8.0	15	7	26	29.9	16	1.93	2.1	<0.05	<0.05	<0.1	260	-1.0
03-Oct-13	85516	188	426	186	7.9	15	4	25	29.7	15	2	2	<0.05	<0.05	0.2	240	1.9
16-Apr-14	89109	174	430	188	8.1	15	6	26	30.0	15	2	1.6	<0.05	<0.05	0.2	170	5.3
08-Sep-14	92263	178	469	185	7.9	16	6	26	29.4	14	2	1.7	<0.05	<0.05	0.2	240	3.2
07-Apr-15	96139	200	432	179	8.0	17	7	26	27.9	14	1.8	1.7	0.08	<0.05	<0.1	230	-4.5
05-Oct-15	99999	194	422	189	7.8	17	5	28	29.2	14	1.9	2.8	<0.05	<0.05	0.2	240	0.3
18-Mar-16	103033	199	423	192	7.7	16	2	25	31.5	14	1.9	**6.9**	<0.05	<0.05	<0.1	290	0.0
12-Sep-16	107313	192	422	196	7.9	18	1	26	32.2	15	2.2	**8.9**	<0.05	<0.05	0.3	240	3.3
03-Apr-17	112033	199	437	194	7.9	18	2	28	30.2	18	2	3.6	<0.05	<0.05	0.3	230	2.4
12-Sep-17	116267	201	424	188	8.0	15	4	25	30.6	15	1.9	1.6	<0.05	<0.05	0.3	250	-0.6
25-Apr-18	121894	199	426	186	8.0	16	8	26	29.8	15	2.1	1.7	<0.05	<0.05	0.2	240	-1.4
25-Sep-18	126472	182	424	182	7.9	16	6	25	29.1	15	1.8	2.4	<0.5	<0.5	0.3	240	1.9
07-Apr-19	130904	185	419	170	7.9	14	8	24	27.0	16	1.8	1.4	<0.5	<0.5	0.2	240	-1.2
24-Sep-19	135334	191	421	183	8.0	16	4	25	29.4	17	1.9	1.5	<0.5	<0.5	0.2	220	1.2
16-Mar-20	139460	187	420	181	8.0	17	6	24	29.3	17	1.9	3.3	<0.5	<0.5	0.1	240	0.8
08-Sep-20	144008	182	418	184	8.0	16	5	25	29.5	18	2.1	2.2	<0.5	<0.5	0.1	240	4.0
30-Mar-21	148864	193	425	188	7.9	15	6	25	30.3	18	2.2	1.7	<0.5	<0.5	0.2	240	2.2
29-Sep-21	154167	193	421	172	8.1	17	3	24	27.6	17	1.9	2.7	<0.5	<0.5	0.3	240	-1.8
05-Apr-22	159586	187	419	203	8.0	15	5	27	32.7	18	2.3	1.4	<0.5	<0.5	0.1	250	6.9
06-Sep-22	164046	188	416	182	8.0	15	4	25	29.3	16	2	1.1	<0.05	<0.05	0.3	240	1.6
28-Mar-23	169180	195	412	162	8.0	16	5	21	26.8	15	1.9	1.5	0.08	<0.05	0.1	210	-6.0
05-Sep-23	173896	194	428	194	7.9	16	4	26	31.5	17	2.1	<1	<0.05	<0.05	0.1	260	2.8
04-Mar-24	178888	195	374	185	8.0	16	4	25	29.9	16	2.1	<1	0.06	<0.05	0.1	250	2.0
03-Sep-24	184139	194	380	186	7.9	18	5	25	29.9	16	2.1	1.3	<0.5	<0.5	<0.1	280	1.5
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		195	377	186	8.0	17	5	25	29.9	16	2.1	<1	<0.5	<0.5	<0.1	265	

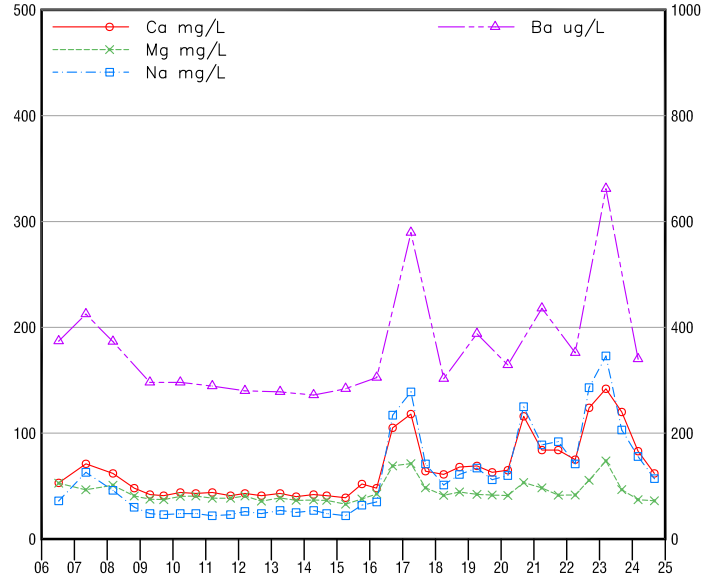
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



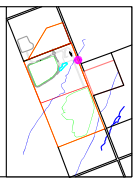








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-86-III

Shallow Overburden

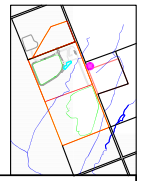
Screen 193.3 - 190.3 masl

CA008825 24 Mar 25	wsp	F124007

BH-86-III

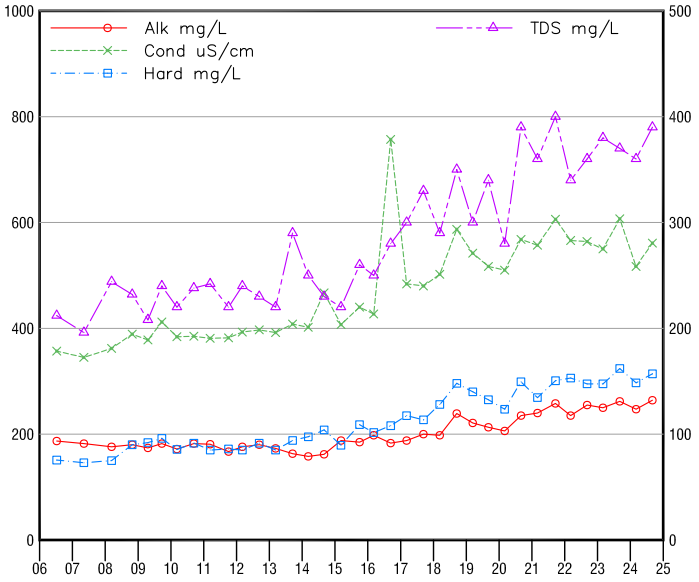
Shallow Overburden

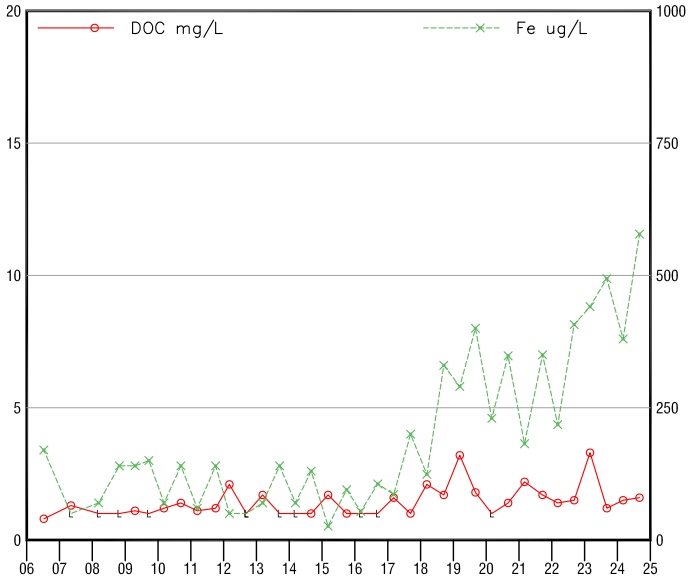
Monitoring Well
Screen 193.3 - 190.3 masl

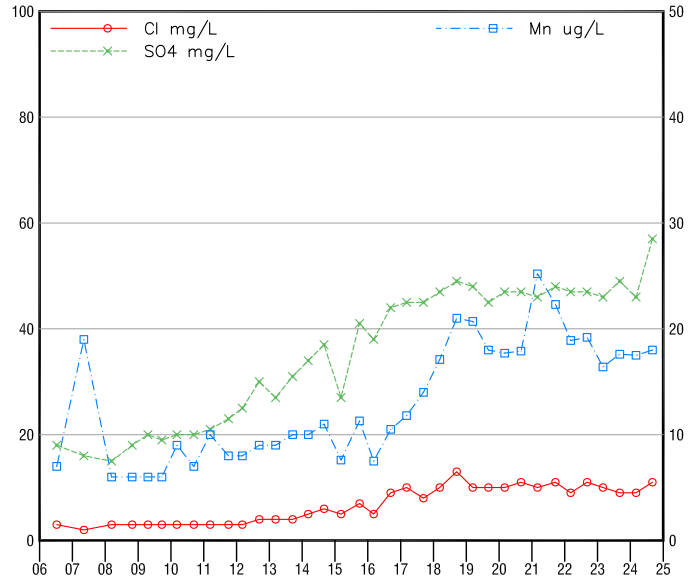


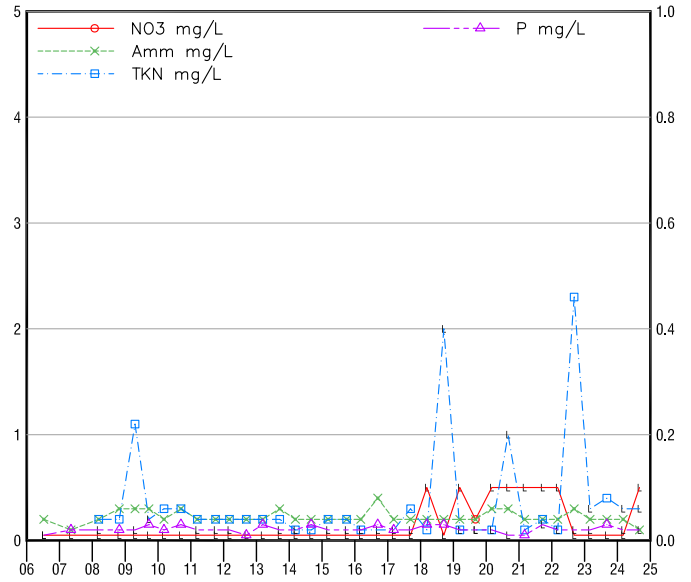
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61541	225	681	276	7.9	67	13	44	40.3	24	2.01	<1	<0.05	<0.05	0.1	378	-0.2
13-Sep-10	64130	228	636	273	7.8	55	10	43	40.6	24	2.51	<1	<0.05	<0.05	0.3	360	2.4
15-Mar-11	66987	246	592	268	7.9	60	11	44	38.6	22	2.12	1.4	<0.05	<0.05	0.1	400	-3.5
04-Oct-11	70626	214	594	261	7.9	51	7	41	38.5	23	2.41	1.4	0.08	<0.05	<0.1	340	3.4
12-Mar-12	73369	245	638	275	7.8	53	11	43	40.6	26	2.1	1.4	<0.05	<0.05	0.1	350	0.6
12-Sep-12	77191	225	605	249	7.8	47	9	41	35.8	24	2.41	<1	<0.05	<0.05	0.2	320	0.8
08-Apr-13	81440	250	659	268	7.8	57	14	43	38.8	27	2.05	2.8	<0.05	<0.05	0.1	370	-2.0
03-Oct-13	85517	230	606	251	7.8	44	11	40	36.5	25	2.3	1.4	0.07	<0.05	0.1	330	0.9
16-Apr-14	89110	221	625	257	7.9	50	12	42	36.8	27	2	3.7	0.05	<0.05	0.1	320	2.3
08-Sep-14	92264	219	665	252	7.8	42	12	41	36.5	24	2.2	1	<0.05	<0.05	0.2	340	2.9
07-Apr-15	96140	251	615	234	7.9	49	12	39	32.9	22	1.8	1.5	0.07	<0.05	<0.1	320	-7.8
05-Oct-15	100000	259	684	286	7.8	65	12	52	37.8	32	2.3	1.1	<0.05	<0.05	<0.1	390	-0.8
18-Mar-16	103034	278	730	295	7.6	73	14	48	42.6	35	2	1.5	0.05	<0.05	<0.1	390	-2.9
12-Sep-16	107314	383	1600	547	7.4	**376**	36	105	69.1	117	3.7	1.3	<0.05	<0.05	0.2	870	-8.2
03-Apr-17	112034	380	1830	588	7.6	**273**	37	118	71.2	139	3.1	1.6	<0.05	<0.05	0.2	1070	5.4
12-Sep-17	116268	311	1040	360	7.8	141	19	64	48.4	71	2.7	1.3	<0.05	<0.05	0.2	610	-1.0
03-Apr-18	121265	297	905	322	7.6	105	19	61	41.2	51	2.2	<1	<0.5	<0.5	0.2	480	-3.1
25-Sep-18	126473	277	993	352	7.7	129	21	68	44.4	61	2.5	<1	<0.5	<0.5	0.2	550	0.9
07-Apr-19	130905	272	998	345	7.6	143	18	69	42.2	67	2.3	<1	<0.5	<0.5	0.2	540	0.2
24-Sep-19	135335	271	947	329	7.6	120	16	63	41.5	56	2.5	3.1	<0.5	<0.5	0.1	560	-0.3
16-Mar-20	139461	290	1050	331	7.7	147	19	65	41.1	60	2.1	2.6	<0.5	<0.5	0.1	580	-5.6
08-Sep-20	144009	320	1610	509	7.4	**312**	23	116	53.3	125	3.3	1.8	<0.5	<0.5	0.2	880	0.2
30-Mar-21	148865	298	1270	408	7.4	212	19	84	48.3	89	2.5	1.5	<0.5	<0.5	0.2	600	-0.9
29-Sep-21	154168	312	1280	379	7.6	217	19	84	41.4	92	2.7	1.4	<0.5	<0.5	0.2	670	-4.6
05-Apr-22	159587	266	895	358	7.6	107	15	75	41.6	71	2.4	1.5	<0.5	<0.5	0.1	480	8.8
06-Sep-22	164047	333	1730	538	7.4	**333**	23	124	55.4	143	3.2	1.1	<0.05	<0.05	0.2	990	1.6
13-Mar-23	168687	325	2070	658	7.2	**456**	23	142	73.8	173	3.3	1.1	<0.25	<0.25	0.2	1250	2.3
05-Sep-23	173897	291	1220	492	7.5	195	18	120	46.7	103	2.8	<1	0.1	<0.05	0.1	680	10.4
04-Mar-24	178889	283	930	361	7.6	157	18	83	37.2	78	2.2	1.1	<0.05	<0.05	0.1	620	2.2
03-Sep-24	184140	275	853	303	7.6	132	16	62	36.1	57	2.6	1.7	<0.5	<0.5	0.2	610	4.0
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		279	892	332	7.6	145	17	73	36.7	68	2.4	1.4	<0.5	<0.5	0.2	615	

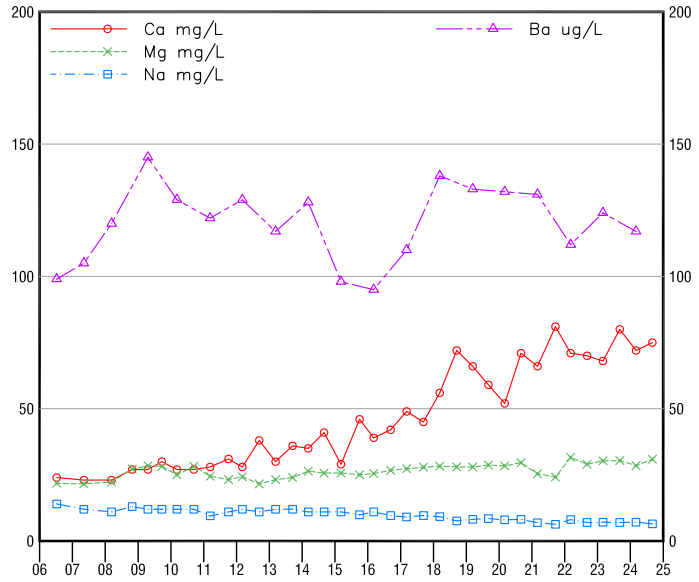
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



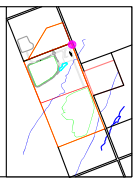








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-87-II

Overburden Formation

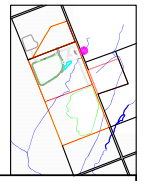
Screen 191.9 - 190.3 masl

CA008825 24 Mar 25	wsp	F124008

BH-87-II

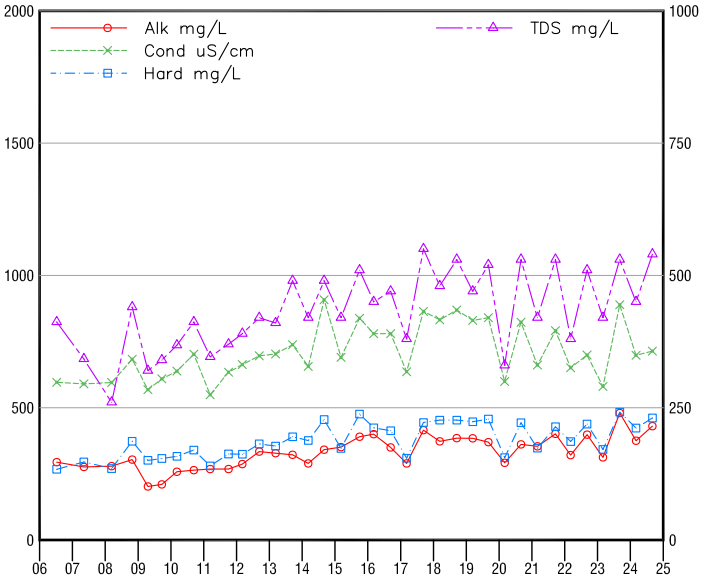
Overburden Formation

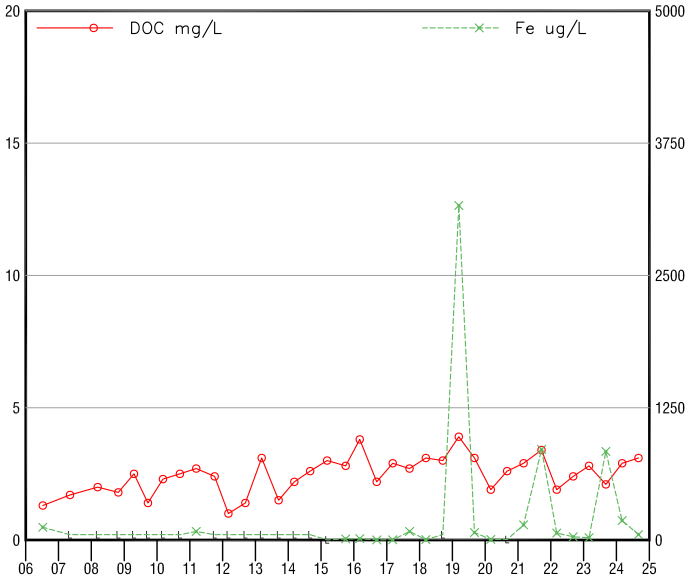
Stand Pipe Piezometer
Screen 191.9 - 190.3 masl

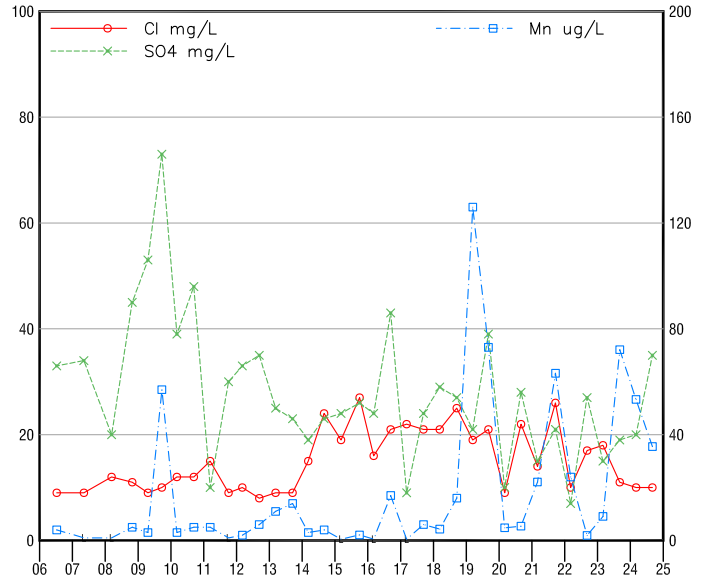


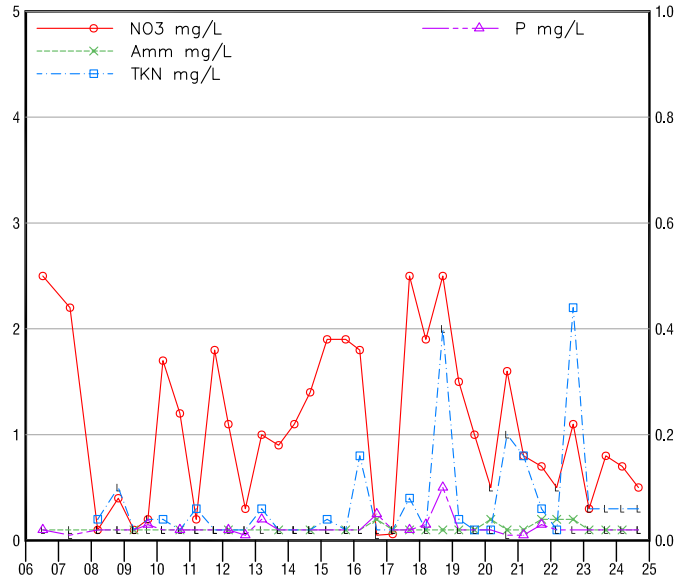
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
09-Mar-10	61123	172	384	171	8.0	3	20	27	25.0	12	1.53	1.2	<0.05	<0.05	0.2	220	0.4
13-Sep-10	64125	182	385	183	7.9	3	20	27	28.2	12	1.44	1.4	<0.05	<0.05	0.3	238	1.2
14-Mar-11	66906	181	381	170	8.1	3	21	28	24.5	9.5	1.41	1.1	<0.05	<0.05	0.2	242	-3.6
04-Oct-11	70628	167	382	172	7.9	3	23	31	23.2	11	1.49	1.2	<0.05	<0.05	0.2	220	0.6
06-Mar-12	73263	176	393	170	7.7	3	25	28	24.3	12	1.44	2.1	<0.05	<0.05	0.2	240	-2.4
10-Sep-12	77140	180	397	183	7.9	4	30	38	21.6	11	1.6	<1	<0.05	<0.05	0.2	230	-1.6
11-Mar-13	80786	173	392	170	8.0	4	27	30	23.2	12	1.42	1.7	<0.05	<0.05	0.2	220	-2.0
16-Sep-13	85198	163	408	188	8.0	4	31	36	24.0	12	1.5	<1	<0.05	<0.05	0.3	290	3.6
10-Mar-14	88314	158	402	195	8.0	5	34	35	26.4	11	1.6	<1	<0.05	<0.05	0.2	250	5.2
02-Sep-14	92069	162	467	208	7.9	6	37	41	25.7	11	1.5	1	<0.05	<0.05	0.2	230	5.8
09-Mar-15	95545	188	407	179	9.9	5	27	29	25.7	11	1.27	1.7	<0.05	<0.05	0.2	220	-4.1
01-Oct-15	99921	185	440	218	8.0	7	41	46	25.0	9.9	1.4	1	<0.05	<0.05	0.2	260	0.9
07-Mar-16	102777	198	427	203	8.2	5	38	39	25.5	11	1.4	<1	<0.05	<0.05	0.2	250	-3.5
12-Sep-16	107316	183	757	216	7.9	9	44	42	26.7	9.6	1.6	<1	<0.05	<0.05	0.4	280	-0.1
08-Mar-17	111336	188	484	235	8.1	10	45	49	27.3	9.1	1.7	1.6	<0.05	<0.05	0.2	300	1.7
12-Sep-17	116264	200	480	227	8.0	8	45	45	27.9	9.6	1.5	1	<0.05	<0.05	0.2	330	-1.5
12-Mar-18	120566	198	502	256	7.7	10	47	56	28.3	9.2	1.7	2.1	<0.5	<0.5	0.2	290	3.6
17-Sep-18	126159	239	587	296	7.7	13	49	72	28.0	7.6	1.8	1.7	<0.05	<0.05	0.2	350	1.3
14-Mar-19	130280	221	542	280	7.8	10	48	66	28.0	8.2	1.8	3.2	<0.5	<0.5	0.2	300	3.0
04-Sep-19	134873	213	517	265	7.8	10	45	59	28.7	8.5	1.5	1.8	0.2	<0.05	0.2	340	2.3
03-Mar-20	139192	206	510	247	7.9	10	47	52	28.4	8.0	1.6	<1	<0.5	<0.5	0.3	280	-0.2
01-Sep-20	143833	235	568	299	7.7	11	47	71	29.6	8.2	1.9	1.4	<0.5	<0.5	0.3	390	3.4
03-Mar-21	148205	240	557	269	7.7	10	46	66	25.4	6.9	1.7	2.2	<0.5	<0.5	0.2	360	-2.4
20-Sep-21	153824	258	606	301	7.7	11	48	81	24.2	6.3	1.6	1.7	<0.5	<0.5	0.2	400	-0.9
08-Mar-22	158620	235	566	306	7.6	9	47	71	31.6	8.1	1.8	1.4	<0.5	<0.5	0.2	340	4.9
06-Sep-22	164043	255	564	295	7.6	11	47	70	29.0	7.0	1.6	1.5	<0.05	**1.08**	0.3	360	-0.7
02-Mar-23	168422	250	550	295	7.7	10	46	68	30.3	7.1	1.7	3.3	<0.05	<0.05	0.2	380	0.5
05-Sep-23	173893	262	607	324	7.5	9	49	80	30.4	7.0	1.7	1.2	<0.05	<0.05	0.2	370	2.7
04-Mar-24	178885	247	517	297	7.5	9	46	72	28.5	7.1	1.7	1.5	<0.05	<0.05	0.2	360	2.8
03-Sep-24	184136	264	561	314	7.5	11	57	75	30.9	6.5	1.7	1.6	<0.5	<0.5	0.1	390	0.4
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		256	539	306	7.5	10	52	74	29.7	6.8	1.7	1.6	<0.5	<0.5	0.2	375	

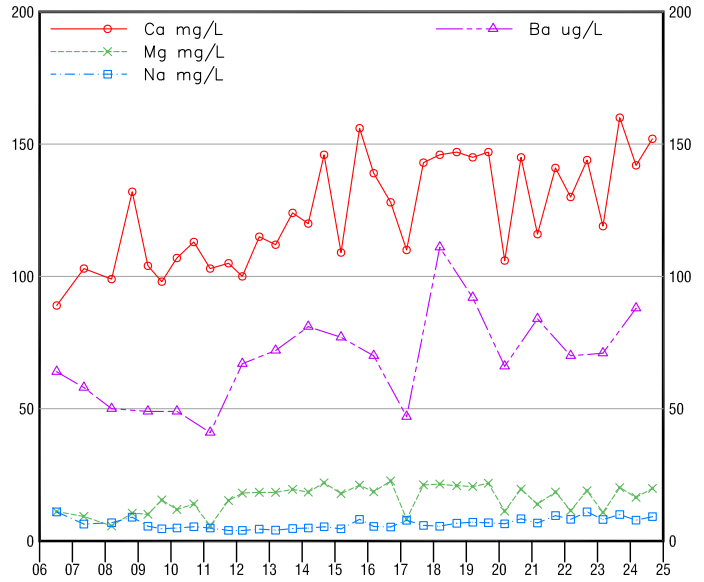
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



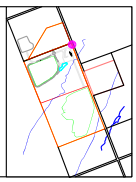








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-87-III

Shallow Overburden

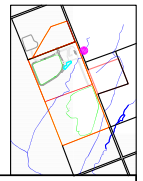
Screen 197.8 - 194.9 masl

CA008825 24 Mar 25	wsp	F124009

BH-87-III

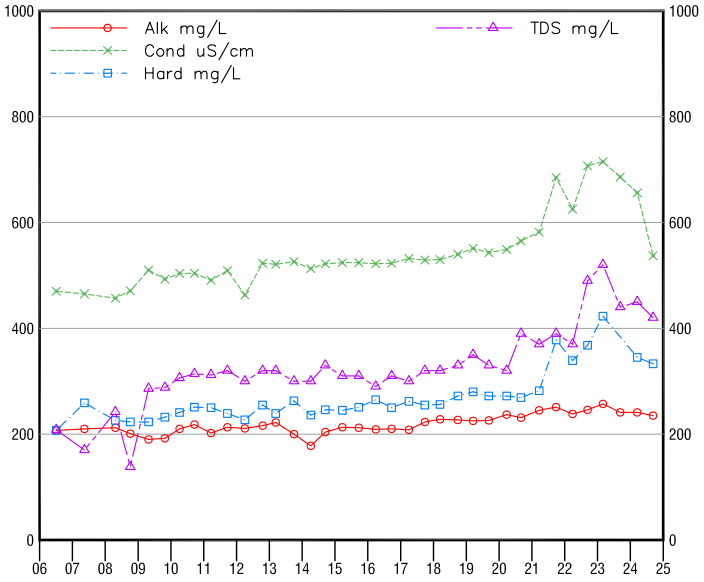
Shallow Overburden

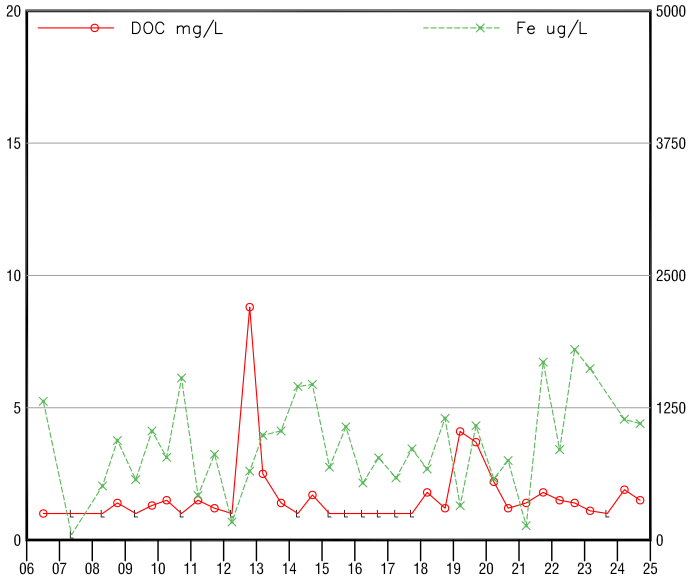
Monitoring Well
Screen 197.8 - 194.9 masl

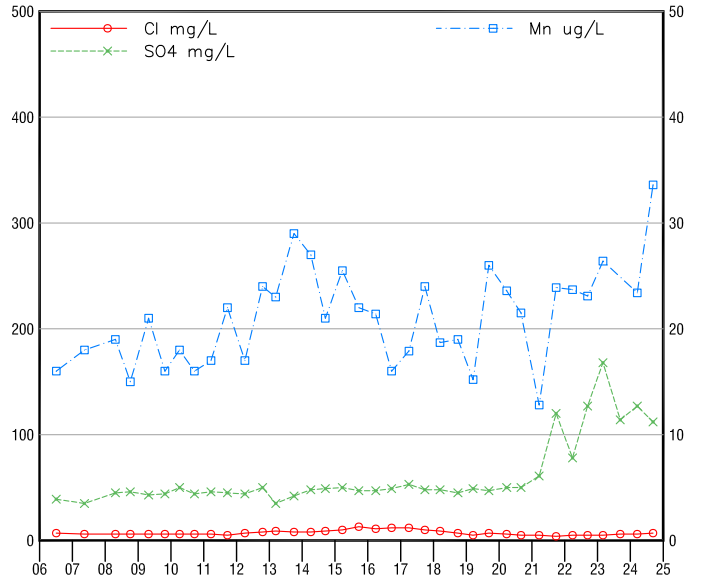


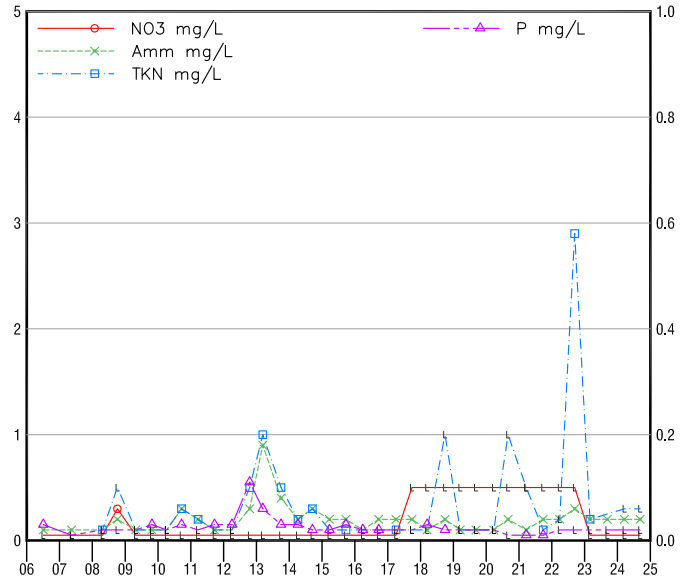
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
09-Mar-10	61124	258	638	316	7.7	12	39	107	11.9	4.9	0.65	2.3	1.7	<0.05	<0.1	368	1.0
13-Sep-10	64126	264	702	340	7.6	12	48	113	14.0	5.4	0.99	2.5	1.2	<0.05	0.1	412	2.5
14-Mar-11	66907	268	549	280	7.6	15	10	103	5.7	4.9	0.57	2.7	0.2	<0.05	<0.1	346	-1.5
04-Oct-11	70629	268	634	325	7.7	9	30	105	15.3	4.0	0.96	2.4	1.8	<0.05	<0.1	370	2.8
06-Mar-12	73264	287	663	324	7.6	10	33	100	18.1	4.0	0.7	1	1.1	<0.05	0.1	390	-0.7
10-Sep-12	77141	334	696	363	7.2	8	35	115	18.4	4.5	1.09	1.4	0.3	<0.05	<0.1	420	-1.1
11-Mar-13	80787	328	703	355	7.7	9	25	112	18.4	4.1	0.69	3.1	1.0	<0.05	<0.1	410	-0.7
16-Sep-13	85199	322	738	390	7.5	9	23	124	19.5	4.7	1	1.5	0.9	<0.05	0.1	490	5.3
10-Mar-14	88315	289	656	376	7.9	15	19	120	18.5	4.9	0.8	2.2	1.1	<0.05	<0.1	420	7.5
02-Sep-14	92070	341	908	455	7.5	24	23	146	22.0	5.4	1.1	2.6	1.4	<0.05	0.1	490	7.5
09-Mar-15	95547	351	690	346	7.2	19	24	109	17.9	4.6	0.68	3	1.9	<0.05	<0.1	420	-6.9
01-Oct-15	99922	390	838	476	7.5	27	26	156	21.1	8.2	1.1	2.8	1.9	<0.05	0.1	510	3.5
07-Mar-16	102778	400	780	424	7.8	16	24	139	18.6	5.5	0.7	3.8	1.8	<0.05	<0.1	450	-1.8
12-Sep-16	107317	350	780	413	7.3	21	43	128	22.7	5.3	1.5	2.2	<0.05	<0.05	0.2	470	0.3
08-Mar-17	111337	289	636	309	7.8	22	9	110	8.3	7.8	0.6	2.9	0.06	<0.05	0.1	380	-0.5
12-Sep-17	116265	415	864	444	7.4	21	24	143	21.2	5.9	1	2.7	2.5	<0.05	0.1	550	-2.0
12-Mar-18	120567	373	832	453	7.3	21	29	146	21.5	5.6	0.8	3.1	1.9	<0.5	0.1	480	3.0
17-Sep-18	126160	385	869	453	7.3	25	27	147	20.9	6.7	1.1	3	2.5	0.08	0.1	530	1.4
14-Mar-19	130281	384	830	447	7.3	19	21	145	20.6	7.1	0.9	3.9	1.5	<0.5	0.1	470	3.5
04-Sep-19	134874	370	840	457	7.3	21	39	147	21.8	6.9	1.1	3.1	1.0	<0.5	0.1	520	3.3
03-Mar-20	139193	292	599	311	7.6	9	10	106	11.3	6.5	0.6	1.9	<0.5	<0.5	0.2	330	1.8
01-Sep-20	143834	361	823	443	7.3	22	28	145	19.6	8.4	1.2	2.6	1.6	<0.5	0.1	530	4.1
03-Mar-21	148206	354	661	347	7.3	14	15	116	13.9	6.8	0.6	2.9	0.8	<0.5	0.1	420	-3.7
20-Sep-21	153825	401	791	428	7.3	26	21	141	18.5	9.6	1	3.4	0.7	<0.5	0.2	530	-1.0
08-Mar-22	158621	321	651	372	7.4	10	7	130	11.5	8.2	<0.5	1.9	<0.5	<0.5	0.2	380	6.6
06-Sep-22	164044	398	699	438	7.3	17	27	144	19.0	11	1	2.4	1.1	<0.05	0.2	510	1.1
02-Mar-23	168423	312	580	342	7.4	18	15	119	10.8	8.1	0.5	2.8	0.3	<0.05	0.1	420	1.0
05-Sep-23	173894	480	889	483	7.2	11	19	160	20.2	10	1.2	2.1	0.8	<0.05	0.1	530	-0.9
04-Mar-24	178886	375	698	423	7.2	10	20	142	16.5	7.9	0.6	2.9	0.7	<0.05	0.1	450	5.0
03-Sep-24	184137	430	714	461	7.1	10	35	152	19.9	9.2	1.2	3.1	0.5	<0.05	<0.1	540	1.8
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		403	706	442	7.2	10	28	147	18.2	8.6	0.9	3.0	0.6	<0.05	<0.1	495	

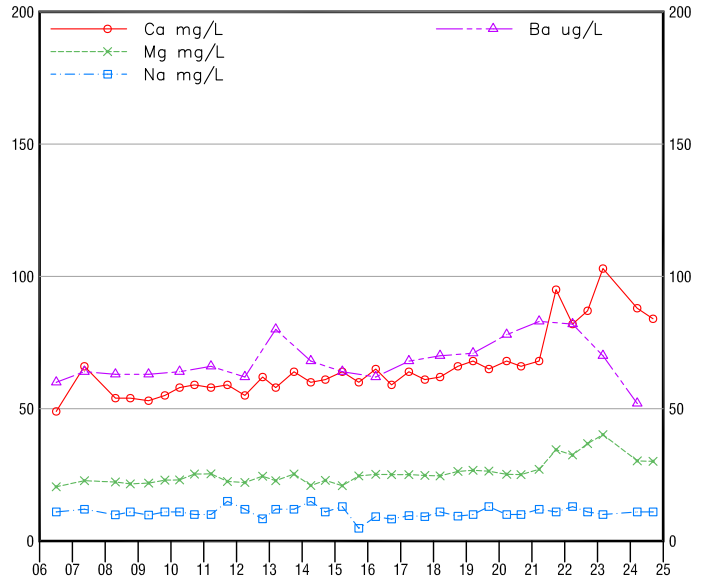
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









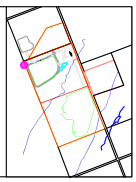


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-88-II

Lower Screened Overburden

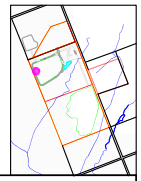
Screen 198.2 - 196.6 masl

CA008825 24 Mar 25	wsp	F124010

BH-88-II

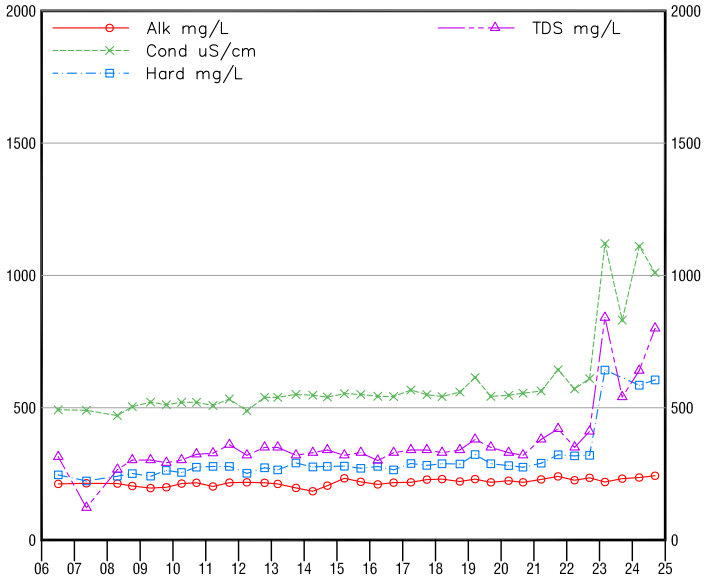
Lower Screened Overburden

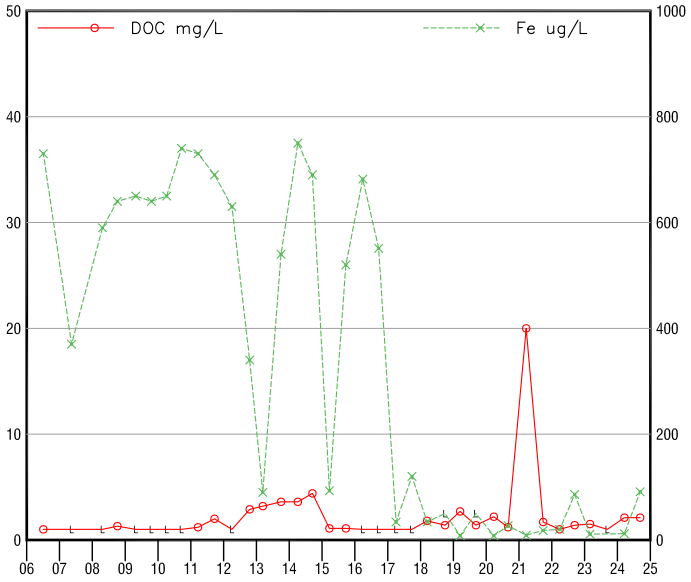
Stand Pipe Piezometer
Screen 198.2 - 196.6 masl

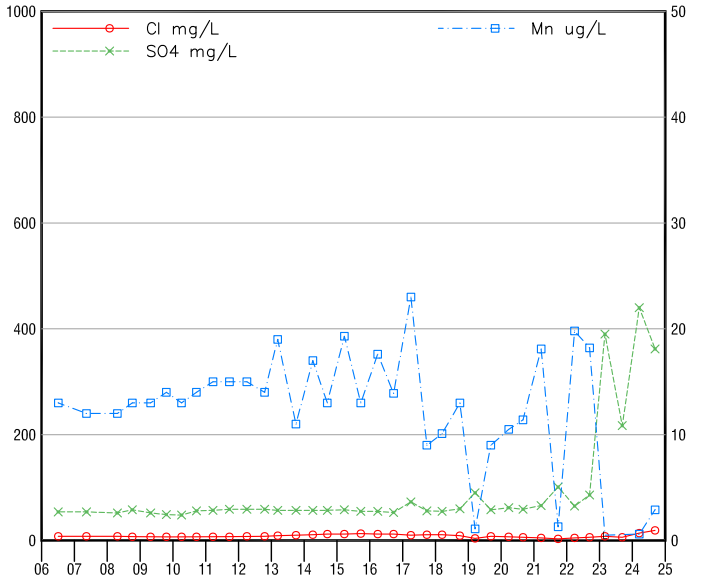


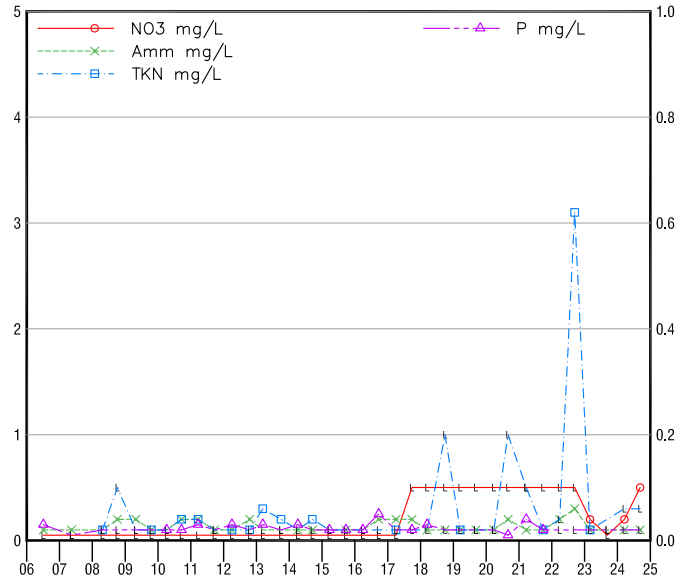
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61790	210	504	241	7.6	6	50	58	23.1	11	2.22	1.5	<0.05	<0.05	<0.1	306	-0.4
20-Sep-10	64262	218	504	251	7.8	6	44	59	25.3	10	2.16	<1	<0.05	<0.05	0.3	314	1.2
23-Mar-11	67145	202	491	250	7.8	6	46	58	25.4	10	2.49	1.5	<0.05	<0.05	0.2	312	3.3
22-Sep-11	70444	213	509	239	7.8	5	45	59	22.5	15	2.63	1.2	<0.05	<0.05	0.1	320	1.6
03-Apr-12	73822	211	463	227	7.8	7	44	55	22.1	12	2.37	<1	<0.05	<0.05	<0.1	300	-2.0
17-Oct-12	78008	216	523	255	7.5	8	50	62	24.5	8.4	2.74	**8.8**	<0.05	<0.05	0.3	320	0.1
12-Mar-13	80845	222	521	239	7.8	9	35	58	22.8	12	2.61	2.5	<0.05	<0.05	0.9	320	0.4
01-Oct-13	85458	200	526	263	7.7	8	42	64	25.3	12	2.8	1.4	<0.05	<0.05	0.4	300	7.5
07-Apr-14	88900	178	513	236	7.9	8	48	60	21.0	15	2.7	<1	<0.05	<0.05	0.2	300	7.0
15-Sep-14	92420	204	522	246	7.8	9	49	61	22.9	11	2.6	1.7	<0.05	<0.05	0.3	330	1.8
24-Mar-15	95924	213	524	245	8.1	10	50	64	20.9	13	2.5	<1	<0.05	<0.05	0.2	310	-0.2
23-Sep-15	99775	212	524	251	7.8	13	47	60	24.6	4.8	2.3	<1	<0.05	<0.05	0.2	310	-2.1
29-Mar-16	103215	209	522	265	7.9	11	47	65	25.2	9.2	2.5	<1	<0.05	<0.05	<0.1	290	2.8
22-Sep-16	107589	210	523	250	7.7	12	49	59	25.1	8.3	2.4	<1	<0.05	<0.05	0.2	310	-0.8
03-Apr-17	112036	208	532	262	7.9	12	53	64	25.1	9.6	2.5	<1	<0.05	<0.05	0.2	300	1.3
27-Sep-17	116688	223	529	255	7.8	10	48	61	24.8	9.2	2.4	<1	<0.5	<0.5	0.2	320	-1.2
15-Mar-18	120690	228	530	256	7.6	9	48	62	24.6	11	2.5	1.8	<0.5	<0.5	0.1	320	-1.1
30-Sep-18	126578	227	540	272	7.7	7	45	66	26.3	9.4	2.5	1.2	<0.5	<0.5	0.2	330	2.4
18-Mar-19	130361	225	551	280	7.9	5	49	68	26.7	10	2.6	4.1	<0.5	<0.5	0.1	350	4.0
09-Sep-19	134993	226	543	272	7.7	7	47	65	26.4	13	3	3.7	<0.5	<0.5	0.1	330	3.7
26-Mar-20	139774	237	549	272	7.6	6	50	68	25.2	10	2.5	2.2	<0.5	<0.5	0.1	320	0.3
01-Sep-20	143842	231	565	269	7.7	5	50	66	25.1	10	2.9	1.2	<0.5	<0.5	0.2	390	1.2
22-Mar-21	148684	245	582	282	7.7	5	61	68	27.1	12	2.7	1.4	<0.5	<0.5	0.1	370	-0.7
27-Sep-21	154084	251	685	378	7.6	4	120	95	34.5	11	3.3	1.8	<0.5	<0.5	0.2	390	3.5
29-Mar-22	159333	238	625	339	7.5	5	78	82	32.5	13	3.3	1.5	<0.5	<0.5	0.2	370	6.8
12-Sep-22	164194	246	707	368	7.5	5	127	87	36.8	11	2.9	1.4	<0.5	<0.5	0.3	490	1.8
02-Mar-23	168429	257	715	423	7.7	5	168	103	40.2	10	3	1.1	<0.05	<0.05	0.2	520	1.6
11-Sep-23	174072	241	686		7.6	6	114					<1	<0.05	<0.05	0.2	440	
18-Mar-24	179267	241	656	345	7.7	6	127	88	30.3	11	2.8	1.9	<0.05	<0.05	0.2	450	0.1
10-Sep-24	184342	235	537	333	7.4	7	112	84	30.1	11	2.8	1.5	<0.05	<0.05	0.2	420	1.3
TOTAL SAMPLES		36	36	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		238	597	339	7.6	7	120	86	30.2	11	2.8	1.7	<0.05	<0.05	0.2	435	

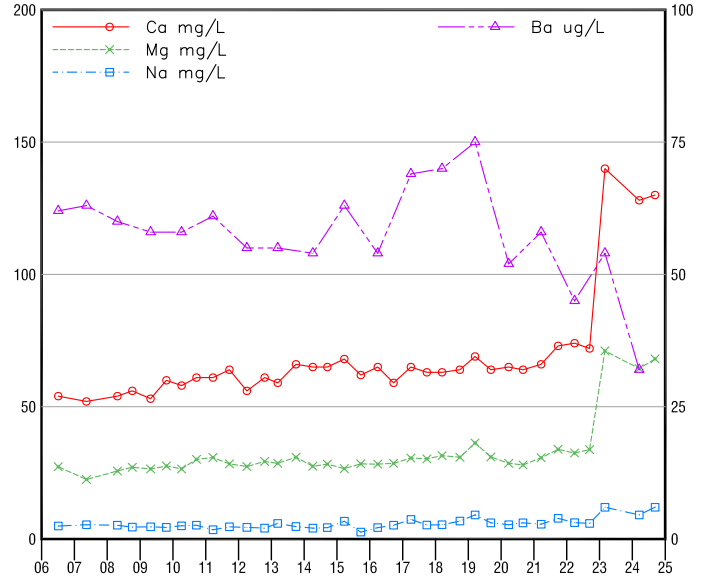
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



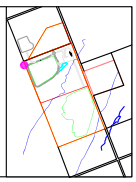








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-88-III

Shallow Overburden

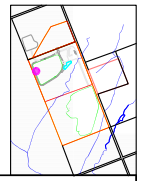
Screen 204.0 - 201.0 masl

CA008825 24 Mar 25	wsp	F124011

BH-88-III

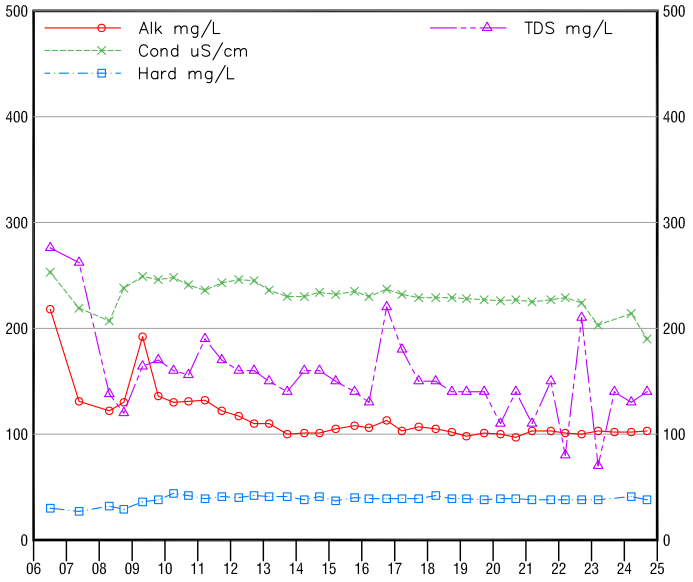
Shallow Overburden

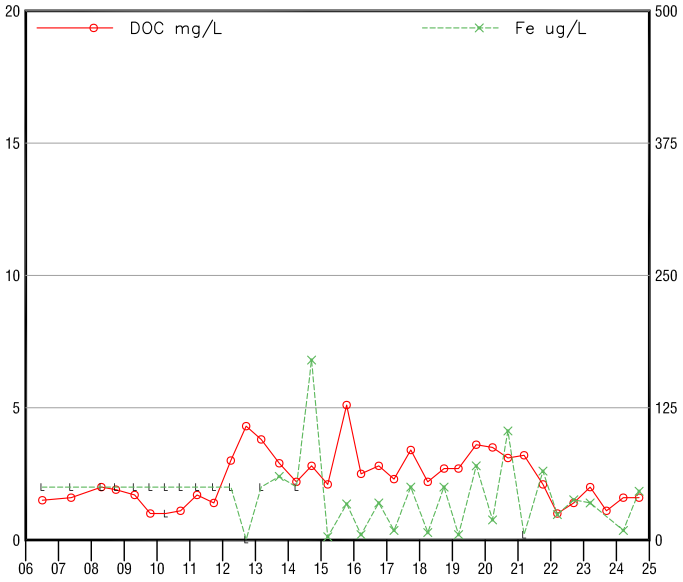
Monitoring Well
Screen 204.0 - 201.0 masl

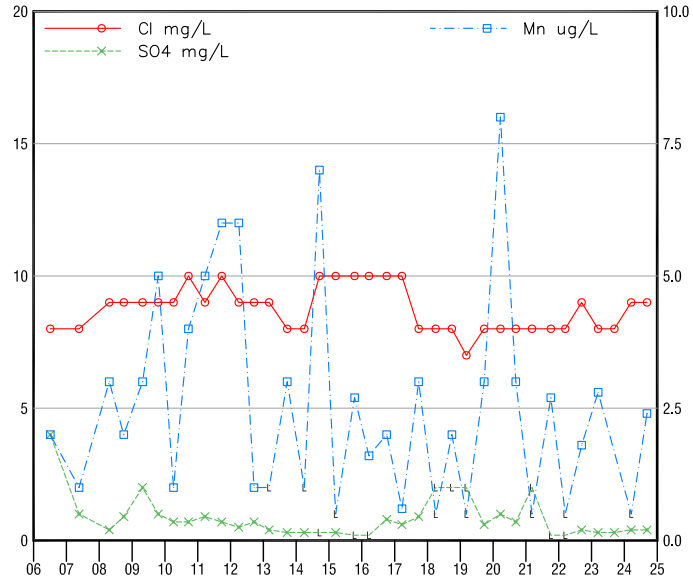


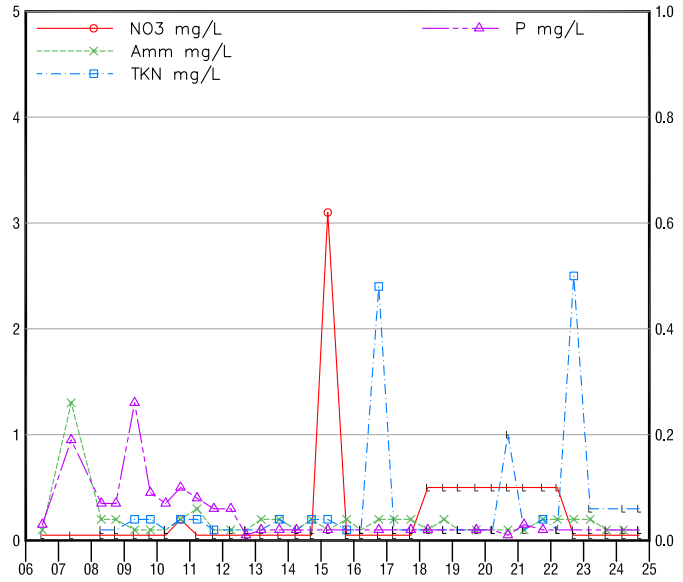
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61791	213	520	255	7.7	7	48	58	26.5	5.0	2.12	<1	<0.05	<0.05	<0.1	302	-0.5
20-Sep-10	64263	216	520	275	7.8	7	56	61	30.1	5.2	2.35	<1	<0.05	<0.05	0.2	324	1.3
23-Mar-11	67146	202	508	278	7.8	7	57	61	30.8	3.5	2.11	1.2	<0.05	<0.05	0.2	328	3.3
22-Sep-11	70445	217	533	278	7.8	7	59	64	28.4	4.6	2.41	2	<0.05	<0.05	0.1	360	0.8
03-Apr-12	73823	218	488	252	7.8	8	59	56	27.4	4.4	2.04	<1	<0.05	<0.05	0.1	320	-4.5
17-Oct-12	78009	216	539	273	7.7	8	59	61	29.3	4.1	2.32	2.9	<0.05	<0.05	0.2	350	-0.3
12-Mar-13	80846	212	539	265	7.8	9	57	59	28.6	5.9	2.06	3.2	<0.05	<0.05	<0.1	350	-0.6
01-Oct-13	85459	197	550	291	7.7	10	57	66	30.9	4.7	2.4	3.6	<0.05	<0.05	<0.1	320	6.2
07-Apr-14	88901	184	547	276	7.8	11	57	65	27.5	4.1	2.1	3.6	<0.05	<0.05	0.1	330	5.5
15-Sep-14	92421	205	540	278	7.9	12	57	65	28.3	4.3	2.3	4.4	<0.05	<0.05	0.1	340	1.9
24-Mar-15	95925	233	553	279	8.1	12	58	68	26.6	6.7	2	1.1	<0.05	<0.05	<0.1	320	-2.4
23-Sep-15	99776	220	550	271	7.8	13	55	62	28.4	2.6	2.3	1.1	<0.05	<0.05	0.1	330	-2.6
29-Mar-16	103216	210	543	278	7.9	12	55	65	28.3	4.3	2.2	<1	<0.05	<0.05	<0.1	300	1.2
22-Sep-16	107590	217	542	265	7.7	12	53	59	28.6	5.2	2.5	<1	<0.05	<0.05	0.2	330	-1.3
03-Apr-17	112037	218	567	289	7.9	10	73	65	30.6	7.4	2.7	<1	<0.05	<0.05	0.2	340	0.1
27-Sep-17	116689	228	549	282	7.8	11	56	63	30.3	5.3	2.5	<1	<0.5	<0.5	0.2	340	-0.6
15-Mar-18	120691	230	542	288	7.7	11	55	63	31.5	5.4	2.4	1.8	<0.5	<0.5	0.1	330	0.0
30-Sep-18	126579	221	559	287	7.7	9	60	64	30.9	6.8	2.8	1.4	<0.5	<0.5	0.1	340	1.7
18-Mar-19	130362	230	614	323	7.9	4	90	69	36.3	9.1	2.4	2.7	<0.5	<0.5	0.1	380	2.4
09-Sep-19	134994	218	543	288	7.7	8	58	64	31.0	6.1	2.7	1.4	<0.5	<0.5	0.1	350	2.7
26-Mar-20	139775	224	547	281	7.7	7	62	65	28.6	5.4	2.3	2.2	<0.5	<0.5	0.1	330	-0.4
01-Sep-20	143843	218	555	275	7.8	6	59	64	28.0	6.1	2.8	1.2	<0.5	<0.5	0.2	320	0.9
22-Mar-21	148685	229	563	290	7.7	5	66	66	30.7	5.6	2.5	**20**	<0.5	<0.5	0.1	380	0.2
27-Sep-21	154085	240	643	322	7.8	3	101	73	33.9	7.8	3	1.7	<0.5	<0.5	0.1	420	-0.8
29-Mar-22	159334	226	571	318	7.7	5	65	74	32.5	6.2	2.6	1	<0.5	<0.5	0.2	350	5.4
12-Sep-22	164195	235	610	320	7.6	6	86	72	33.8	5.9	2.7	1.4	<0.5	<0.5	0.3	410	0.7
02-Mar-23	168430	219	1120	642	7.6	8	390	140	71.1	12	3.3	1.5	0.2	<0.05	0.1	840	2.7
11-Sep-23	174073	232	831		7.6	6	217					<1	<0.05	<0.05	<0.1	540	
18-Mar-24	179268	236	1110	585	7.6	14	440	128	64.4	9.1	3	2.1	0.2	<0.05	0.1	640	7.2
10-Sep-24	184343	243	1010	605	7.3	19	362	130	68.1	12	3.8	2.1	0.5	<0.05	0.1	800	0.1
TOTAL SAMPLES		36	36	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		240	1060	595	7.5	17	401	129	66.3	11	3.4	2.1	0.4	<0.05	0.1	720	

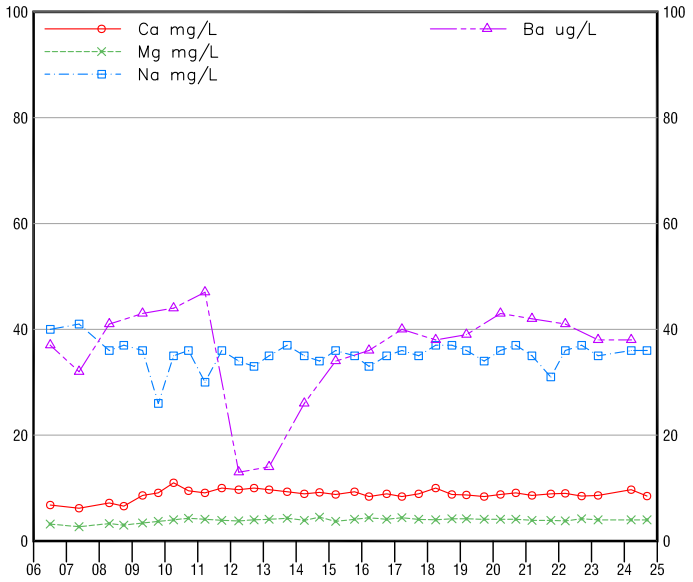
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











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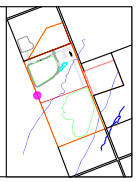
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-89-II

Lower Screened Overburden

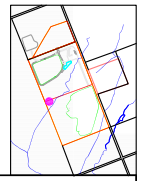
Screen 190.4 - 188.7 masl

CA008825 24 Mar 25	wsp	F124012

BH-89-II

Lower Screened Overburden

Stand Pipe Piezometer
Screen 190.4 - 188.7 masl



DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61793	130	248	44	8.3	9	0.7	11	4.0	35	<0.5	<1	<0.05	<0.05	<0.1	160	-8.7
20-Sep-10	64265	131	241	42	8.3	10	0.7	9.5	4.3	36	<0.5	1.1	0.2	<0.05	0.2	156	-9.7
23-Mar-11	67149	132	236	39	8.3	9	0.9	9.1	4.1	30	<0.5	1.7	<0.05	<0.05	0.3	190	-15.8
26-Sep-11	70469	122	243	41	7.8	10	0.7	10	3.9	36	<0.5	1.4	<0.05	<0.05	<0.1	170	-6.7
02-Apr-12	73791	117	246	40	8.2	9	0.5	9.7	3.8	34	<0.5	3	<0.05	<0.05	0.1	160	-6.7
19-Sep-12	77345	110	245	42	7.9	9	0.7	10	4.0	33	0.42	4.3	<0.05	<0.05	<0.1	160	-3.6
05-Mar-13	80689	110	236	41	7.9	9	0.4	9.7	4.1	35	0.41	3.8	<0.05	<0.05	0.2	150	-1.8
23-Sep-13	85307	100	230	41	8.0	8	0.3	9.3	4.3	37	<0.5	2.9	<0.05	<0.05	0.2	140	3.8
01-Apr-14	88816	101	230	38	8.0	8	0.3	8.9	3.9	35	<0.5	2.2	<0.05	<0.05	<0.1	160	0.6
17-Sep-14	92472	101	234	41	7.9	10	<0.3	9.2	4.5	34	<0.5	2.8	<0.05	<0.05	0.2	160	1.0
16-Mar-15	95694	105	232	37	8.0	10	0.3	8.8	3.7	36	<0.5	2.1	3.1	<0.05	<0.1	150	-6.0
13-Oct-15	100144	108	235	40	8.1	10	<0.2	9.3	4.1	35	<0.5	**5.1**	<0.05	<0.05	0.2	140	-2.5
21-Mar-16	103106	106	230	39	8.2	10	<0.2	8.4	4.4	33	<0.5	2.5	<0.05	<0.05	<0.1	130	-4.3
04-Oct-16	107876	113	237	39	8.1	10	0.8	8.9	4.1	35	<0.5	2.8	<0.05	<0.05	0.2	220	-4.8
23-Mar-17	111761	103	232	39	8.0	10	0.6	8.4	4.4	36	<0.5	2.3	<0.05	<0.05	0.2	180	0.5
25-Sep-17	116644	107	229	39	8.2	8	0.9	8.9	4.1	35	<0.5	3.4	<0.05	<0.05	0.2	150	-1.2
03-Apr-18	121257	105	229	42	8.0	8	<2	10	4.0	37	<0.5	2.2	<0.5	<0.5	0.1	150	2.5
30-Sep-18	126593	102	229	39	8.0	8	<2	8.8	4.2	37	<0.5	2.7	<0.5	<0.5	0.2	140	2.5
11-Mar-19	130203	98	228	39	8.1	7	<2	8.7	4.2	36	<0.5	2.7	<0.5	<0.5	<0.1	140	4.2
24-Sep-19	135341	101	227	38	8.2	8	0.6	8.4	4.1	34	<0.5	3.6	<0.5	<0.5	0.1	140	-0.4
23-Mar-20	139729	100	226	39	8.1	8	1	8.8	4.1	36	<0.5	3.5	<0.5	<0.5	<0.1	110	2.1
10-Sep-20	144078	97	227	39	8.1	8	0.7	9.1	4.1	37	0.6	3.1	<0.5	<0.5	0.1	140	5.2
09-Mar-21	148434	103	225	38	8.1	8	<2	8.6	3.9	35	<0.5	3.2	<0.5	<0.5	0.1	110	-0.2
05-Oct-21	154352	103	227	38	8.2	8	<0.2	8.9	3.9	31	<0.5	2.1	<0.5	<0.5	0.2	150	-3.5
15-Mar-22	158875	101	229	38	7.8	8	<0.2	9.0	3.8	36	<0.5	1	<0.5	<0.5	0.2	80	2.3
13-Sep-22	164238	100	224	38	8.1	9	0.4	8.5	4.2	37	<0.5	1.4	<0.05	<0.05	0.2	210	3.3
15-Mar-23	168773	103	203	38	8.2	8	0.3	8.6	4.0	35	<0.5	2	<0.05	<0.05	0.2	70	0.0
12-Sep-23	174118	102			8.1	8	0.3					1.1	<0.05	<0.05	0.1	140	
18-Mar-24	179270	102	214	41	7.9	9	0.4	9.7	4.0	36	<0.5	1.6	<0.05	<0.05	0.1	130	3.3
09-Sep-24	184297	103	190	38	7.6	9	0.4	8.5	4.0	36	<0.5	1.6	<0.05	<0.05	<0.1	140	1.0
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		103	202	40	7.8	9	0.4	9.1	4.0	36	<0.5	1.6	<0.05	<0.05	<0.1	135	

all Concentrations mg/L unless otherwise indicated
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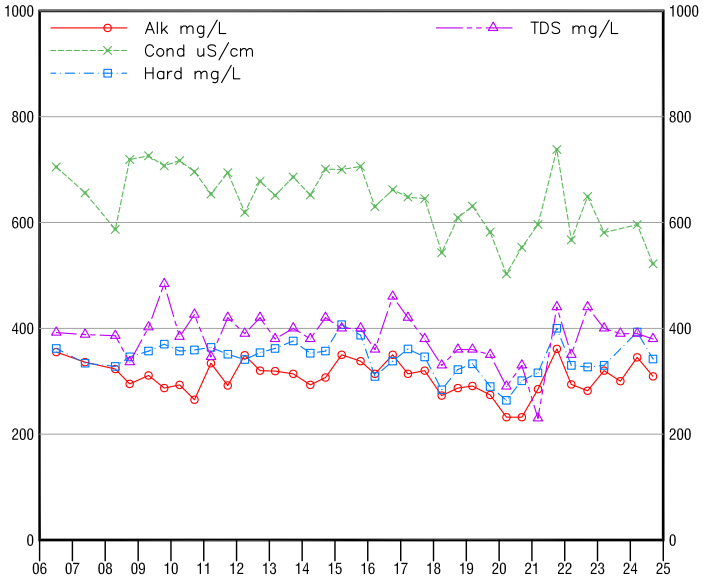

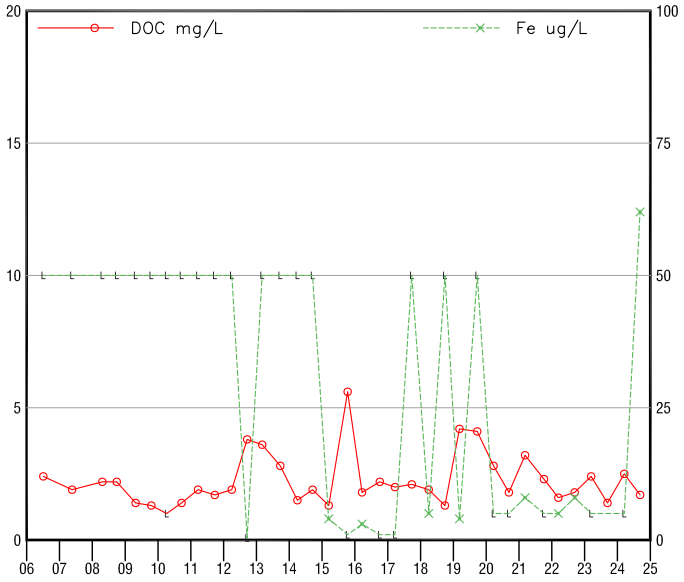

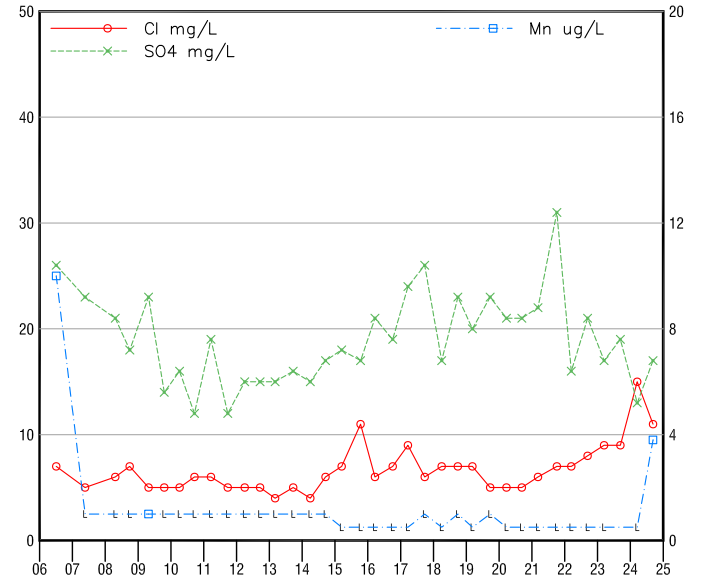

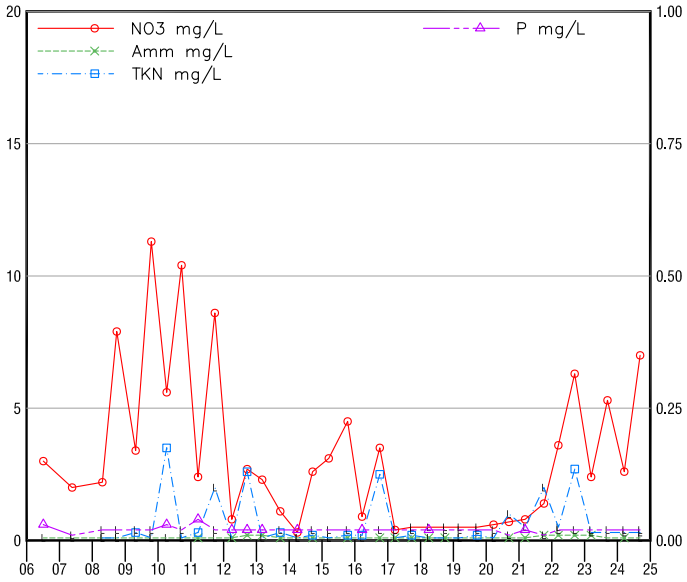

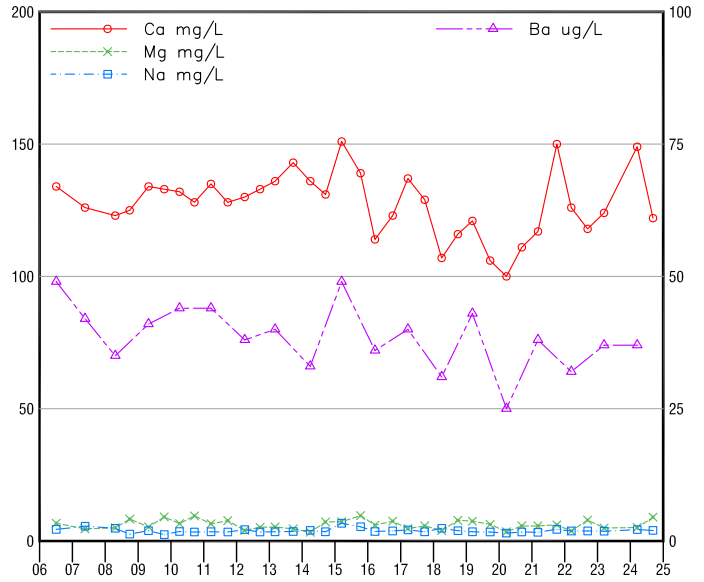

L	Concentration Reported Less Than
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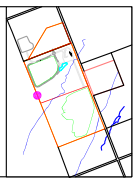
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-89-III

Shallow Overburden

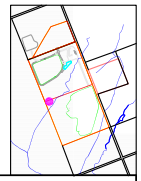
Screen 198.9 - 195.7 masl

CA008825 24 Mar 25	wsp	F124013

BH-89-III

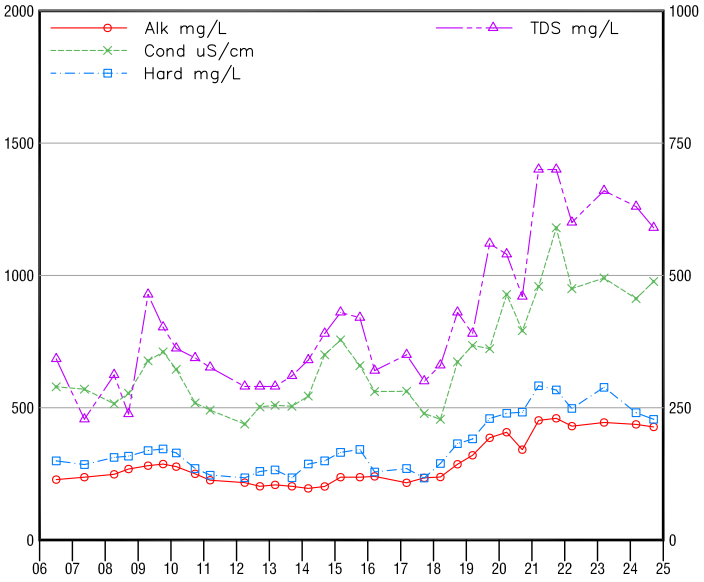
Shallow Overburden

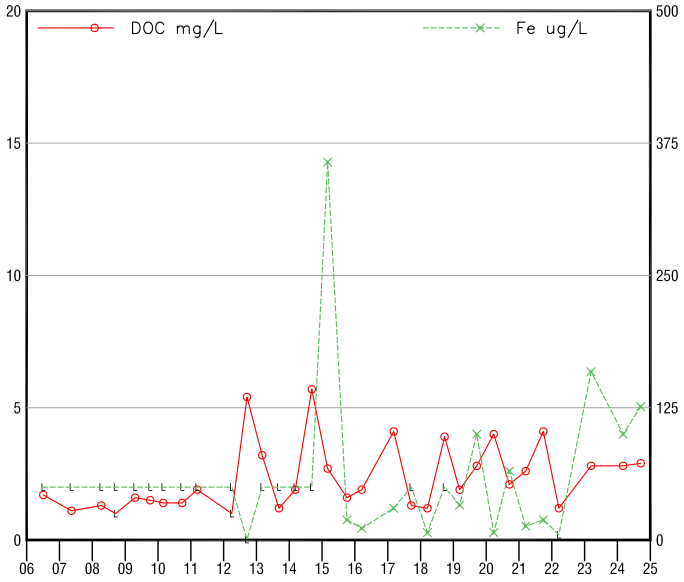
Monitoring Well
Screen 198.9 - 195.7 masl

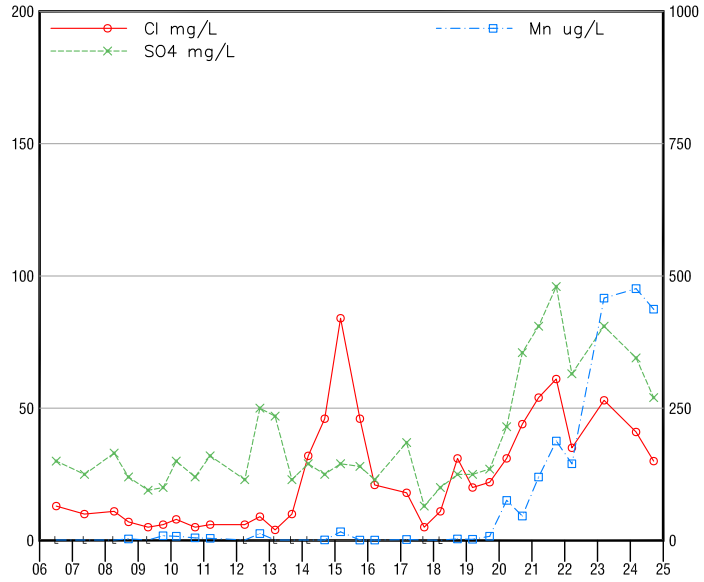


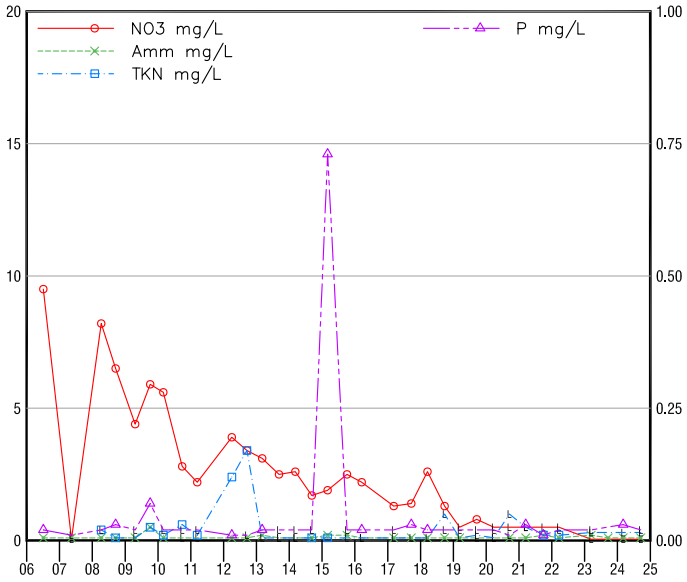
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61794	293	717	357	7.3	5	16	132	6.6	3.6	0.58	<1	5.6	<0.05	<0.1	384	4.0
20-Sep-10	64266	265	696	359	7.7	6	12	128	9.5	3.4	0.74	1.4	**10.4**	<0.05	<0.1	426	6.4
23-Mar-11	67150	334	654	364	7.4	6	19	135	6.5	3.5	0.58	1.9	2.4	<0.05	0.1	346	0.4
26-Sep-11	70470	292	694	351	7.6	5	12	128	7.7	3.4	0.71	1.7	8.6	<0.05	<0.1	420	2.5
02-Apr-12	73792	349	619	341	7.3	5	15	130	4.0	4.3	<0.5	1.9	0.8	<0.05	0.1	390	-3.2
19-Sep-12	77346	320	678	354	7.5	5	15	133	5.2	3.4	0.67	3.8	2.7	<0.05	0.2	420	1.4
05-Mar-13	80690	319	651	362	7.8	4	15	136	5.3	3.5	0.61	3.6	2.3	<0.05	0.2	380	3.0
23-Sep-13	85308	314	686	376	7.6	5	16	143	4.6	3.6	0.6	2.8	1.1	<0.05	0.1	400	6.0
01-Apr-14	88817	293	652	353	7.2	4	15	136	3.3	4.0	<0.5	1.5	0.3	<0.05	<0.1	380	6.9
17-Sep-14	92473	307	701	357	7.5	6	17	131	7.2	3.5	0.7	1.9	2.6	<0.05	0.1	420	3.2
16-Mar-15	95695	350	700	407	7.4	7	18	151	7.3	6.7	0.6	1.3	3.1	<0.05	<0.1	400	3.9
13-Oct-15	100145	338	706	387	7.6	11	17	139	9.6	5.4	0.7	**5.6**	4.5	<0.05	0.1	400	1.6
21-Mar-16	103107	314	630	309	7.7	6	21	114	6.0	3.6	<0.5	1.8	0.9	<0.05	<0.1	360	-4.6
04-Oct-16	107877	350	662	338	7.5	7	19	123	7.5	3.8	0.6	2.2	3.5	<0.05	0.1	460	-6.2
23-Mar-17	111762	314	648	361	7.3	9	24	137	4.7	4.2	0.5	2	0.4	<0.05	0.1	420	2.6
25-Sep-17	116645	320	645	346	7.6	6	26	129	5.7	3.5	0.7	2.1	<0.5	<0.5	0.1	380	-0.2
03-Apr-18	121258	273	543	284	7.6	7	17	107	4.0	4.8	<0.5	1.9	<0.5	<0.5	0.1	330	-1.1
30-Sep-18	126594	287	609	322	7.5	7	23	116	7.8	3.9	0.7	1.3	<0.5	<0.5	0.1	360	1.7
11-Mar-19	130204	291	631	333	7.5	7	20	121	7.5	3.5	0.8	4.2	<0.5	<0.5	<0.1	360	3.1
24-Sep-19	135342	274	582	290	7.6	5	23	106	6.3	3.4	0.6	4.1	<0.5	<0.5	<0.1	350	-1.2
23-Mar-20	139730	232	503	264	7.5	5	21	100	3.5	3.0	<0.5	2.8	0.6	<0.5	<0.1	290	1.6
10-Sep-20	144079	232	553	301	7.5	5	21	111	5.7	3.4	0.7	1.8	0.7	<0.5	0.1	330	7.9
09-Mar-21	148435	285	596	316	7.6	6	22	117	5.7	3.3	0.6	3.2	0.8	<0.5	0.1	230	0.7
05-Oct-21	154353	361	738	400	7.3	7	31	150	6.1	4.4	0.6	2.3	1.4	<0.5	0.2	440	0.4
15-Mar-22	158876	294	567	330	7.1	7	16	126	3.8	3.8	<0.5	1.6	3.6	<0.5	0.2	350	0.8
13-Sep-22	164239	282	649	327	7.3	8	21	118	7.9	3.8	0.7	1.8	6.3	<0.05	0.2	440	0.0
15-Mar-23	168774	320	581	330	7.3	9	17	124	4.9	3.7	0.5	2.4	2.4	<0.05	0.2	400	-2.9
12-Sep-23	174119	300			7.3	9	19					1.4	5.3	<0.05	<0.1	390	
18-Mar-24	179271	345	596	393	7.4	15	13	149	5.1	4.3	0.5	2.5	2.6	<0.05	0.1	390	3.4
09-Sep-24	184298	309	522	342	6.9	11	17	122	9.0	4.0	0.9	1.7	7.0	<0.05	<0.1	380	0.7
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		327	559	368	7.2	13	15	136	7.1	4.2	0.7	2.1	4.8	<0.05	<0.1	385	

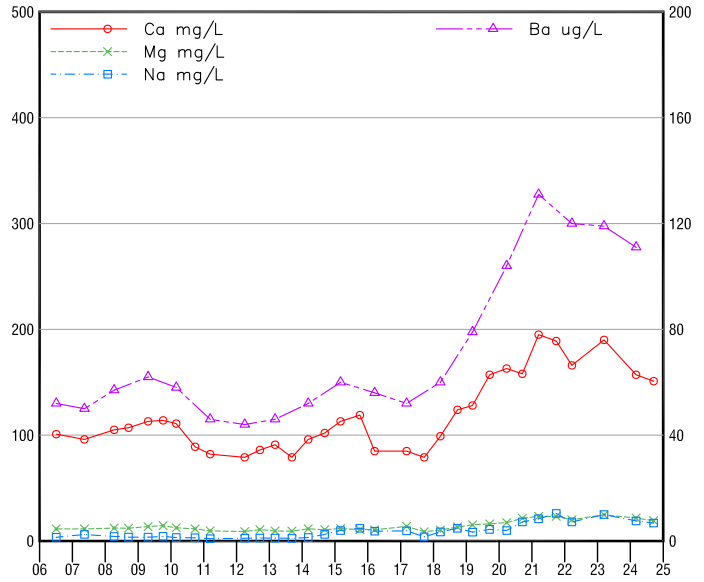
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



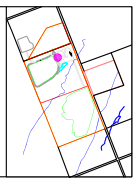








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-91-II

Overburden Formation

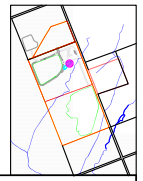
Screen 198.1 - 196.5 masl

CA008825 24 Mar 25	wsp	F124014

BH-91-II

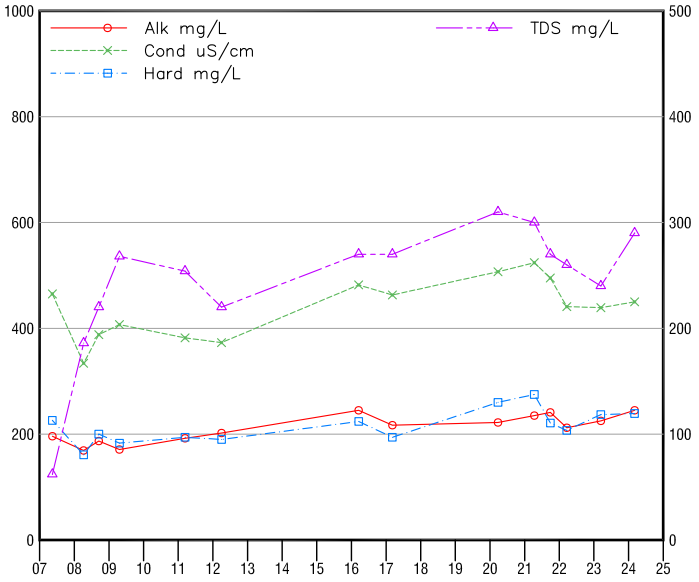
Overburden Formation

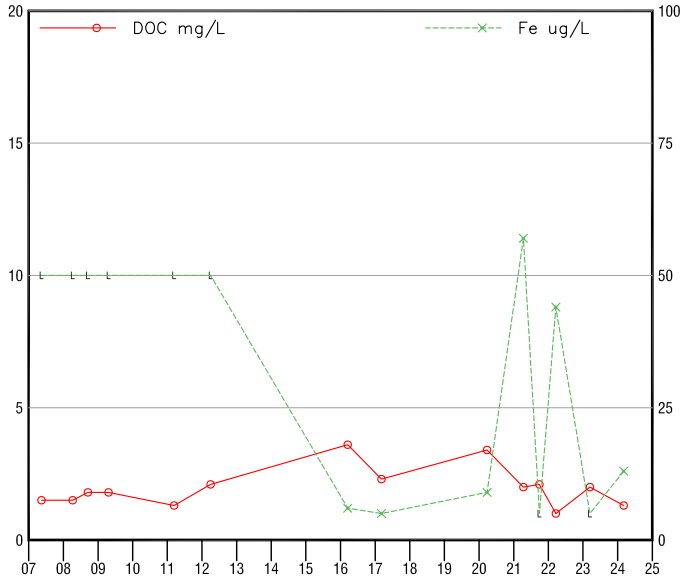
Stand Pipe Piezometer
Screen 198.1 - 196.5 masl

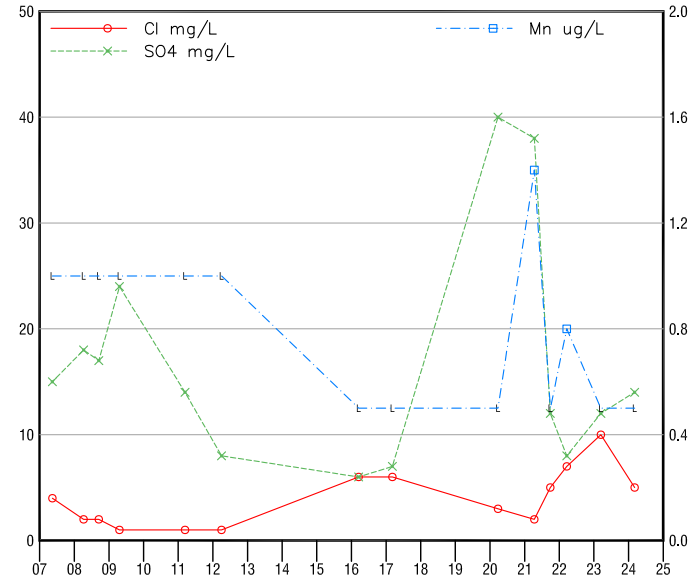


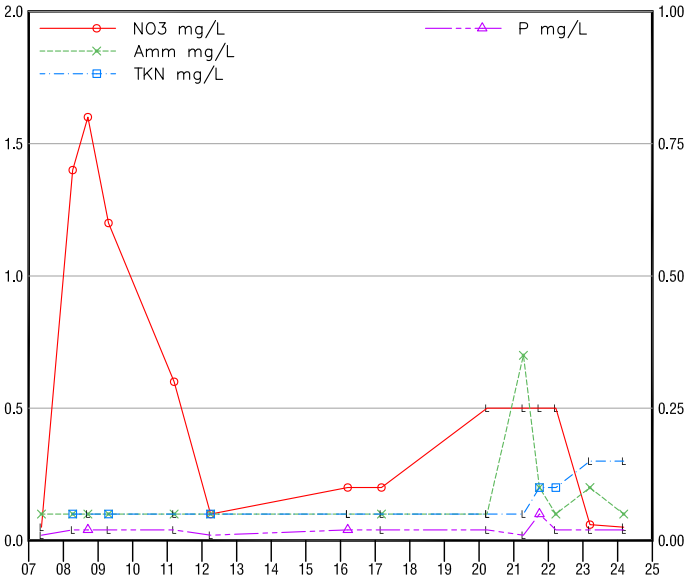
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
16-Sep-08	51294	268	554	317	7.8	7	24	107	12.1	3.6	0.75	<1	6.5	<0.1	0.1	238	-0.1
22-Apr-09	55180	281	677	338	7.8	5	19	113	13.6	3.6	0.76	1.6	4.4	<0.1	0.1	464	3.5
06-Oct-09	58349	287	711	344	7.7	6	20	114	14.5	4.4	1.04	1.5	5.9	<0.1	0.5	402	3.0
02-Mar-10	60950	277	645	329	7.7	8	30	111	12.5	3.3	0.79	1.4	5.6	<0.05	0.1	362	-0.2
27-Sep-10	64383	250	518	270	7.6	5	24	89	11.5	3.0	0.76	1.4	2.8	<0.05	<0.1	344	-2.4
14-Mar-11	66910	226	491	245	7.7	6	32	82	9.6	2.2	0.72	1.9	2.2	<0.05	<0.1	326	-4.8
02-Apr-12	73794	217	438	235	7.7	6	23	79	8.9	2.6	0.62	<1	3.9	<0.05	0.1	290	-4.1
17-Sep-12	77334	203	503	259	7.7	9	50	86	10.7	2.8	0.73	**5.4**	3.4	<0.05	0.1	290	-2.6
05-Mar-13	80695	208	509	265	7.8	4	47	91	9.5	2.7	0.66	3.2	3.1	<0.05	0.2	290	-0.2
09-Sep-13	85030	203	505	235	7.8	10	23	79	9.3	2.5	0.7	1.2	2.5	<0.05	<0.1	310	-1.6
10-Mar-14	88317	195	544	287	7.7	32	29	96	11.5	3.3	0.8	1.9	2.6	<0.05	<0.1	340	2.7
08-Sep-14	92266	202	700	299	7.7	46	25	102	10.7	6.2	0.8	**5.7**	1.7	<0.05	0.1	390	2.4
04-Mar-15	95473	237	756	331	7.6	84	29	113	11.8	9.9	0.82	2.7	1.9	<0.05	0.2	430	-5.2
05-Oct-15	100011	237	659	342	7.6	46	28	119	10.9	12	0.8	1.6	2.5	<0.05	0.2	420	4.3
18-Mar-16	103036	240	561	257	7.5	21	23	85	10.6	9.3	0.8	1.9	2.2	<0.05	<0.1	320	-3.9
08-Mar-17	111343	216	562	270	7.9	18	37	85	13.8	9.6	1.2	4.1	1.3	<0.05	0.1	350	1.4
20-Sep-17	116503	235	478	234	7.7	5	13	79	8.8	4.0	0.7	1.3	1.4	<0.5	0.1	300	-3.3
19-Mar-18	120796	238	456	289	7.5	11	20	99	10.4	8.6	0.7	1.2	2.6	<0.5	0.1	330	4.2
25-Sep-18	126475	286	673	364	7.5	31	25	124	13.2	12	0.8	3.9	1.3	<0.5	0.1	430	4.2
12-Mar-19	130226	320	735	382	7.4	20	25	128	15.2	8.4	1	1.9	<0.5	<0.5	0.1	390	3.6
18-Sep-19	135232	386	723	459	7.6	22	27	157	16.2	11	1.1	2.8	0.8	0.80	<0.1	560	4.0
26-Mar-20	139777	407	928	479	7.2	31	43	163	17.4	9.9	0.9	4	<0.5	<0.5	<0.1	540	0.6
16-Sep-20	144238	341	791	483	7.4	44	71	158	21.4	18	1.2	2.1	<0.5	<0.5	0.1	460	4.7
16-Mar-21	148555	452	958	583	7.3	54	81	195	23.3	21	1.2	2.6	<0.5	<0.5	0.1	700	1.5
29-Sep-21	154170	460	1180	567	7.2	61	96	189	23.2	26	1.2	4.1	<0.5	<0.5	0.2	700	-1.6
21-Mar-22	159043	430	950	497	7.2	35	63	166	20.1	18	1.1	1.2	<0.5	<0.5	0.1	600	-0.7
14-Mar-23	168720	444	990	577	7.2	53	81	190	24.8	25	1.3	2.8	<0.05	<0.05	0.2	660	2.5
19-Sep-23	174343				7.4										0.1		
05-Mar-24	178934	437	912	481	7.0	41	69	157	21.7	19	1.2	2.8	<0.05	<0.05	0.1	630	2.3
16-Sep-24	184502	427	977	456	7.2	30	54	151	19.2	17	1.2	2.9	<0.05	<0.05	0.1	590	1.7
TOTAL SAMPLES		32	32	32	30	32	32	32	32	32	32	32	32	32	33	32	
AVERAGE 2024		432	945	469	7.1	36	62	154	20.5	18	1.2	2.9	<0.05	<0.05	0.1	610	

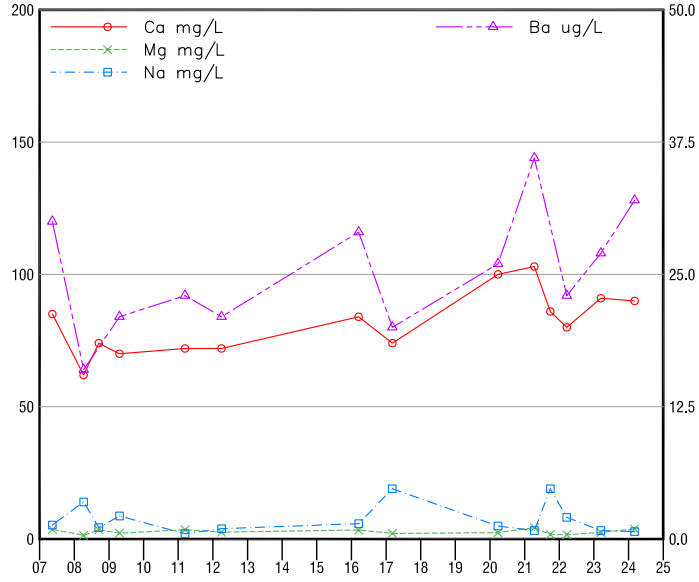
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



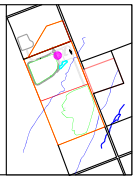








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-91-III

Shallow Overburden

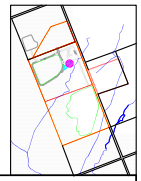
Screen 203.5 - 200.1 masl

CA008825 24 Mar 25	wsp	F124015

BH-91-III

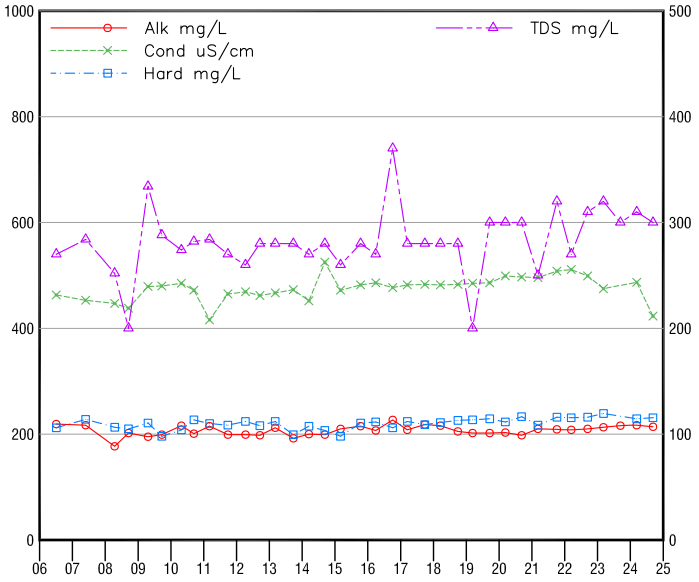
Shallow Overburden

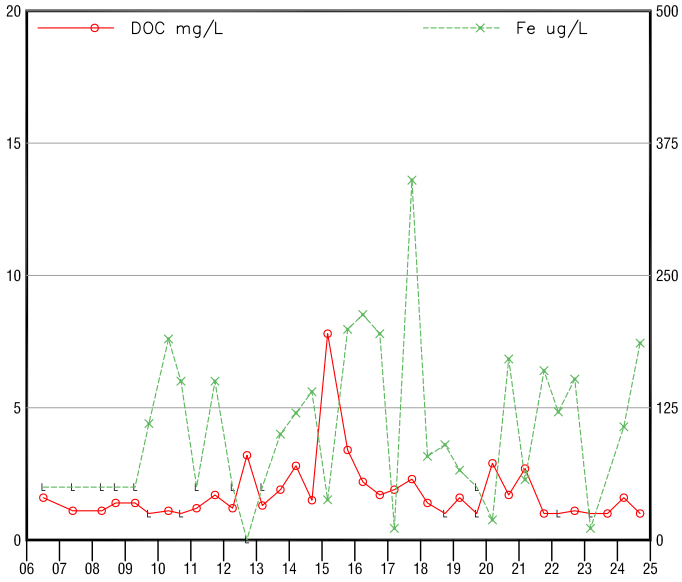
Monitoring Well
Screen 203.5 - 200.1 masl

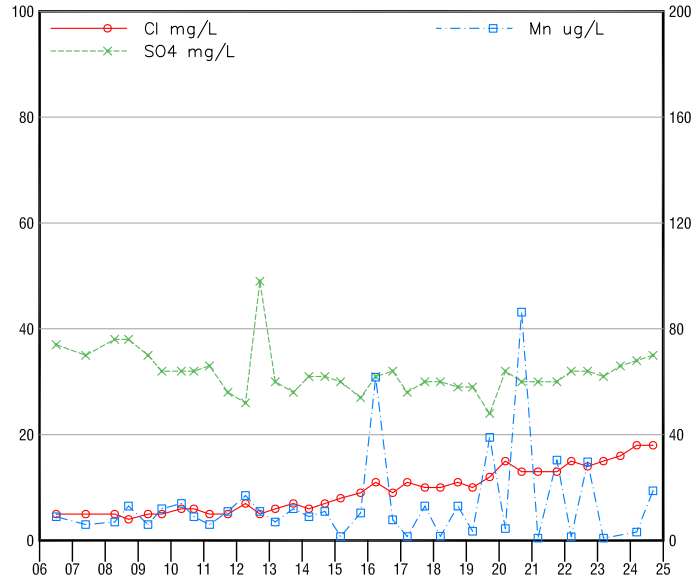


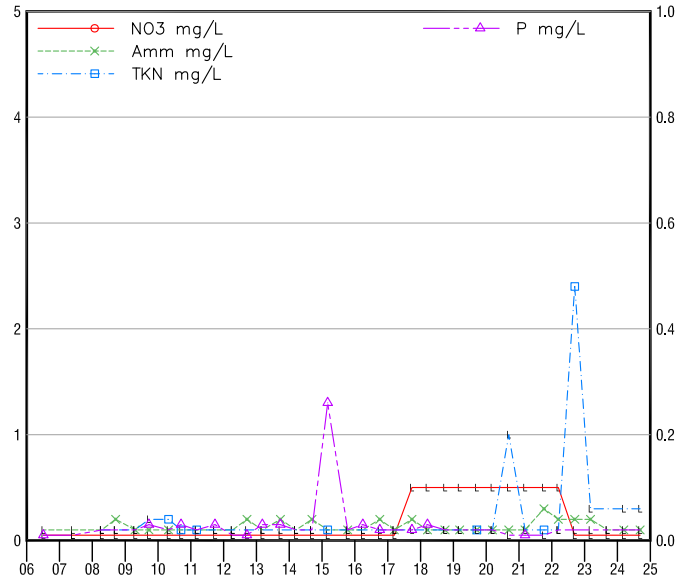
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
15-May-07	42839	196	465	226		4	15	85	3.6	5.3	0.61	1.5	<0.05	<0.05	0.1	62	4.7
09-Apr-08	48628	169	334	161		2	18	62	1.4	14	<0.5	1.5	1.4	<0.1	0.1	186	-1.1
16-Sep-08	51295	187	388	200	7.8	2	17	74	3.5	4.3	0.77	1.8	1.6	<0.1	0.1	220	-0.4
22-Apr-09	55181	171	407	183	7.8	1	24	70	2.2	8.7	<0.5	1.8	1.2	<0.1	0.1	268	0.3
14-Mar-11	66911	192	382	194	7.9	1	14	72	3.5	2.0	<0.5	1.3	0.6	<0.05	0.1	254	-2.9
02-Apr-12	73795	202	373	190	7.8	1	8	72	2.6	3.9	<0.5	2.1	0.1	<0.05	0.1	220	-3.2
18-Mar-16	103037	245	482	224	7.5	6	6	84	3.4	5.8	<0.5	3.6	0.2	<0.05	<0.1	270	-4.8
08-Mar-17	111344	217	463	194	8.1	6	7	74	2.1	19	0.5	2.3	0.2	<0.05	0.1	270	0.3
26-Mar-20	139778	222	507	260	7.7	3	40	100	2.4	4.9	<0.5	3.4	<0.5	<0.5	<0.1	310	0.4
13-Apr-21	149229	235	524	275	7.6	2	38	103	4.3	3.2	<0.5	2	<0.5	<0.5	0.7	300	1.3
29-Sep-21	154171	241	495	221	7.7	5	12	86	1.7	19	0.6	2.1	<0.5	<0.5	0.2	270	0.6
21-Mar-22	159044	212	441	207	7.6	7	8	80	1.6	8.2	<0.5	1	<0.5	<0.5	0.1	260	-1.1
15-Mar-23	168771	225	439	237	7.7	10	12	91	2.5	3.2	<0.5	2	0.06	<0.05	0.2	240	-1.3
05-Mar-24	178935	245	450	239	7.5	5	14	90	3.8	2.8	<0.5	1.3	<0.05	<0.05	0.1	290	2.4
TOTAL SAMPLES		14	14	14	12	14	14	14	14	14	14	14	14	14	14	14	
AVERAGE 2024																	

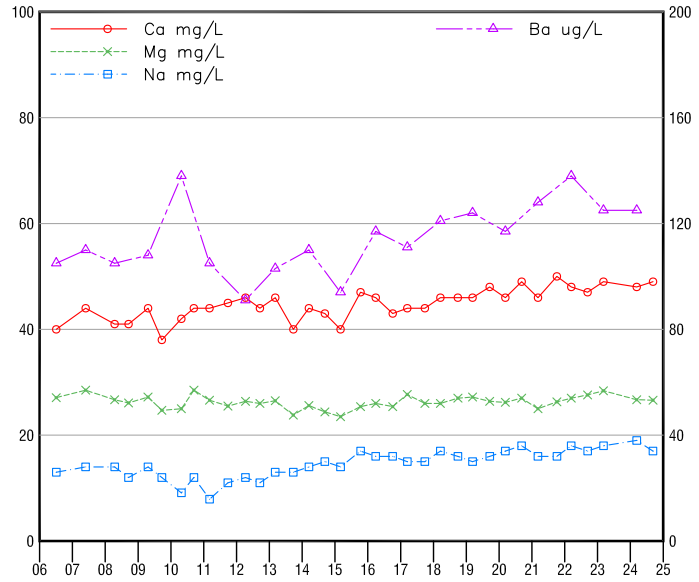
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
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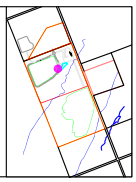
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-92-II

Overburden Formation

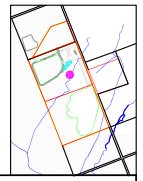
Screen 192.3 - 190.6 masl

CA008825 24 Mar 25	wsp	F124016

BH-92-II

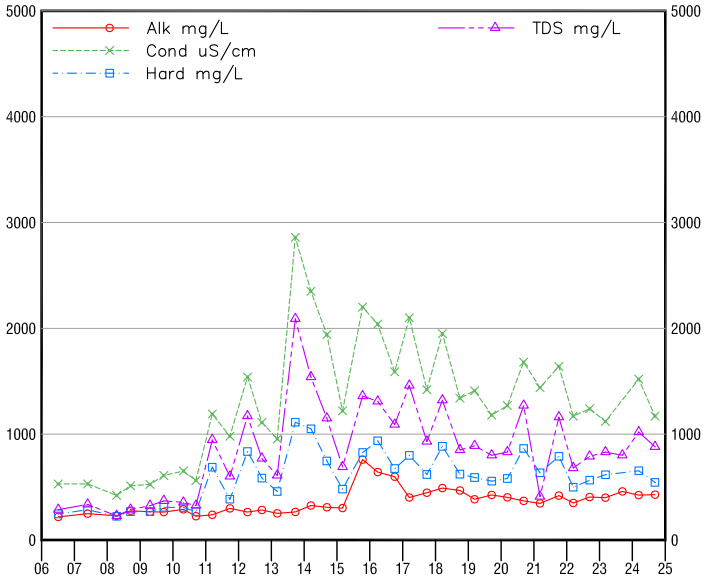
Overburden Formation

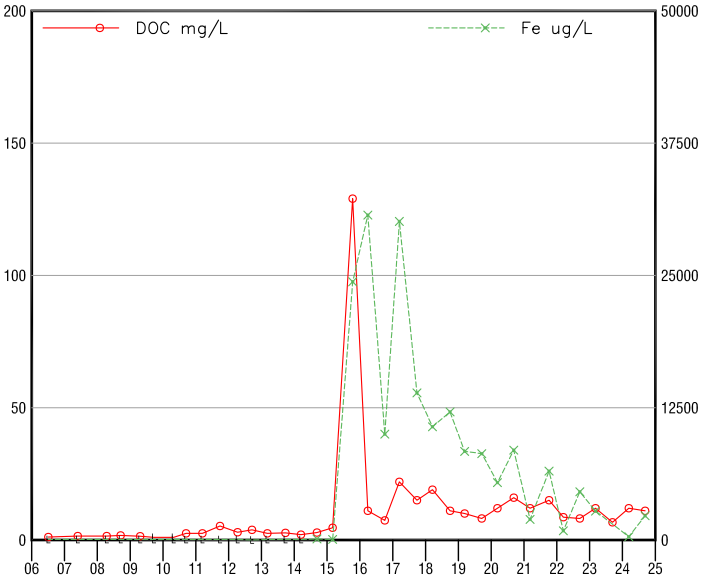
Stand Pipe Piezometer
Screen 192.3 - 190.6 masl

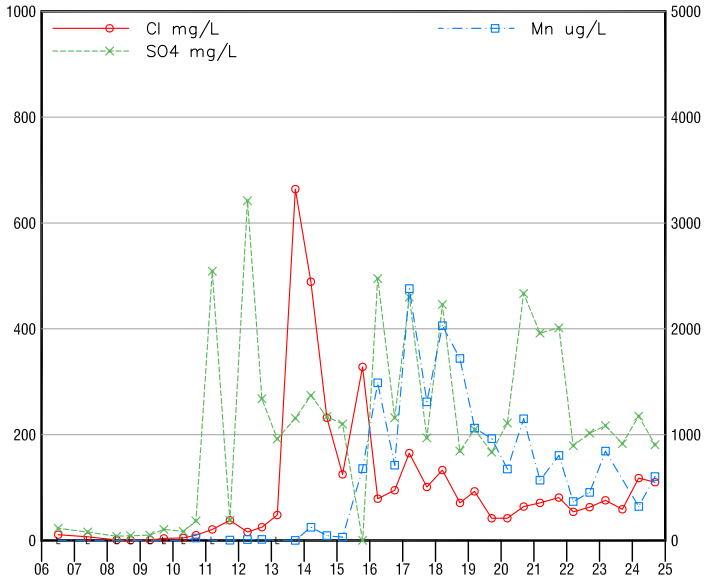


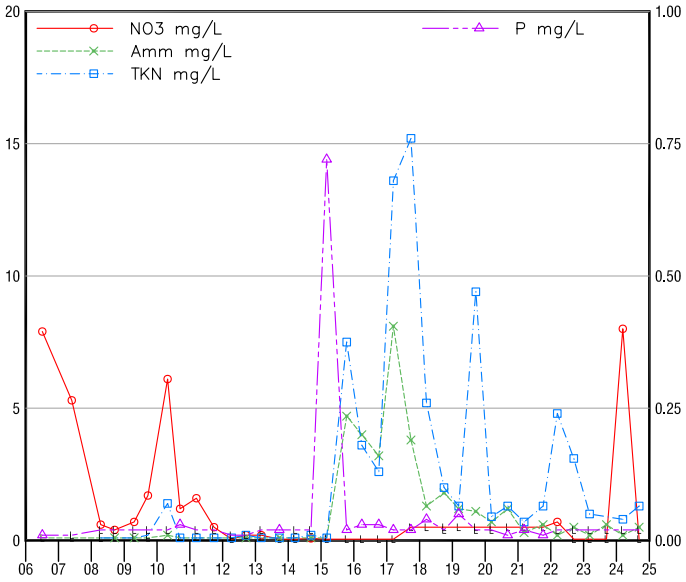
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Apr-10	62145	216	485	208	7.9	6	32	42	25.0	9.1	1.89	1.1	<0.05	<0.05	0.1	274	-5.4
14-Sep-10	64170	201	472	227	7.8	6	32	44	28.5	12	2.05	<1	<0.05	<0.05	<0.1	282	2.7
07-Mar-11	66793	215	416	220	7.9	5	33	44	26.6	7.9	2.1	1.2	<0.05	<0.05	<0.1	284	-3.3
27-Sep-11	70496	199	465	217	7.9	5	28	45	25.5	11	2.03	1.7	<0.05	<0.05	<0.1	270	1.4
10-Apr-12	73893	199	469	224	7.8	7	26	46	26.4	12	2.06	1.2	<0.05	<0.05	<0.1	260	3.5
17-Sep-12	77330	198	462	216	7.7	5	49	44	26.0	11	2	3.2	<0.05	<0.05	0.2	280	-2.6
07-Mar-13	80736	212	467	224	7.9	6	30	46	26.5	13	1.92	1.3	<0.05	<0.05	<0.1	280	0.5
24-Sep-13	85339	192	473	199	7.8	7	28	40	23.8	13	1.9	1.9	<0.05	<0.05	0.2	280	0.0
17-Mar-14	88487	200	452	215	8.0	6	31	44	25.6	14	2	2.8	<0.05	<0.05	<0.1	270	1.4
10-Sep-14	92323	199	525	207	7.8	7	31	43	24.4	15	2	1.5	<0.05	<0.05	0.2	280	0.2
04-Mar-15	95476	210	472	196	7.8	8	30	40	23.5	14	1.84	**7.8**	<0.05	<0.05	<0.1	260	-5.0
13-Oct-15	100141	215	482	221	7.9	9	27	47	25.4	17	2.1	3.4	<0.05	<0.05	0.1	280	1.2
29-Mar-16	103218	207	486	223	7.9	11	31	46	26.0	16	2.1	2.2	<0.05	<0.05	<0.1	270	1.3
04-Oct-16	107882	227	477	212	8.0	9	32	43	25.4	16	2.2	1.7	<0.05	<0.05	0.2	370	-4.3
16-Mar-17	111468	208	482	224	7.9	11	28	44	27.7	15	2.3	1.9	<0.05	<0.05	0.1	280	1.6
27-Sep-17	116685	218	483	218	7.9	10	30	44	26.0	15	2.1	2.3	<0.5	<0.5	0.2	280	-1.4
19-Mar-18	120808	216	482	222	7.8	10	30	46	26.0	17	2.2	1.4	<0.5	<0.5	0.1	280	-0.2
30-Sep-18	126584	205	483	226	7.8	11	29	46	27.0	16	2.3	<1	<0.5	<0.5	0.1	280	2.7
12-Mar-19	130235	202	485	227	8.0	10	29	46	27.2	15	2.3	1.6	<0.5	<0.5	0.1	200	3.4
19-Sep-19	135286	202	486	229	8.0	12	24	48	26.4	16	2.4	<1	<0.5	<0.5	0.1	300	4.3
11-Mar-20	139386	203	499	223	7.9	15	32	46	26.2	17	2.4	2.9	<0.5	<0.5	0.1	300	1.2
08-Sep-20	144011	198	497	233	7.9	13	30	49	27.0	18	2.6	1.7	<0.5	<0.5	0.1	300	5.1
09-Mar-21	148430	210	496	217	8.0	13	30	46	25.0	16	2.3	2.7	<0.5	<0.5	0.1	250	-1.0
06-Oct-21	154473	209	508	232	7.8	13	30	50	26.3	16	2.4	1	<0.5	<0.5	0.3	320	2.2
14-Mar-22	158784	208	511	231	7.8	15	32	48	27.0	18	2.5	<1	<0.5	<0.5	0.2	270	2.4
13-Sep-22	164244	210	499	232	7.7	14	32	47	27.6	17	2.5	1.1	<0.05	<0.05	0.2	310	1.9
08-Mar-23	168580	213	475	239	8.0	15	31	49	28.4	18	2.7	<1	<0.05	<0.05	0.2	320	3.1
12-Sep-23	174121	216			7.7	16	33					1	<0.05	<0.05	<0.1	300	
12-Mar-24	179127	217	487	229	7.9	18	34	48	26.7	19	2.5	1.6	<0.05	<0.05	0.1	310	0.9
09-Sep-24	184304	214	423	231	7.3	18	35	49	26.6	17	2.4	1	<0.05	<0.05	0.1	300	0.6
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		216	455	230	7.6	18	35	49	26.7	18	2.5	1.3	<0.05	<0.05	0.1	305	

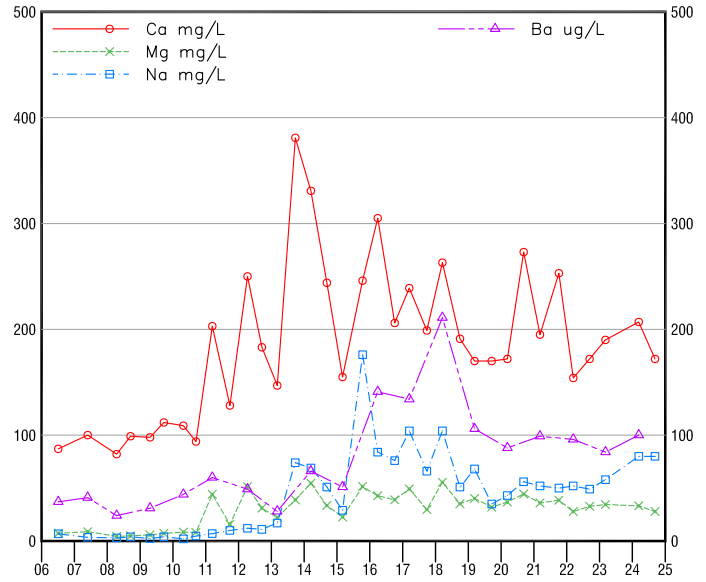
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



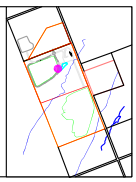








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-92-III

Shallow Overburden

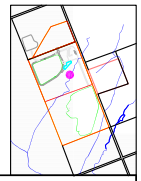
Screen 197.1 - 193.8 masl

CA008825 24 Mar 25	wsp	F124017

BH-92-III

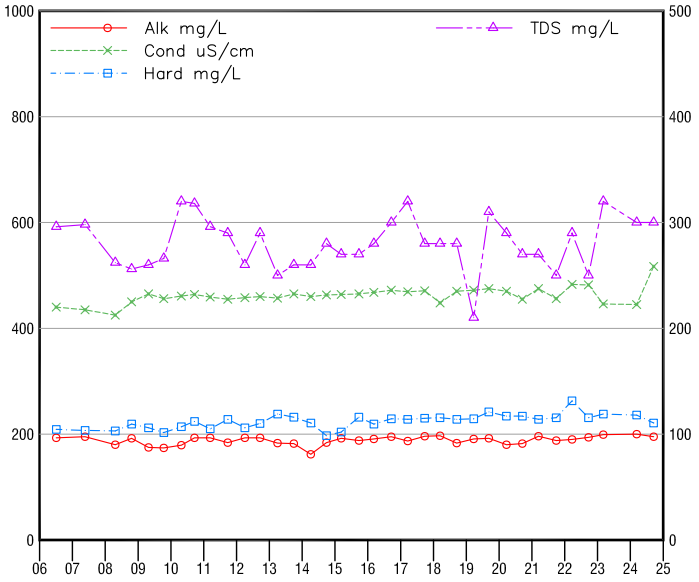
Shallow Overburden

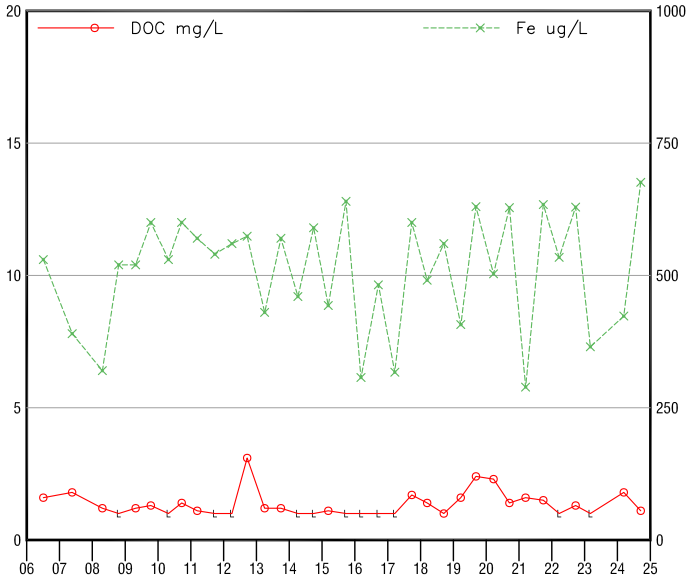
Monitoring Well
Screen 197.1 - 193.8 masl

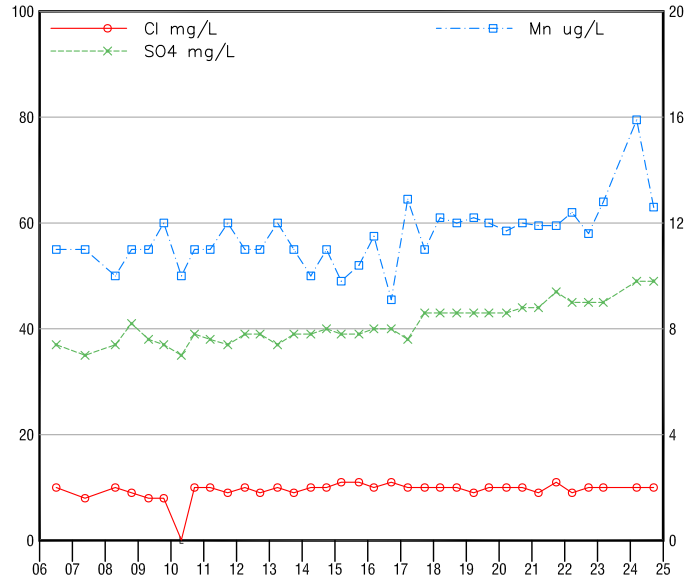


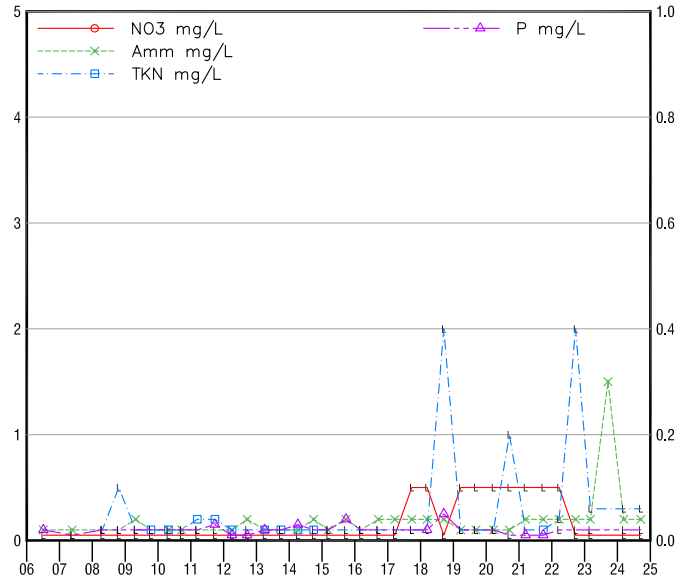
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Apr-10	62146	290	652	307	7.5	5	17	109	8.4	2.0	<0.5	<1	6.1	<0.05	0.2	354	-3.8
14-Sep-10	64171	224	562	268	7.7	10	37	94	8.1	4.7	0.99	2.5	1.2	<0.05	<0.1	326	-0.3
15-Mar-11	66988	238	1190	688	7.5	21	**509**	203	44.1	7.0	2.63	2.5	1.6	<0.05	<0.1	946	-6.4
27-Sep-11	70497	298	980	385	7.3	38	38	128	15.8	10	1.13	**5.3**	0.5	<0.05	<0.1	600	1.9
10-Apr-12	73894	263	1540	836	7.4	16	**642**	250	51.3	12	2.74	2.9	<0.05	<0.05	<0.1	1170	-4.9
17-Sep-12	77331	283	1110	585	7.4	25	268	183	31.1	11	2.04	3.8	0.2	<0.05	0.1	770	1.1
07-Mar-13	80737	251	955	458	7.4	48	192	147	22.2	17	3.34	2.5	0.2	<0.05	<0.1	610	-1.9
24-Sep-13	85340	265	2860	1112	7.3	**664**	231	381	38.9	74	4.5	2.7	<0.05	<0.05	0.1	2090	-6.1
17-Mar-14	88488	325	2350	1051	7.1	**489**	274	331	54.5	69	4.6	2	<0.05	<0.05	<0.1	1540	-3.8
10-Sep-14	92324	309	1940	747	7.0	232	234	244	33.5	51	4.5	2.8	0.08	<0.05	0.1	1150	-1.0
04-Mar-15	95477	302	1220	480	7.2	125	220	155	22.6	29	2.15	4.6	<0.05	<0.05	<0.1	690	-12.9
13-Oct-15	100142	760	2200	826	6.8	**328**	0.4	246	51.5	176	6.8	**129**	<0.05	<0.05	4.7	1360	2.2
29-Mar-16	103219	642	2040	937	7.0	79	495	305	42.7	84	6.8	**11**	<0.05	<0.05	4	1310	-2.9
04-Oct-16	107883	597	1590	675	7.0	95	232	206	39.0	76	5.5	**7.4**	<0.05	<0.05	3.2	1090	-5.2
16-Mar-17	111469	401	2100	799	7.1	165	460	239	49.2	104	10.6	**22**	<0.05	<0.05	8.1	1460	0.4
27-Sep-17	116686	446	1420	619	7.1	101	194	199	29.7	66	8.1	**15**	<0.5	<0.5	3.8	930	1.3
19-Mar-18	120809	491	1950	885	7.0	133	446	263	55.5	104	17.8	**19**	<0.5	<0.5	1.3	1320	0.6
30-Sep-18	126585	468	1340	622	7.0	71	169	191	35.2	51	16.9	**11**	<0.5	<0.5	1.8	850	2.6
12-Mar-19	130236	385	1410	590	7.3	93	210	170	40.2	68	21.5	**10**	<0.5	<0.5	1.2	890	3.2
19-Sep-19	135287	426	1180	556	7.2	42	167	170	32.0	35	24.3	**8.1**	<0.5	<0.5	1.1	800	1.8
11-Mar-20	139387	403	1270	581	7.2	42	222	172	36.8	43	23.4	**12**	<0.5	<0.5	0.7	830	1.6
08-Sep-20	144012	370	1680	865	7.1	64	467	273	44.4	56	31.5	**16**	<0.5	<0.5	1.2	1270	5.0
09-Mar-21	148431	345	1440	635	7.3	71	392	195	36.0	52	20.3	**12**	<0.5	<0.5	0.3	410	-4.6
06-Oct-21	154474	420	1640	790	7.1	81	402	253	38.5	50	24.6	**15**	<0.5	<0.5	0.6	1160	-0.5
14-Mar-22	158785	350	1170	499	7.2	54	179	154	27.9	52	18.3	**8.6**	0.7	<0.5	0.2	680	1.9
13-Sep-22	164245	406	1240	565	7.1	63	203	172	32.8	49	20.8	**8.1**	<0.05	<0.05	0.5	790	0.1
08-Mar-23	168581	400	1120	617	7.3	76	217	190	34.5	58	20.0	**12**	<0.05	<0.05	0.2	830	2.7
12-Sep-23	174122	459			7.0	59	183					**6.7**	<0.05	<0.05	0.6	800	
12-Mar-24	179128	424	1520	654	7.2	118	235	207	33.2	80	20.6	**12**	8.0	0.32	0.2	1020	0.3
09-Sep-24	184305	428	1170	544	6.7	110	181	172	27.9	80	21.2	**11**	<0.05	<0.05	0.5	880	0.6
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		426	1345	599	7.0	114	208	190	30.6	80	20.9	12	4.0	0.16	0.4	950	

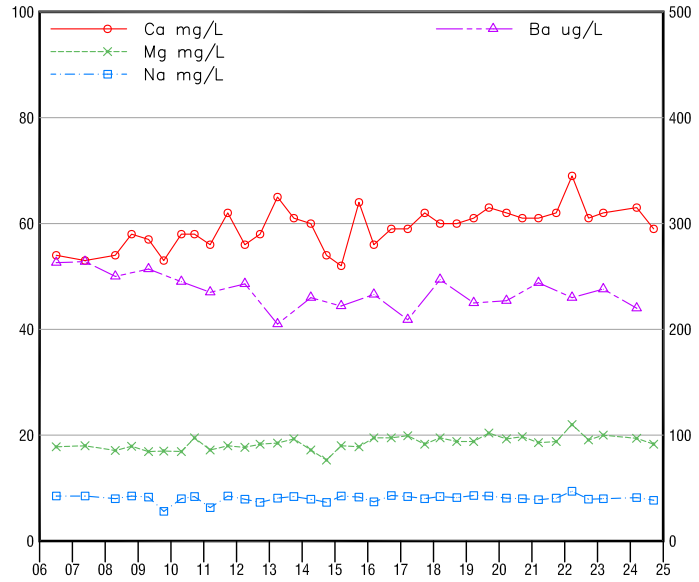
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



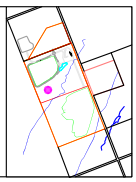








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-93-I

Overburden Formation

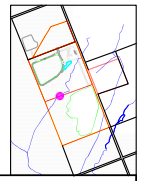
Screen 189.5 - 187.9 masl

CA008825 24 Mar 25	wsp	F124018

BH-93-I

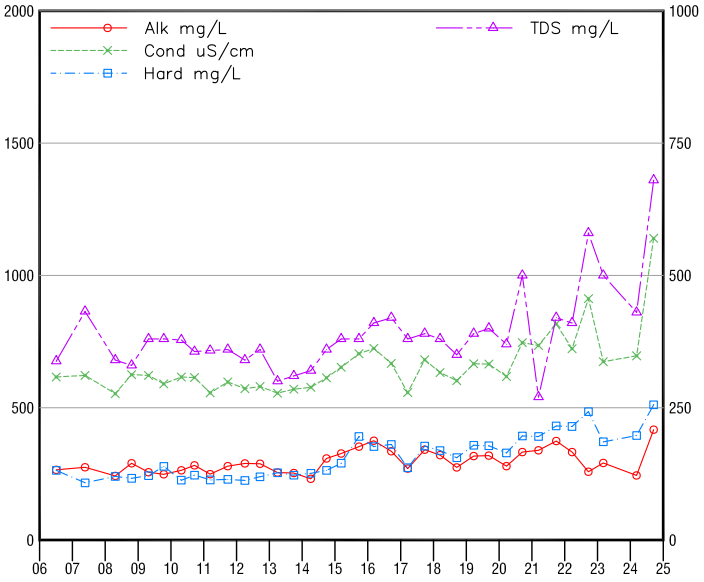
Overburden Formation

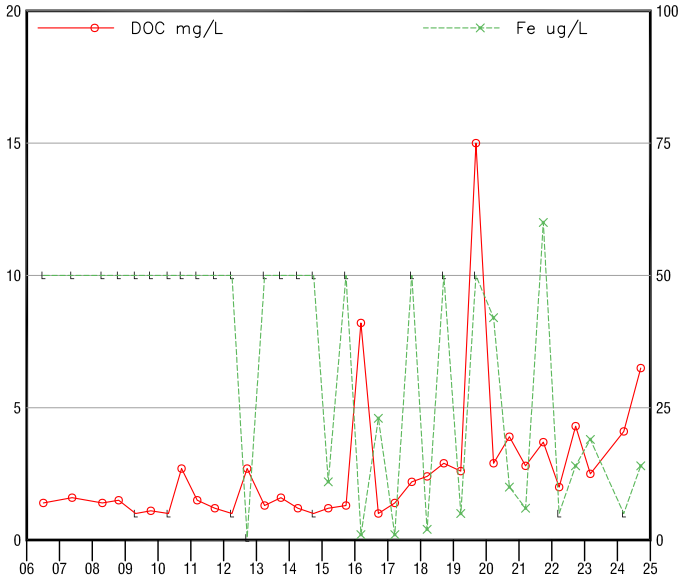
Stand Pipe Piezometer
Screen 189.5 - 187.9 masl

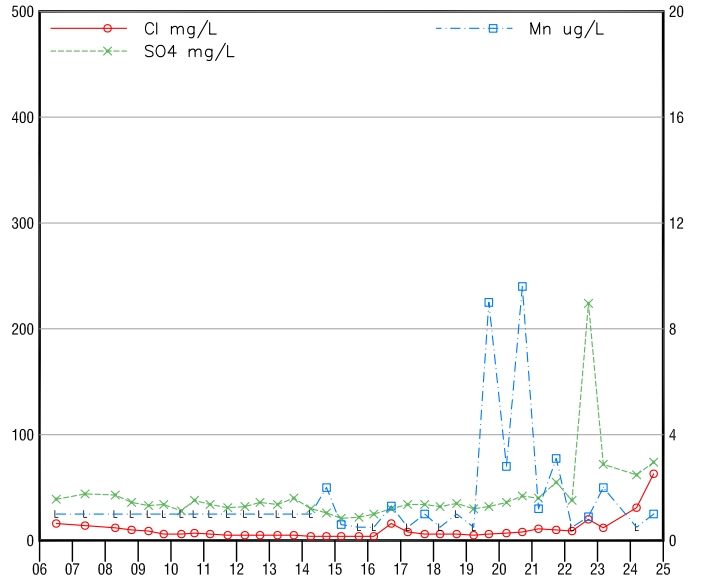


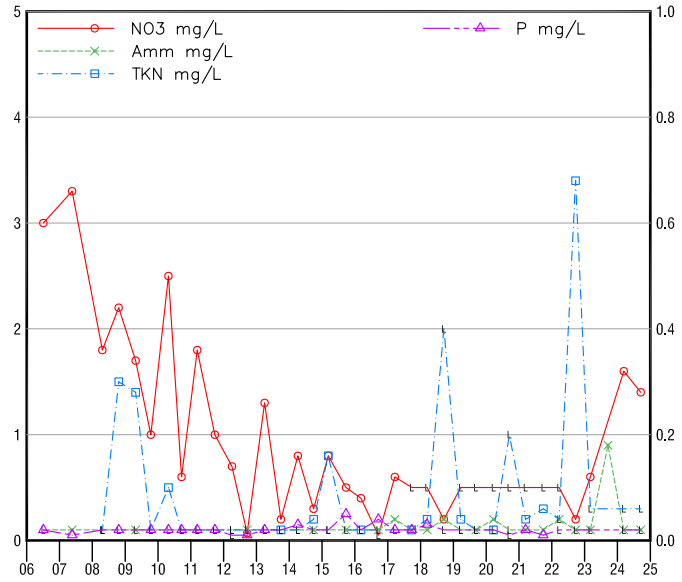
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Apr-10	62094	179	461	214	8.0	<0.1	35	58	16.9	8.0	1.16	<1	<0.05	<0.05	0.1	320	4.1
21-Sep-10	64271	193	464	224	7.8	10	39	58	19.5	8.4	1.1	1.4	<0.05	<0.05	0.1	318	-0.3
14-Mar-11	66914	193	459	210	7.8	10	38	56	17.2	6.3	1.14	1.1	<0.05	<0.05	<0.1	296	-4.3
26-Sep-11	70471	184	455	228	7.7	9	37	62	18.0	8.5	1.17	<1	<0.05	<0.05	<0.1	290	3.0
03-Apr-12	73824	193	458	212	7.8	10	39	56	17.7	7.9	1.05	<1	<0.05	<0.05	0.1	260	-3.2
19-Sep-12	77347	193	460	220	7.8	9	39	58	18.3	7.3	1.06	3.1	<0.05	<0.05	0.2	290	-1.5
02-Apr-13	81308	183	457	238	7.8	10	37	65	18.5	8.1	1.31	1.2	<0.05	<0.05	0.1	250	4.6
30-Sep-13	85427	182	465	232	7.8	9	39	61	19.3	8.4	1.2	1.2	<0.05	<0.05	<0.1	260	3.7
07-Apr-14	88902	162	460	221	7.8	10	39	60	17.2	7.9	1	<1	<0.05	<0.05	0.1	260	5.4
29-Sep-14	92708	184	463	197	7.8	10	40	54	15.3	7.3	1	<1	<0.05	<0.05	0.2	280	-5.1
11-Mar-15	95599	192	464	204	7.8	11	39	52	18.0	8.5	1.1	1.1	<0.05	<0.05	0.1	270	-4.7
24-Sep-15	99799	188	465	232	7.8	11	39	64	17.8	8.3	1.1	<1	<0.05	<0.05	0.2	270	2.1
09-Mar-16	102827	191	468	219	7.9	10	40	56	19.5	7.4	1	<1	<0.05	<0.05	<0.1	280	-2.2
19-Sep-16	107514	195	472	229	8.0	11	40	59	19.5	8.6	1.2	<1	<0.05	<0.05	0.2	300	-0.4
20-Mar-17	111709	187	469	228	7.8	10	38	59	19.9	8.4	1.1	<1	<0.05	<0.05	0.2	320	1.7
25-Sep-17	116646	196	471	230	8.0	10	43	62	18.3	8.0	1.1	1.7	<0.5	<0.5	0.2	280	-1.0
15-Mar-18	120692	197	448	231	7.8	10	43	60	19.5	8.4	1.1	1.4	<0.5	<0.5	0.2	280	-0.7
17-Sep-18	126165	183	470	228	7.9	10	43	60	18.8	8.2	1.1	1	<0.05	<0.05	0.2	280	1.3
25-Mar-19	130603	191	472	229	7.9	9	43	61	18.8	8.6	1.2	1.6	<0.5	<0.5	0.1	210	0.4
09-Sep-19	134995	192	475	242	7.8	10	43	63	20.4	8.5	1.2	2.4	<0.5	<0.5	0.1	310	2.5
23-Mar-20	139731	180	470	234	7.8	10	43	62	19.3	8.1	1.2	2.3	<0.5	<0.5	0.1	290	3.0
16-Sep-20	144240	182	455	234	7.7	10	44	61	19.7	8.0	1.2	1.4	<0.5	<0.5	0.1	270	2.7
15-Mar-21	148528	196	475	228	7.8	9	44	61	18.6	7.8	1.2	1.6	<0.5	<0.5	0.2	270	-1.3
28-Sep-21	154117	188	456	231	7.9	11	47	62	18.8	8.1	1.1	1.5	<0.5	<0.5	0.2	250	-0.1
23-Mar-22	159182	190	483	263	7.9	9	45	69	22.0	9.4	1.4	<1	<0.5	<0.5	0.2	290	6.8
22-Sep-22	164536	194	482	231	7.5	10	45	61	19.1	7.9	1.1	1.3	<0.05	<0.05	0.2	250	-0.7
06-Mar-23	168499	199	446	238	8.0	10	45	62	20.0	8.0	1.2	<1	<0.05	<0.05	0.2	320	-0.3
18-Sep-23	174294				7.7										1.5		
11-Mar-24	179080	200	445	236	7.9	10	49	63	19.4	8.2	1.2	1.8	<0.05	<0.05	0.2	300	0.3
16-Sep-24	184496	195	517	221	7.6	10	49	59	18.3	7.7	1.1	1.1	<0.05	<0.05	0.2	300	2.4
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		198	481	229	7.8	10	49	61	18.9	8.0	1.2	1.5	<0.05	<0.05	0.2	300	

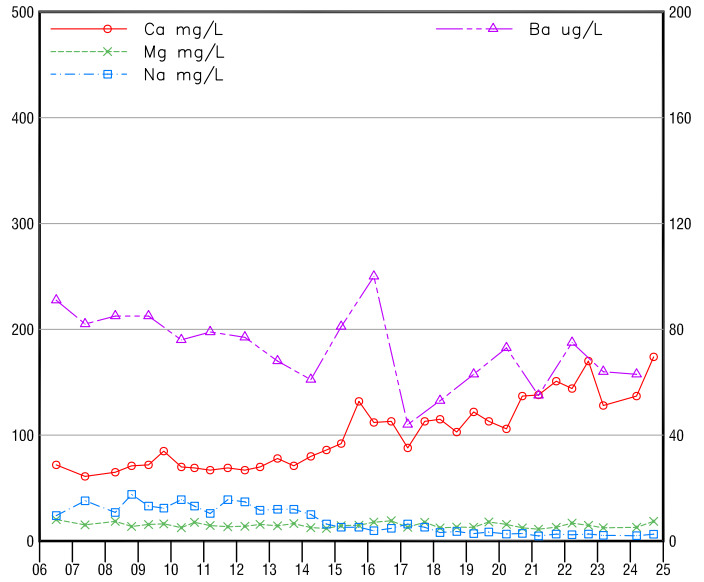
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



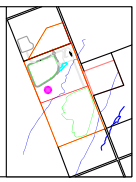








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-93-II

Shallow Overburden

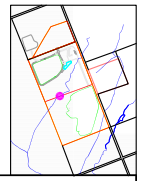
Screen 195.7 - 193.9 masl

CA008825 24 Mar 25	wsp	F124019

BH-93-II

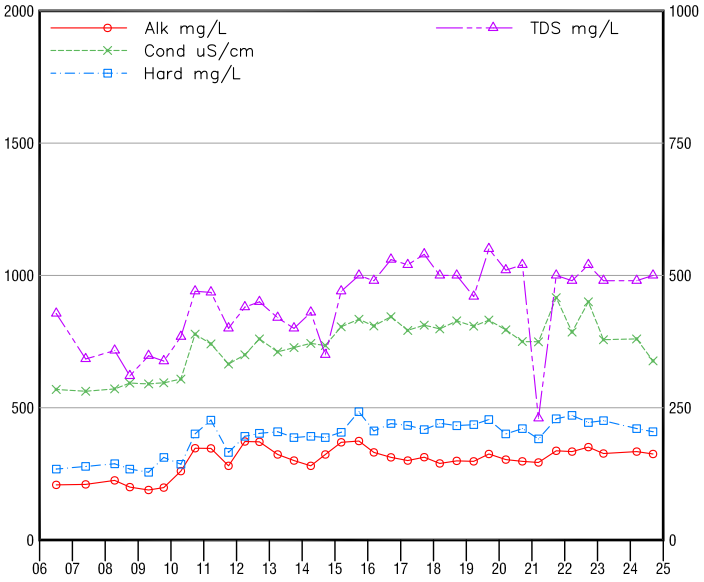
Shallow Overburden

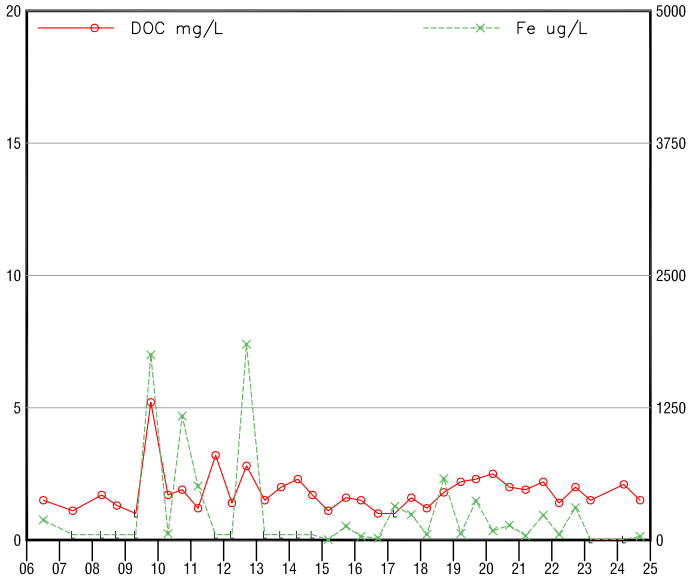
Monitoring Well
Screen 195.7 - 193.9 masl

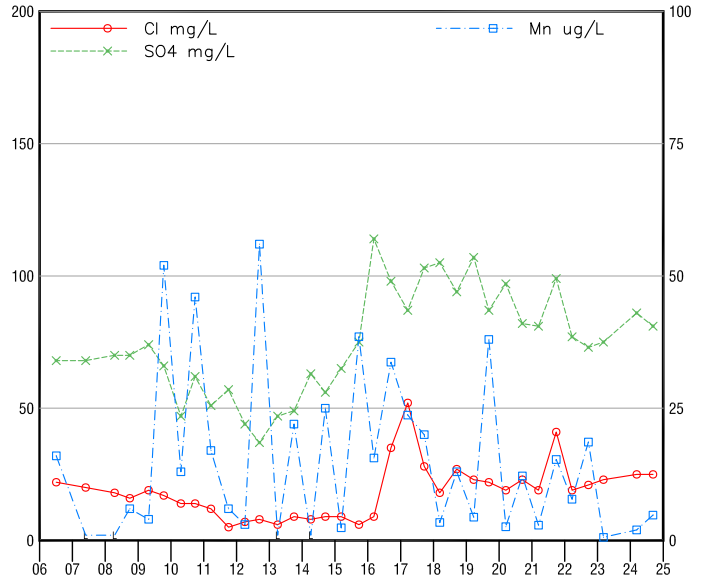


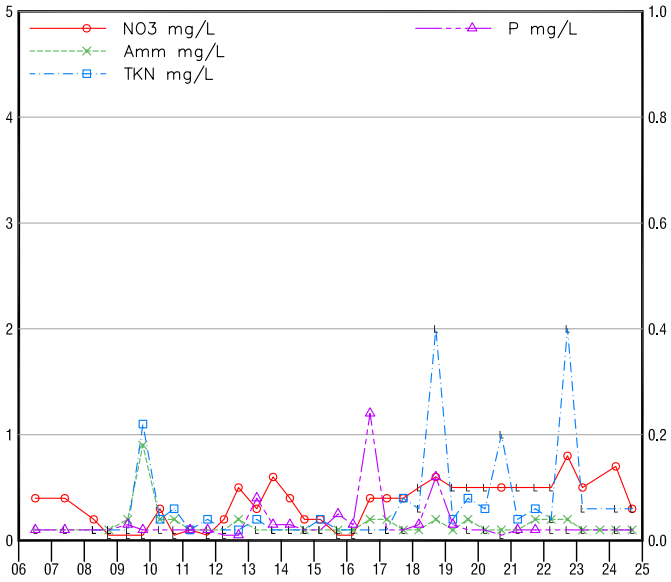
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Apr-10	62095	263	616	226	7.8	6	28	70	12.6	39	1.25	<1	2.5	<0.05	<0.1	378	0.3
21-Sep-10	64272	282	614	245	7.6	7	38	69	17.7	33	2.1	2.7	0.6	<0.05	<0.1	356	-2.0
14-Mar-11	66915	249	556	227	7.7	6	34	67	14.6	26	1.44	1.5	1.8	<0.05	<0.1	358	-2.3
26-Sep-11	70472	279	597	229	7.8	5	31	69	13.5	39	1.82	1.2	1.0	<0.05	<0.1	360	-0.8
03-Apr-12	73825	289	572	225	7.7	5	32	67	13.9	37	1.19	<1	0.7	<0.05	<0.1	340	-3.8
19-Sep-12	77348	288	580	239	7.7	5	36	70	15.7	29	1.85	2.7	0.07	<0.05	0.1	360	-4.1
02-Apr-13	81309	255	555	254	7.9	5	34	78	14.3	30	1.43	1.3	1.3	<0.05	<0.1	300	3.2
30-Sep-13	85428	253	570	245	7.6	5	40	71	16.5	30	1.8	1.6	0.2	<0.05	<0.1	310	1.8
07-Apr-14	88903	231	577	252	7.8	4	30	80	12.6	25	0.8	1.2	0.8	<0.05	<0.1	320	6.1
29-Sep-14	92709	308	613	263	7.5	4	26	86	11.9	16	1.1	<1	0.3	<0.05	0.1	360	-6.7
11-Mar-15	95600	327	653	290	7.6	4	21	92	14.5	13	0.9	1.2	0.8	<0.05	<0.1	380	-5.7
24-Sep-15	99801	353	704	391	7.3	4	22	132	14.9	13	1.2	1.3	0.5	<0.05	0.1	380	4.8
09-Mar-16	102828	375	724	353	7.6	4	25	112	17.8	9.7	0.9	**8.2**	0.4	<0.05	<0.1	410	-4.2
19-Sep-16	107515	335	667	361	7.9	16	30	113	19.1	12	2	1	<0.05	<0.05	0.1	420	0.1
20-Mar-17	111711	270	557	273	7.7	8	34	88	13.0	16	0.8	1.4	0.6	<0.05	0.2	380	-1.4
25-Sep-17	116647	341	681	355	7.8	6	34	113	17.7	13	1.4	2.2	<0.5	<0.5	0.1	390	0.1
15-Mar-18	120694	321	633	338	7.4	6	32	115	12.4	8.0	0.6	2.4	<0.5	<0.5	0.1	380	-0.8
17-Sep-18	126166	274	602	311	7.5	6	35	103	13.1	9.0	1.2	2.9	0.2	<0.05	0.2	350	2.2
25-Mar-19	130604	317	666	358	7.5	5	30	122	13.0	7.0	0.9	2.6	<0.5	<0.5	<0.1	390	2.7
09-Sep-19	134996	319	665	356	7.5	6	32	113	18.0	8.5	1.6	**15**	<0.5	<0.5	0.1	400	2.3
23-Mar-20	139732	279	618	329	7.5	7	36	106	15.7	6.6	1.1	2.9	<0.5	<0.5	0.2	370	3.0
16-Sep-20	144241	332	746	393	7.2	8	42	137	12.4	7.1	1.4	3.9	<0.5	<0.5	<0.1	500	2.9
15-Mar-21	148529	339	735	391	7.3	11	40	138	11.2	4.8	0.9	2.8	<0.5	<0.5	0.1	270	0.9
28-Sep-21	154118	374	817	431	7.4	10	55	151	13.0	6.5	1.8	3.7	<0.5	<0.5	0.1	420	0.3
23-Mar-22	159183	332	723	429	7.5	9	38	144	16.9	5.9	1.4	2	<0.5	<0.5	0.2	410	7.3
22-Sep-22	164537	258	912	485	7.5	20	224	170	14.8	6.6	1.9	4.3	0.2	<0.05	0.1	580	-1.7
06-Mar-23	168500	291	674	371	7.7	12	72	128	12.5	5.3	1.3	2.5	0.6	<0.05	0.1	500	-0.2
18-Sep-23	174295				7.1										0.9		
11-Mar-24	179081	244	696	395	5.0	31	62	137	12.9	5.0	1.3	4.1	1.6	<0.05	0.1	430	7.9
16-Sep-24	184497	417	1140	511	7.1	63	74	174	18.6	6.4	2.1	**6.5**	1.4	<0.05	0.1	680	4.1
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		331	918	453	6.1	47	68	156	15.8	5.7	1.7	5.30	1.5	<0.05	0.1	555	

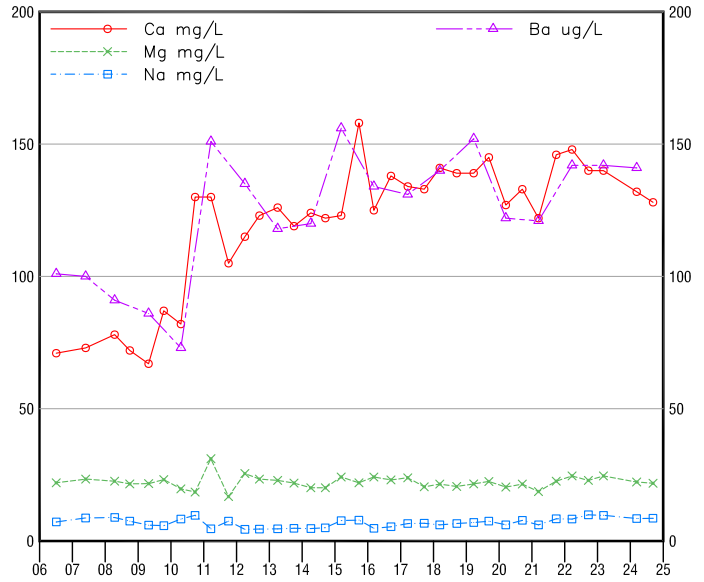
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-94-II

Shallow Overburden

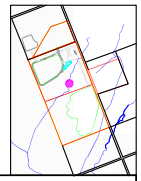
Screen 194.9 - 193.5 masl

CA008825 24 Mar 25	wsp	F124020

BH-94-II

Shallow Overburden

Monitoring Well
Screen 194.9 - 193.5 masl



DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-10	62016	260	608	286	6.9	14	47	82	19.7	8.3	0.94	1.7	0.3	<0.05	0.2	384	-3.6
27-Sep-10	64381	347	778	401	7.3	14	62	130	18.5	9.7	0.88	1.9	<0.05	<0.05	0.2	470	-0.7
22-Mar-11	67103	346	741	453	7.6	12	51	130	31.1	4.6	1.23	1.2	0.1	<0.05	<0.1	468	5.6
04-Oct-11	70631	280	665	331	7.7	5	57	105	16.8	7.5	1.13	3.2	<0.05	<0.05	<0.1	400	0.4
03-Apr-12	73827	372	700	392	7.4	7	44	115	25.5	4.4	1.06	1.4	0.2	<0.05	<0.1	440	-3.1
12-Sep-12	77196	371	760	403	7.4	8	37	123	23.4	4.5	1.56	2.8	0.5	<0.05	0.2	450	-0.3
03-Apr-13	81356	323	711	409	7.6	6	47	126	22.9	4.6	1.07	1.5	0.3	<0.05	<0.1	420	4.8
01-Oct-13	85461	300	727	387	7.6	9	49	119	21.9	4.8	1.4	2	0.6	<0.05	<0.1	400	4.5
07-Apr-14	88905	280	743	392	7.7	8	63	124	20.1	4.7	0.9	2.3	0.4	<0.05	<0.1	430	6.0
15-Sep-14	92424	323	735	387	7.4	9	56	122	20.1	5.0	1.2	1.7	0.2	0.08	0.1	350	0.7
11-Mar-15	95598	369	806	407	7.6	9	65	123	24.2	7.7	1.1	1.1	0.2	<0.05	<0.1	470	-2.9
24-Sep-15	99803	374	834	485	7.1	6	75	158	22.0	7.9	1.2	1.6	<0.05	<0.05	0.1	500	4.6
09-Mar-16	102830	331	809	412	7.4	9	114	125	24.2	4.8	0.8	1.5	<0.05	<0.05	0.1	490	-4.3
15-Sep-16	107398	312	844	440	7.7	35	98	138	23.1	5.4	1.5	1	0.4	<0.05	0.2	530	-1.2
20-Mar-17	111713	300	792	433	7.5	52	87	134	23.9	6.6	1.1	<1	0.4	<0.05	0.2	520	-1.7
20-Sep-17	116510	313	812	417	7.5	28	103	133	20.5	6.7	1.4	1.6	0.4	<0.5	0.1	540	-3.0
12-Mar-18	120578	289	798	441	7.5	18	105	141	21.5	6.1	1	1.2	<0.5	<0.5	0.1	500	3.7
17-Sep-18	126168	299	828	432	7.5	27	94	139	20.6	6.6	1.3	1.8	0.6	<0.05	0.2	500	1.4
25-Mar-19	130606	297	808	436	7.5	23	107	139	21.6	7.0	1.1	2.2	<0.5	<0.5	0.1	460	1.4
09-Sep-19	134999	325	831	455	7.4	22	87	145	22.5	7.5	1.4	2.3	<0.5	<0.5	0.2	550	3.0
16-Mar-20	139464	304	794	401	7.5	19	97	127	20.4	6.1	1	2.5	<0.5	<0.5	0.1	510	-1.8
16-Sep-20	144243	297	750	421	7.4	23	82	133	21.5	7.8	1.2	2	0.5	<0.5	0.1	520	2.8
15-Mar-21	148530	293	749	382	7.5	19	81	122	18.7	6.1	1	1.9	<0.5	<0.5	<0.1	230	-0.9
28-Sep-21	154120	337	916	458	7.4	41	99	146	22.6	8.4	1.3	2.2	<0.5	<0.5	0.2	500	-1.9
23-Mar-22	159181	334	786	471	7.5	19	77	148	24.6	8.3	1.2	1.4	<0.5	<0.5	0.2	490	5.4
21-Sep-22	164489	351	900	444	7.5	21	73	140	22.9	9.9	1.4	2	0.8	<0.05	0.2	520	0.9
08-Mar-23	168583	327	757	451	7.6	23	75	140	24.6	9.7	1.2	1.5	0.5	<0.05	0.1	490	3.8
18-Sep-23	174300				7.3										0.1		
11-Mar-24	179079	334	760	421	7.5	25	86	132	22.3	8.5	1.1	2.1	0.7	<0.05	0.1	490	0.8
09-Sep-24	184307	325	677	409	7.0	25	81	128	21.8	8.6	1.4	1.5	0.3	<0.05	0.1	500	0.4
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		330	719	415	7.3	25	84	130	22.1	8.6	1.3	1.8	0.5	<0.05	0.1	495	

all Concentrations mg/L unless otherwise indicated
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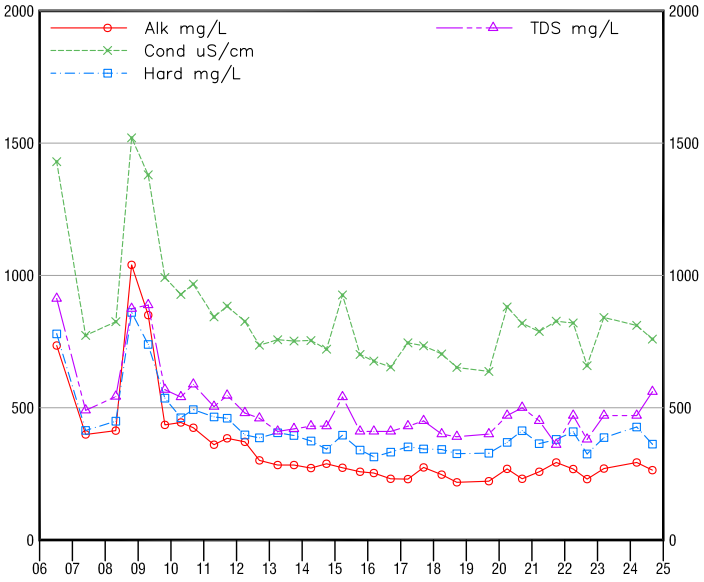

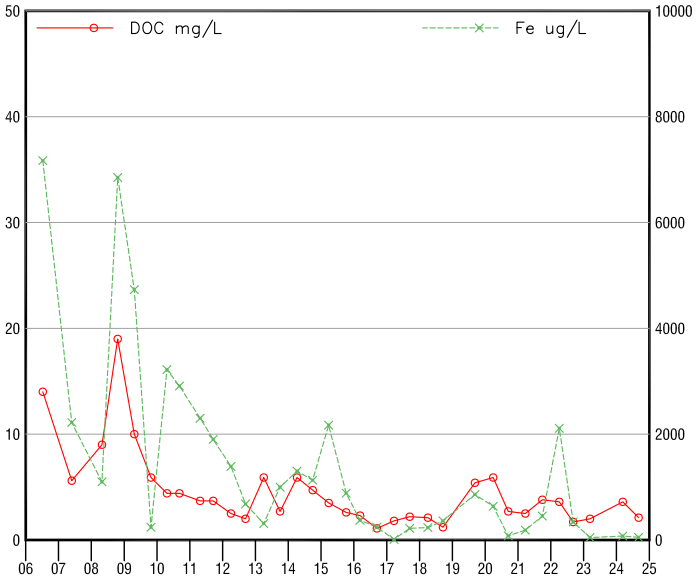

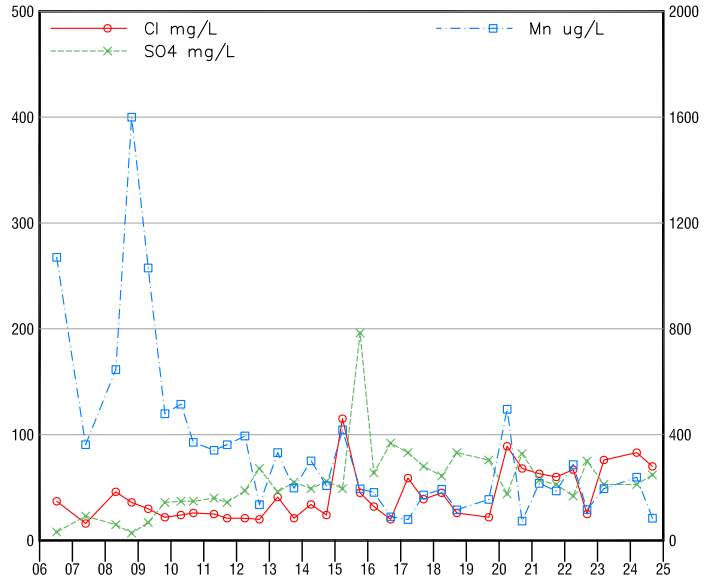

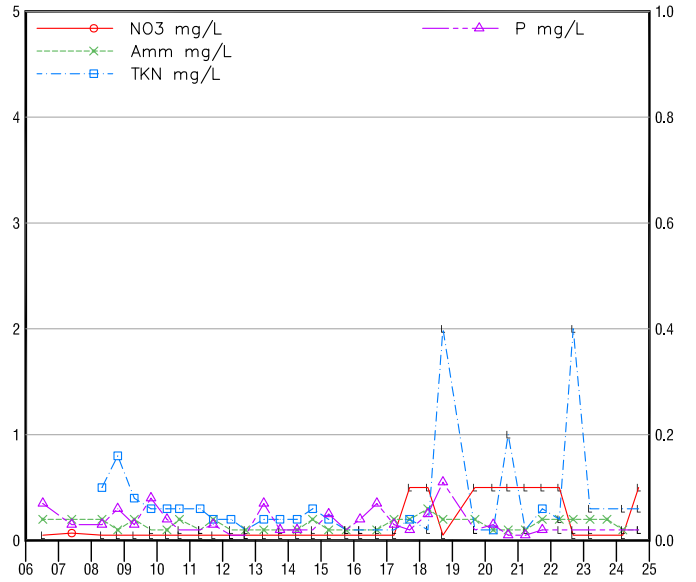

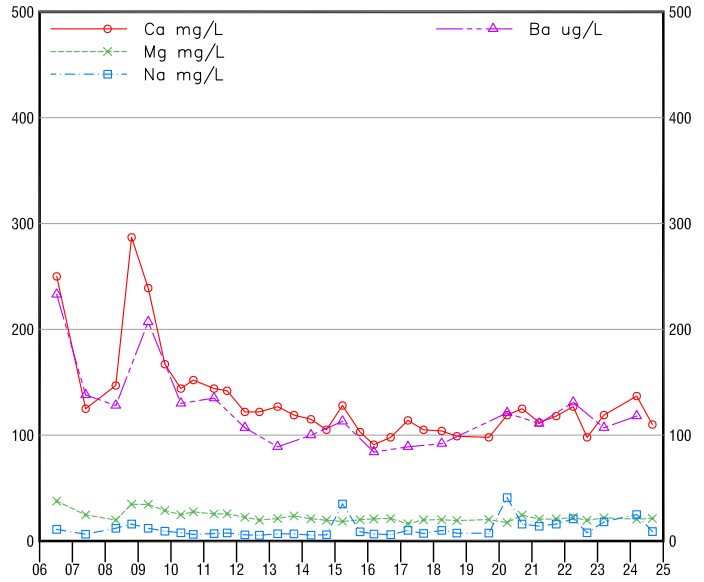

L	Concentration Reported Less Than
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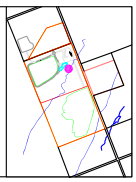
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-95-II

Shallow Overburden

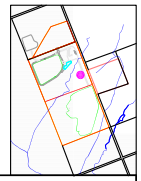
Screen 194.3 - 192.7 masl

CA008825 24 Mar 25	wsp	F124021

BH-95-II

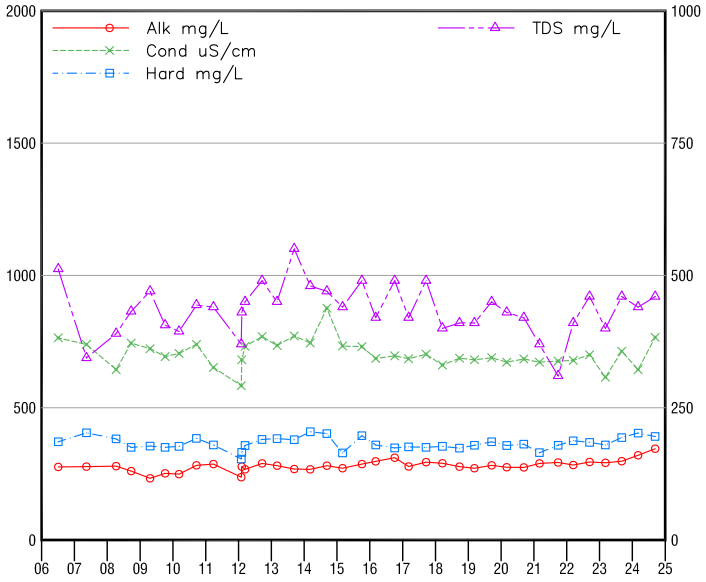
Shallow Overburden

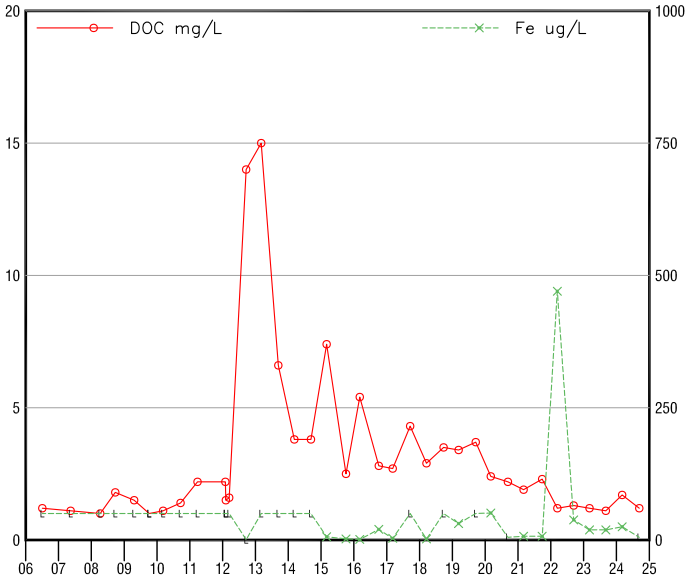
Monitoring Well
Screen 194.3 - 192.7 masl

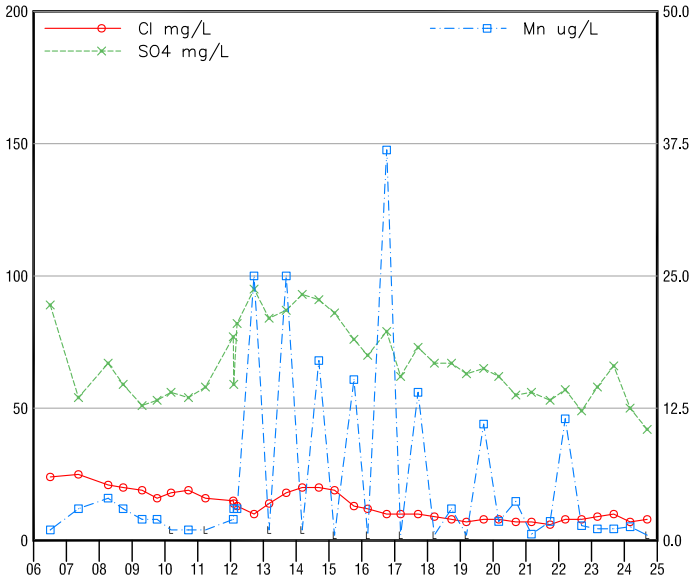


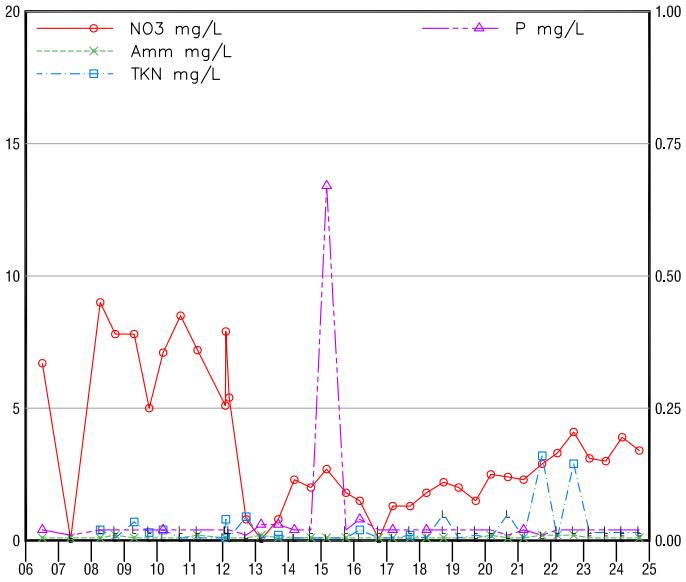
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
26-Oct-09	58833	435	992	536	7.5	22	36	167	28.8	9.3	2.15	**5.9**	<0.05	<0.05	<0.1	568	5.1
22-Apr-10	62018	444	928	462	7.0	24	37	144	24.8	7.8	1.62	4.4	<0.05	<0.05	0.1	540	-2.9
07-Sep-10	64032	424	967	493	7.5	26	37	152	27.6	6.3	2.43	4.4	<0.05	<0.05	0.2	588	1.7
26-Apr-11	67653	360	843	465	7.6	25	40	144	25.5	7.0	1.85	3.7	<0.05	<0.05	<0.1	504	5.4
19-Sep-11	70360	384	884	460	7.6	21	36	142	25.7	7.6	2.22	3.7	<0.05	<0.05	0.2	546	3.4
03-Apr-12	73829	371	826	397	7.2	21	47	122	22.5	5.8	1.49	2.5	<0.05	<0.05	<0.1	480	-4.0
12-Sep-12	77198	301	736	386	7.4	20	68	122	19.7	5.4	2.07	2	<0.05	<0.05	0.1	460	0.3
03-Apr-13	81358	283	757	405	7.6	41	46	127	21.3	6.8	1.56	**5.9**	<0.05	<0.05	0.1	410	4.1
01-Oct-13	85463	283	752	395	7.6	21	55	119	23.7	6.7	2.1	2.7	<0.05	<0.05	<0.1	420	5.5
09-Apr-14	88952	272	754	374	7.3	34	49	115	21.0	5.5	1.5	**5.9**	<0.05	<0.05	0.1	430	2.6
29-Sep-14	92711	288	721	343	7.4	24	56	105	19.7	5.9	1.8	4.7	<0.05	<0.05	0.2	430	-2.5
26-Mar-15	95963	273	926	396	7.6	115	49	128	18.5	35	1.3	3.5	<0.05	<0.05	0.1	540	-0.9
07-Oct-15	100060	258	701	340	7.4	45	196	103	20.1	8.7	1.8	2.6	<0.05	<0.05	0.1	410	-18.3
09-Mar-16	102832	253	676	314	7.7	32	64	91	20.9	6.6	1.3	2.3	<0.05	<0.05	<0.1	410	-4.8
12-Sep-16	107319	231	654	332	7.5	20	92	98	21.2	6.0	2.1	1.1	<0.05	<0.05	0.1	410	-0.9
23-Mar-17	111767	230	745	352	7.5	59	83	114	16.3	10	1.4	1.8	<0.05	<0.05	0.2	430	-3.1
13-Sep-17	116306	274	734	344	7.7	39	70	105	19.9	7.1	1.6	2.2	<0.5	<0.05	0.2	450	-5.2
03-Apr-18	121263	247	703	342	7.5	45	61	104	20.1	10	1.5	2.1	<0.5	<0.5	0.3	400	-0.8
18-Sep-18	126212	218	652	326	7.7	26	83	99	19.3	7.4	1.9	1.2	<0.05	<0.05	0.2	390	0.7
09-Sep-19	135003	222	637	328	7.6	22	76	98	20.2	7.4	2	**5.4**	<0.5	<0.5	0.2	400	2.6
31-Mar-20	139934	269	881	369	7.5	89	44	119	17.4	41	2.4	**5.9**	<0.5	<0.5	0.1	470	2.4
13-Sep-20	144104	231	819	413	7.5	68	82	125	24.5	16	2.1	2.7	<0.5	<0.5	0.1	500	4.4
23-Mar-21	148725	258	788	364	7.6	63	57	112	20.6	14	1.4	2.5	<0.5	<0.5	0.1	450	-1.2
28-Sep-21	154122	293	827	380	7.5	60	53	118	20.8	16	2	3.8	<0.5	<0.5	0.2	360	-1.5
05-Apr-22	159589	268	820	409	7.5	67	42	127	22.3	21	1.8	3.6	<0.5	<0.5	0.2	470	6.5
06-Sep-22	164058	230	659	325	7.7	25	75	98	19.6	7.8	2	1.7	<0.05	<0.05	0.2	380	0.4
13-Mar-23	168681	270	841	387	7.3	76	53	119	21.9	18	1.5	2	<0.05	<0.05	0.2	470	-0.2
18-Sep-23	174302				7.5										0.2		
11-Mar-24	179076	293	811	427	7.4	83	53	137	20.7	25	1.4	3.6	<0.05	<0.05	0.1	470	3.1
03-Sep-24	184149	264	759	362	7.2	70	62	110	21.3	8.9	2.1	2.1	<0.5	<0.5	<0.1	560	4.1
TOTAL SAMPLES		34	34	34	33	34	34	34	34	34	34	34	34	34	35	34	
AVERAGE 2024		279	785	395	7.3	77	58	124	21.0	17	1.8	2.9	<0.5	<0.5	<0.1	515	

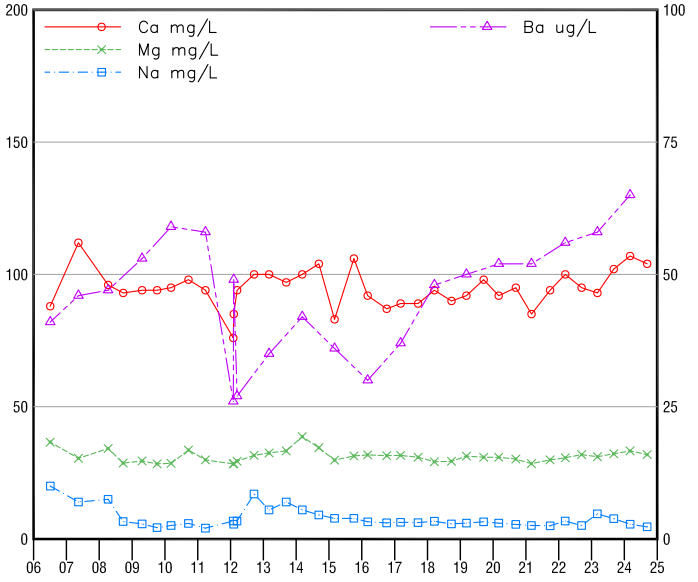
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



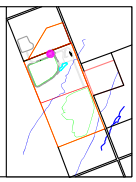








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-104-II

Overburden Formation

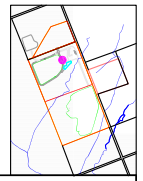
Screen 198.2 - 197.1 masl

CA008825 24 Mar 25	wsp	F124022

BH-104-II

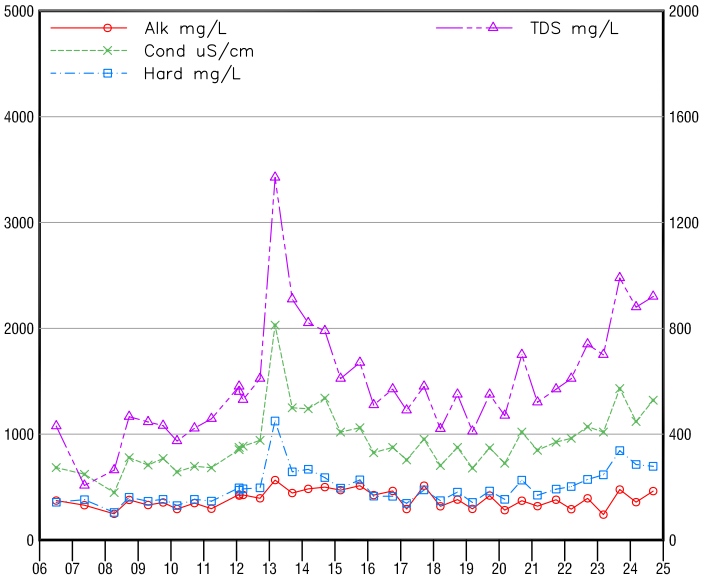
Overburden Formation

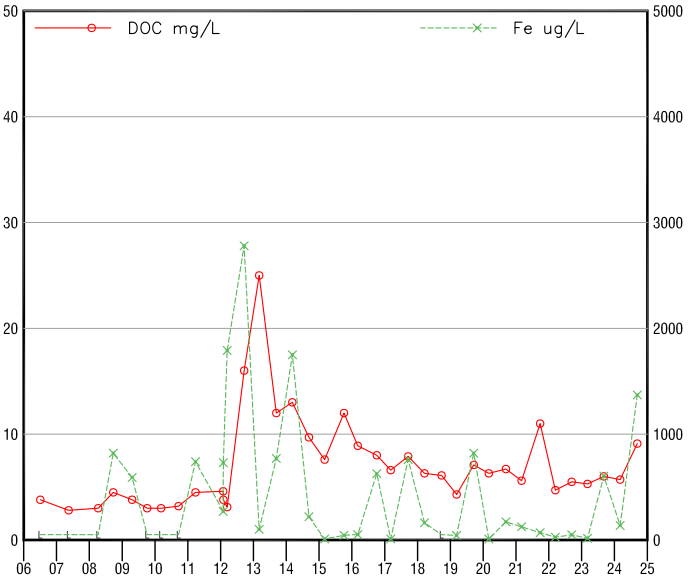
Stand Pipe Piezometer
Screen 198.2 - 197.1 masl

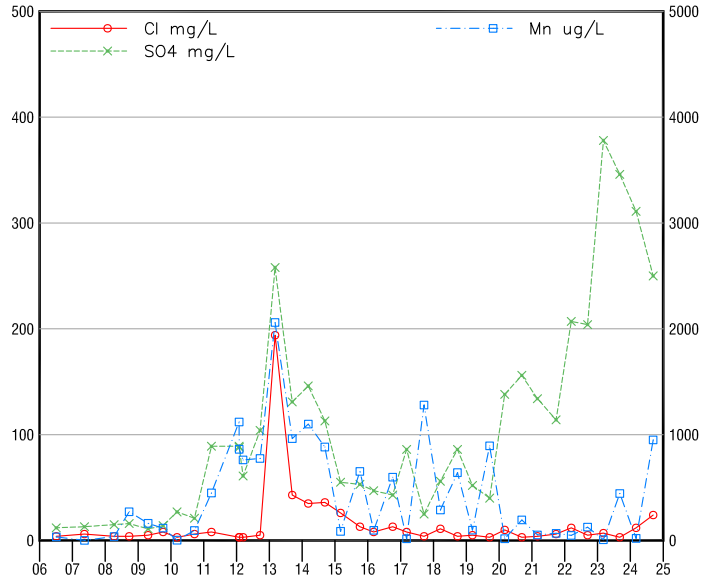


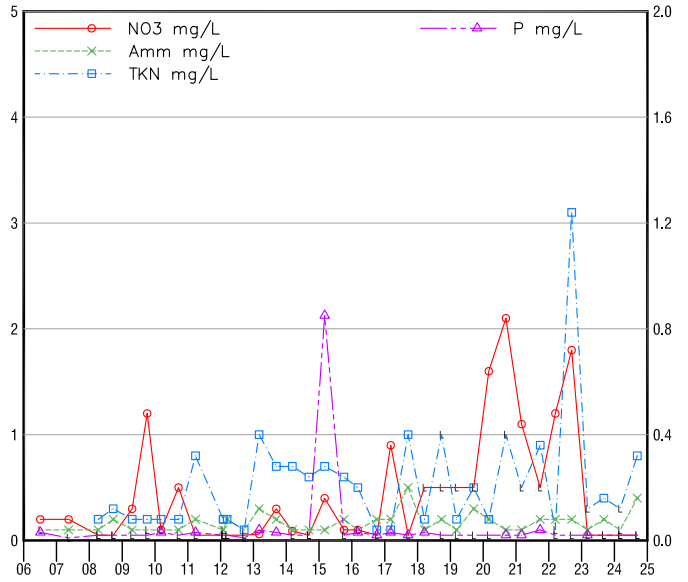
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Sep-10	64259	282	739	384	7.5	19	54	98	33.6	5.9	2.01	1.4	8.5	<0.05	<0.1	444	0.4
28-Mar-11	67210	287	652	359	7.6	16	58	94	29.9	4.1	1.62	2.2	7.2	<0.05	0.2	440	-3.2
01-Feb-12	72754	237	583	306	7.7	15	77	76	28.4	6.8	2.59	2.2	5.1	<0.05	0.1	370	-4.6
06-Feb-12	72821	277	681	331	7.5	14	59	85	28.5	5.6	2.03	1.5	7.9	<0.05	0.1	430	-5.6
14-Mar-12	73437	267	732	357	7.8	13	82	94	29.4	6.8	2.71	1.6	5.4	<0.05	<0.1	450	-2.0
19-Sep-12	77342	289	769	380	7.6	10	95	100	31.6	17	3.6	**14**	0.8	0.07	<0.1	490	2.0
05-Mar-13	80683	281	735	383	7.9	14	84	100	32.5	11	3.14	**15**	<0.05	<0.05	0.2	450	3.0
12-Sep-13	85142	268	771	379	7.6	18	87	97	33.3	14	3.3	**6.6**	0.8	0.51	0.1	550	3.3
10-Mar-14	88320	267	745	409	7.7	20	93	100	38.7	11	3.4	3.8	2.3	<0.05	<0.1	480	4.4
10-Sep-14	92326	281	876	402	7.5	20	91	104	34.5	9.1	3.1	3.8	2.0	0.31	0.1	470	1.7
04-Mar-15	95479	271	733	329	7.7	19	86	83	29.8	7.8	2.7	**7.4**	2.7	<0.05	0.1	440	-6.3
05-Oct-15	100005	287	731	394	7.7	13	76	106	31.4	7.8	2.7	2.5	1.8	0.66	0.1	490	2.9
07-Mar-16	102767	297	686	359	7.9	12	70	92	31.8	6.5	2.6	**5.4**	1.5	<0.05	<0.1	420	-2.0
04-Oct-16	107870	311	696	348	7.6	10	79	87	31.5	6.1	2.9	2.8	<0.05	0.19	0.1	490	-5.6
08-Mar-17	111346	278	685	352	8.1	10	62	89	31.6	6.3	3	2.7	1.3	<0.05	0.1	420	1.1
18-Sep-17	116454	294	702	350	7.7	10	73	89	30.9	6.2	2.9	4.3	1.3	0.23	0.1	490	-2.8
19-Mar-18	120799	290	661	354	7.7	9	67	94	29.2	6.7	2.9	2.9	1.8	<0.5	0.1	400	-0.7
25-Sep-18	126478	277	687	347	7.6	8	67	90	29.4	5.7	2.6	3.5	2.2	<0.5	0.1	410	-0.5
11-Mar-19	130208	271	681	358	7.8	7	63	92	31.3	6.0	3	3.4	2.0	<0.5	<0.1	410	3.0
18-Sep-19	135229	282	689	371	7.6	8	65	98	30.9	6.5	2.9	3.7	1.5	<0.5	<0.1	450	3.1
04-Mar-20	139238	275	672	357	7.8	8	62	92	30.9	6.0	2.9	2.4	2.5	<0.5	0.2	430	2.0
10-Sep-20	144081	274	684	362	7.6	7	55	95	30.2	5.5	2.9	2.2	2.4	<0.5	0.1	420	3.9
03-Mar-21	148211	289	672	330	7.8	7	56	85	28.5	5.1	2.7	1.9	2.3	<0.5	0.1	370	-2.9
27-Sep-21	154090	293	676	358	7.6	6	53	94	29.9	5.0	2.8	2.3	2.9	<0.5	0.2	310	0.8
14-Mar-22	158780	283	679	375	7.6	8	57	100	30.7	6.8	3.1	1.2	3.3	<0.5	0.2	410	4.0
12-Sep-22	164191	295	700	369	7.6	8	49	95	31.9	5.1	2.5	1.3	4.1	<0.05	0.2	460	1.6
07-Mar-23	168533	292	615	359	8.0	9	58	93	31.1	9.5	2.9	1.2	3.1	<0.05	<0.1	400	1.1
05-Sep-23	173900	298	713	387	7.6	10	66	102	32.2	7.7	3	1.1	3.0	<0.05	<0.1	460	2.1
05-Mar-24	178930	320	644	404	7.3	7	50	107	33.3	5.6	2.4	1.7	3.9	<0.05	<0.1	440	4.5
11-Sep-24	184378	345	766	391	7.2	8	42	104	31.9	4.6	2.2	1.2	3.4	<0.05	0.1	460	0.6
TOTAL SAMPLES		37	37	37	34	37	37	37	37	37	37	37	37	37	37	37	
AVERAGE 2024		333	705	398	7.3	8	46	106	32.6	5.1	2.3	1.5	3.7	<0.05	<0.1	450	

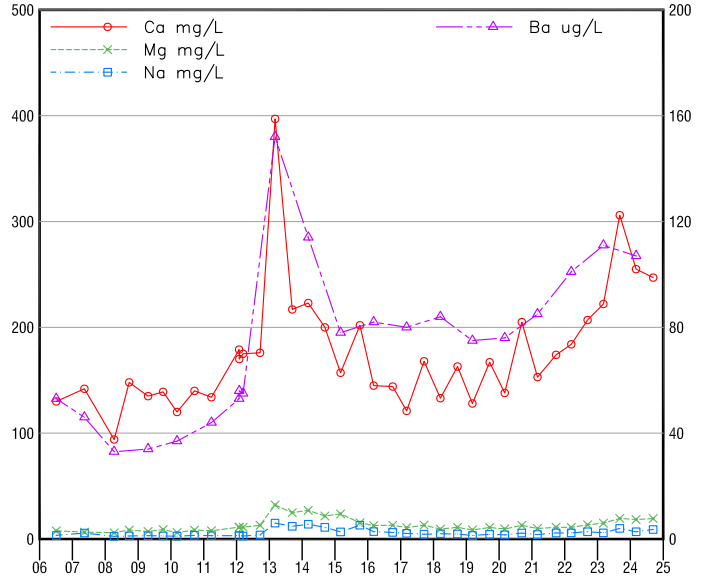
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



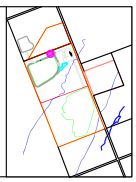








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-104-III

Shallow Overburden

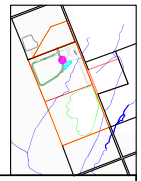
Screen 203.2 - 201.0 masl

CA008825 24 Mar 25	wsp	F124023

BH-104-III

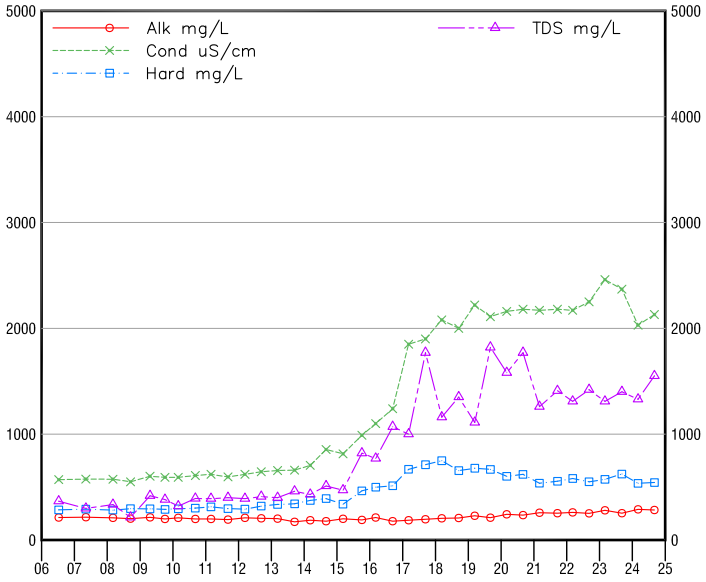
Shallow Overburden

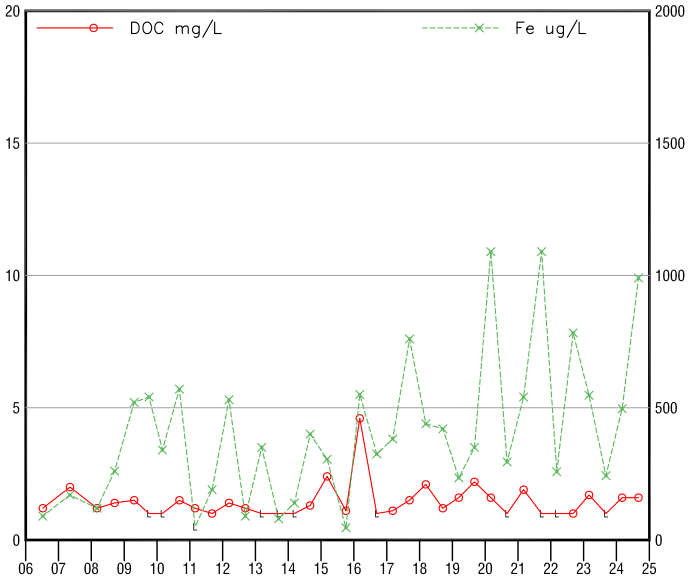
Monitoring Well
Screen 203.2 - 201.0 masl

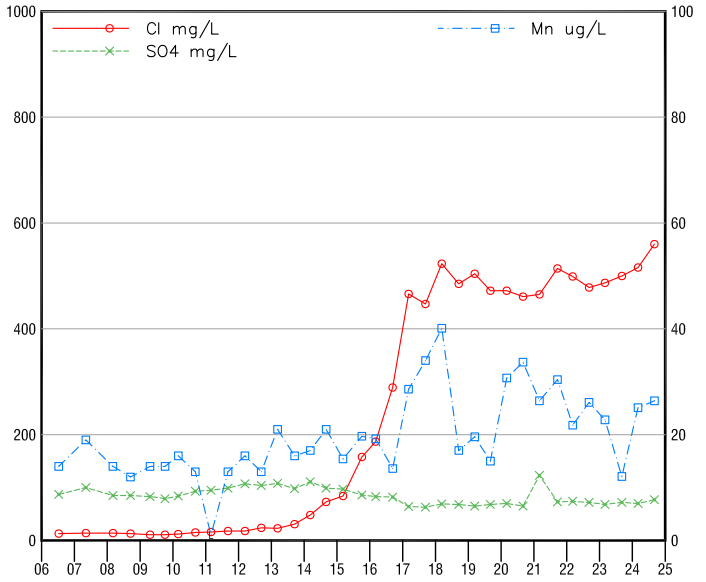


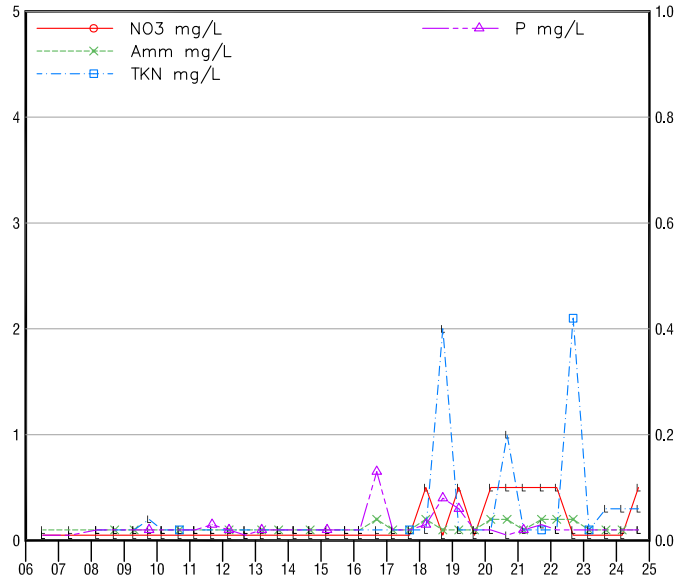
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Sep-10	64260	349	696	384	7.3	6	21	140	8.4	3.5	0.66	3.2	0.5	<0.05	0.1	422	1.5
28-Mar-11	67211	295	683	367	7.4	8	89	134	7.8	3.2	0.54	4.5	<0.05	<0.05	0.2	458	-2.8
30-Jan-12	72709	430	853	493	7.1	3	89	179	11.2	3.1	0.73	4.6	<0.05	<0.05	0.1	580	-2.4
31-Jan-12	72734	419	874	470	7.2	3	88	170	11.1	3.2	0.7	3.8	<0.05	<0.05	<0.1	560	-3.5
14-Mar-12	73438	426	886	483	7.3	3	61	175	11.1	2.8	0.67	3.1	<0.05	<0.05	0.2	530	-0.1
19-Sep-12	77343	393	941	493	7.2	5	104	176	13.0	3.8	0.94	**16**	<0.05	<0.05	<0.1	610	0.0
05-Mar-13	80684	566	2030	1124	7.3	194	258	397	32.2	15	3.56	**25**	0.06	<0.05	0.3	1370	2.3
12-Sep-13	85143	443	1250	644	7.1	43	131	217	24.9	12	2.8	**12**	0.3	<0.05	0.2	910	2.8
10-Mar-14	88321	483	1240	668	7.0	35	146	223	27.0	14	5	**13**	0.09	<0.05	0.1	820	1.7
10-Sep-14	92327	499	1340	589	7.0	36	113	200	21.7	11	4.1	**9.7**	<0.05	<0.05	0.1	790	-3.8
04-Mar-15	95480	471	1020	490	7.2	26	55	157	23.7	6.7	2.43	**7.6**	0.4	<0.05	0.1	610	-5.5
05-Oct-15	100006	513	1060	568	7.2	13	53	202	15.4	13	17.8	**12**	0.1	<0.05	0.2	670	2.7
07-Mar-16	102768	424	825	414	7.4	8	47	145	12.7	7.0	17.0	**8.9**	0.1	<0.05	<0.1	510	-3.5
04-Oct-16	107871	463	875	413	7.2	13	43	144	13.0	6.2	13.6	**8**	<0.05	<0.05	0.2	570	-8.2
08-Mar-17	111347	292	756	346	7.8	8	86	121	10.7	5.3	14.7	**6.6**	0.9	<0.05	0.2	490	-2.4
18-Sep-17	116455	513	952	473	7.3	4	25	168	13.1	4.5	15.3	**7.9**	<0.05	<0.05	0.5	580	-3.6
19-Mar-18	120800	318	704	371	7.2	11	56	133	9.4	5.0	9.6	**6.3**	<0.5	<0.5	0.1	420	0.2
25-Sep-18	126479	382	874	452	7.2	4	86	163	11.0	4.7	9.8	**6.1**	<0.5	<0.5	0.2	550	-0.2
11-Mar-19	130209	294	680	355	7.4	5	52	128	8.6	3.3	6.2	4.3	<0.5	<0.5	0.1	410	2.2
18-Sep-19	135230	419	870	462	7.3	3	40	167	10.9	4.4	11.7	**7.1**	<0.5	<0.5	0.3	550	2.6
04-Mar-20	139239	281	725	384	7.3	10	138	138	9.5	3.9	8	**6.3**	1.6	<0.5	0.2	470	-4.8
10-Sep-20	144082	371	1020	565	7.1	3	156	205	12.9	5.6	11.8	**6.7**	2.1	<0.5	0.1	700	4.2
03-Mar-21	148212	319	848	423	7.3	4	134	153	9.9	4.2	6.3	**5.6**	1.1	<0.5	0.1	520	-3.1
27-Sep-21	154091	380	925	480	7.2	6	114	174	11.1	5.7	11.1	**11**	<0.5	<0.5	0.2	570	0.0
14-Mar-22	158781	291	960	505	7.1	12	207	184	11.0	5.8	6.3	4.7	1.2	<0.5	0.2	610	-0.2
12-Sep-22	164192	393	1070	572	7.2	5	204	207	13.4	6.9	8	**5.5**	1.8	<0.5	0.2	740	-1.7
07-Mar-23	168534	240	1020	616	7.4	7	378	222	15.0	5.8	6.9	**5.3**	<0.05	<0.05	0.1	700	-0.4
05-Sep-23	173901	477	1430	844	7.0	3	346	306	19.4	10	12.0	**6**	<0.05	<0.05	0.2	990	2.4
05-Mar-24	178931	357	1120	713	6.9	12	311	255	18.4	6.8	5.8	**5.7**	<0.05	<0.05	<0.1	880	3.6
11-Sep-24	184379	461	1320	696	6.9	24	250	247	19.3	9.0	8.3	**9.1**	<0.05	<0.05	0.4	920	0.7
TOTAL SAMPLES		37	37	37	34	37	37	37	37	37	37	37	37	37	37	37	
AVERAGE 2024		409	1220	705	6.9	18	281	251	18.9	7.9	7.1	7.40	<0.05	<0.05	0.2	900	

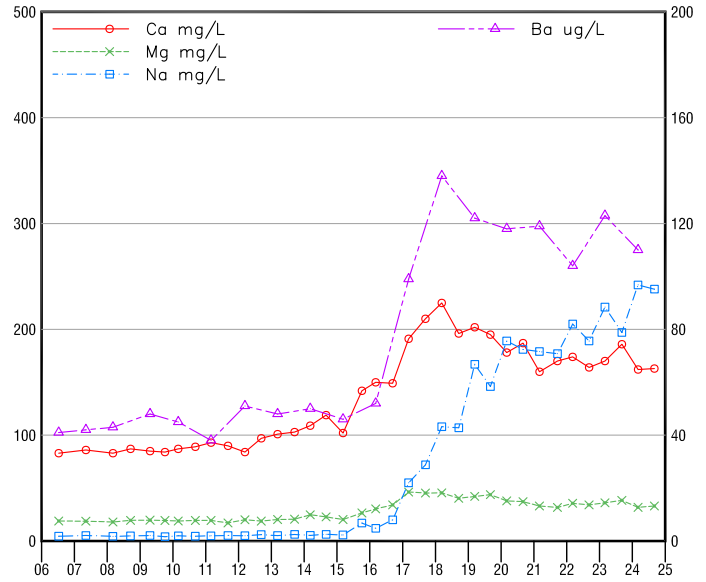
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



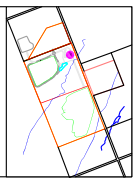








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-106-II

Overburden Formation

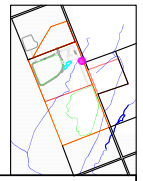
Screen 192.4 - 191.3 masl

CA008825 24 Mar 25	wsp	F124024

BH-106-II

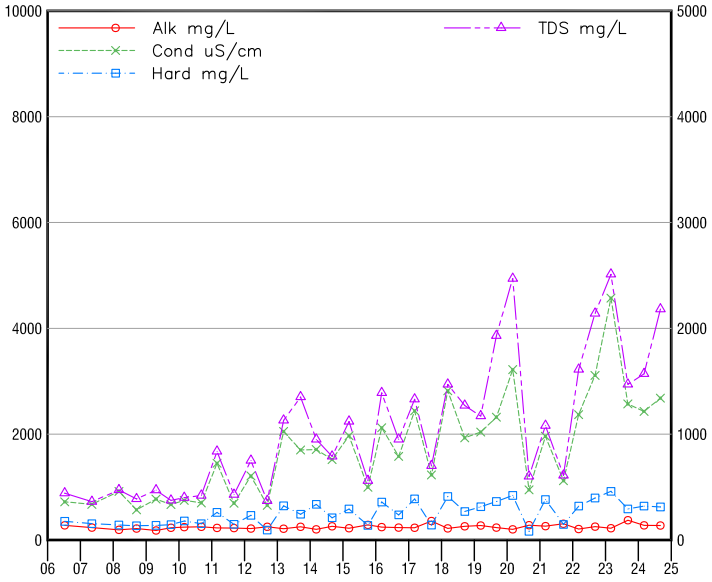
Overburden Formation

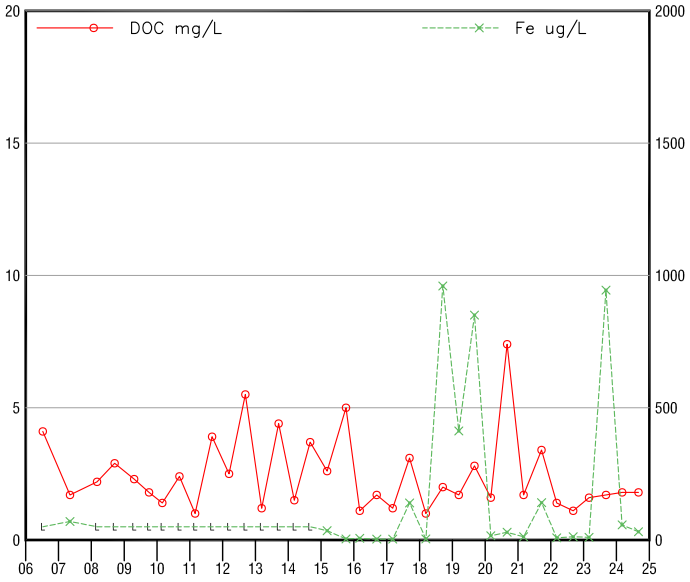
Stand Pipe Piezometer
Screen 192.4 - 191.3 masl

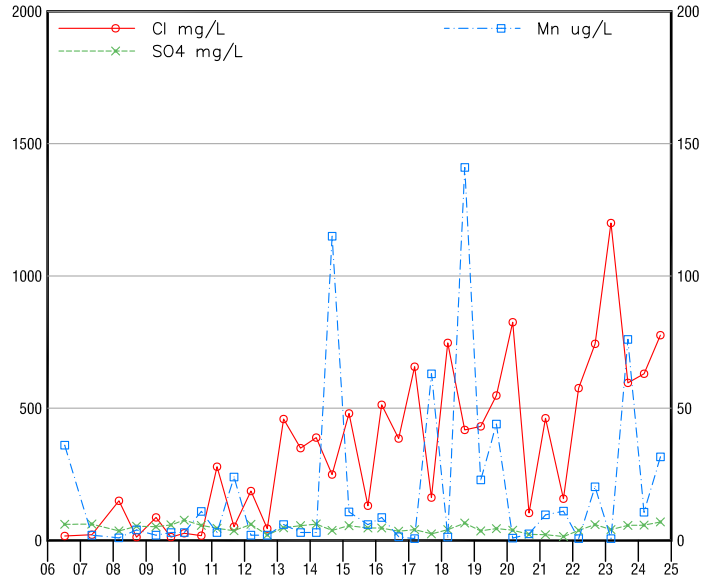


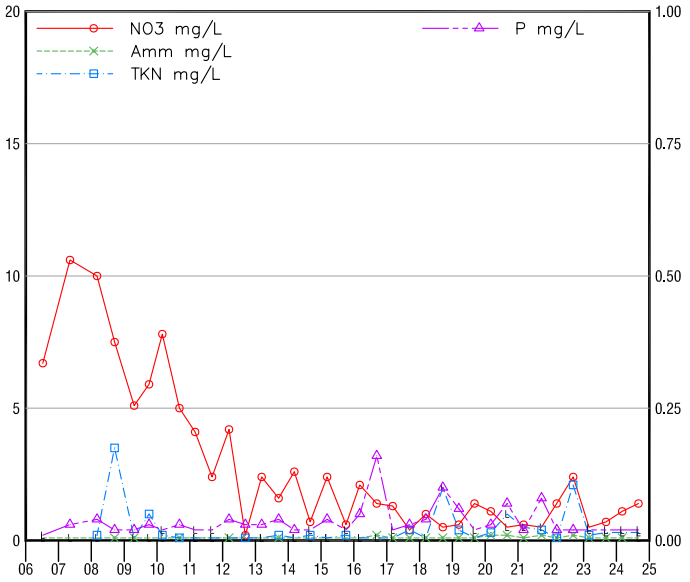
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
02-Mar-10	60953	209	592	295	7.8	12	84	87	18.9	4.9	1.67	<1	<0.05	<0.05	<0.1	320	-0.8
07-Sep-10	64028	198	609	301	7.7	15	93	89	19.4	4.5	1.58	1.5	<0.05	<0.05	0.1	392	-0.4
01-Mar-11	66689	198	620	313	7.6	16	95	93	19.4	4.9	1.79	1.2	<0.05	<0.05	<0.1	390	0.9
06-Sep-11	70157	192	596	296	7.7	18	99	90	17.1	5.2	2.05	1	<0.05	<0.05	<0.1	400	-1.5
12-Mar-12	73371	209	620	291	7.7	18	107	84	20.1	5.0	1.84	1.4	<0.05	<0.05	0.1	390	-6.1
10-Sep-12	77143	204	645	320	7.6	24	104	97	18.8	6.0	2.28	1.2	<0.05	<0.05	<0.1	410	-1.5
11-Mar-13	80780	201	656	336	7.7	23	108	101	20.3	5.1	2.06	<1	<0.05	<0.05	0.1	400	0.6
16-Sep-13	85201	171	660	342	7.7	31	98	103	20.6	6.2	2.2	<1	<0.05	<0.05	0.1	460	6.2
10-Mar-14	88323	187	705	374	7.7	48	111	109	24.8	5.3	2	<1	<0.05	<0.05	<0.1	430	2.4
02-Sep-14	92072	178	855	391	7.7	73	99	119	22.8	6.3	2.2	1.3	<0.05	<0.05	0.1	510	3.0
09-Mar-15	95549	200	814	338	7.5	84	97	102	20.3	5.7	1.83	2.4	<0.05	<0.05	<0.1	470	-8.6
05-Oct-15	100002	190	989	464	7.7	158	86	142	26.5	17	2.4	1.1	<0.05	<0.05	<0.1	820	0.0
07-Mar-16	102770	212	1100	499	7.8	187	83	150	30.3	12	2.4	4.6	<0.05	<0.05	<0.1	770	-3.1
12-Sep-16	107307	178	1240	512	7.6	**289**	82	149	34.1	20	2.8	<1	<0.05	<0.05	0.2	1070	-9.0
08-Mar-17	111339	187	1850	668	7.7	**466**	64	191	46.3	55	3.4	1.1	<0.05	<0.05	0.1	1000	-7.0
12-Sep-17	116271	196	1900	711	7.6	**447**	63	210	45.3	72	3.4	1.5	<0.05	<0.05	0.1	1770	-1.1
12-Mar-18	120569	204	2080	749	7.4	**523**	69	225	45.5	108	3.4	2.1	<0.5	<0.5	0.2	1160	-1.2
17-Sep-18	126162	207	2000	655	7.5	**485**	68	196	40.3	107	3.4	1.2	<0.05	<0.05	0.1	1350	-3.7
14-Mar-19	130276	229	2220	678	7.4	**504**	65	202	42.1	167	3.6	1.6	<0.5	<0.5	0.1	1110	1.9
04-Sep-19	134869	211	2110	667	7.4	**472**	68	195	43.8	146	3.4	2.2	<0.05	<0.05	0.1	1820	2.2
04-Mar-20	139242	242	2160	601	7.5	**472**	70	178	37.9	189	3.5	1.6	<0.5	<0.5	0.2	1580	1.9
01-Sep-20	143836	235	2180	620	7.4	**461**	65	187	37.2	181	4	<1	<0.5	<0.5	0.2	1770	3.4
03-Mar-21	148208	257	2170	536	7.4	**465**	123	160	33.1	179	3.3	1.9	<0.5	<0.5	0.1	1260	-5.6
20-Sep-21	153830	253	2180	555	7.5	**514**	73	170	31.7	177	3.2	<1	<0.5	<0.5	0.2	1410	-5.4
08-Mar-22	158623	261	2170	581	7.4	**499**	74	174	35.6	**205**	3.6	<1	<0.5	<0.5	0.2	1310	-0.4
06-Sep-22	164049	251	2250	550	7.4	**478**	72	164	34.1	189	3.5	1	<0.05	<0.05	0.2	1420	-1.7
02-Mar-23	168426	280	2460	573	7.5	**487**	68	170	36.1	**221**	3.7	1.7	<0.05	<0.05	0.1	1310	1.0
06-Sep-23	173958	253	2370	623	7.5	**500**	72	186	38.4	197	3.5	<1	<0.05	<0.05	0.1	1400	1.1
04-Mar-24	178891	290	2030	535	7.5	**516**	70	162	31.8	**242**	3.4	1.6	<0.05	<0.05	0.1	1330	0.6
03-Sep-24	184143	283	2130	543	7.4	**560**	77	163	33.1	**238**	3.7	1.6	<0.5	<0.5	<0.1	1550	3.4
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		287	2080	539	7.5	538	74	163	32.5	240	3.6	1.6	<0.5	<0.5	<0.1	1440	

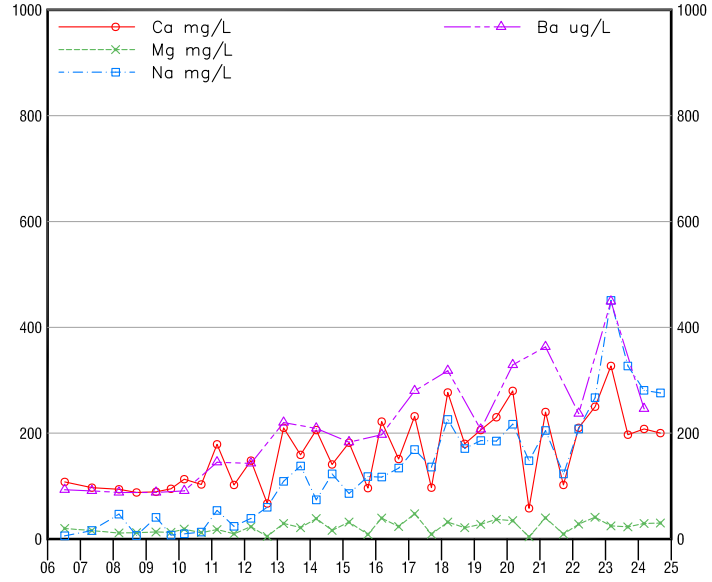
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



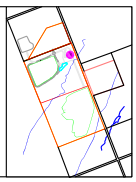








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-106-III

Shallow Overburden

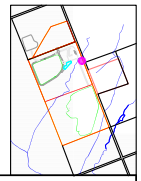
Screen 198.1 - 195.3 masl

CA008825	wsp	F124025
24 Mar 25		

BH-106-III

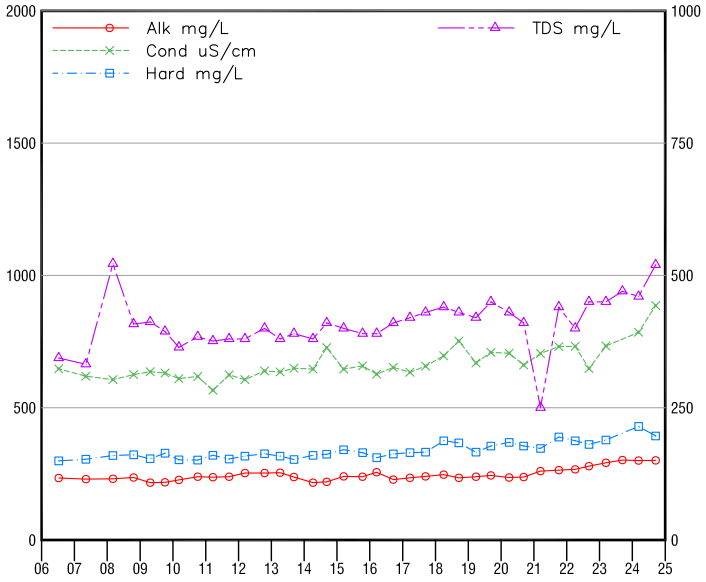
Shallow Overburden

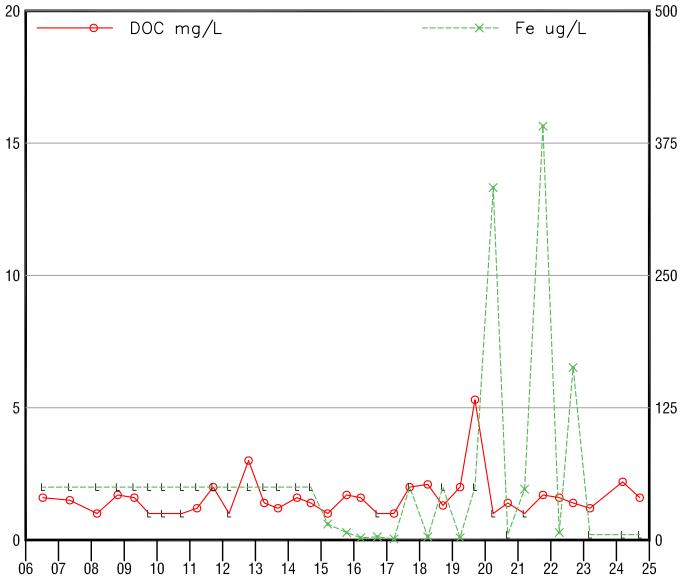
Monitoring Well
Screen 198.1 - 195.3 masl

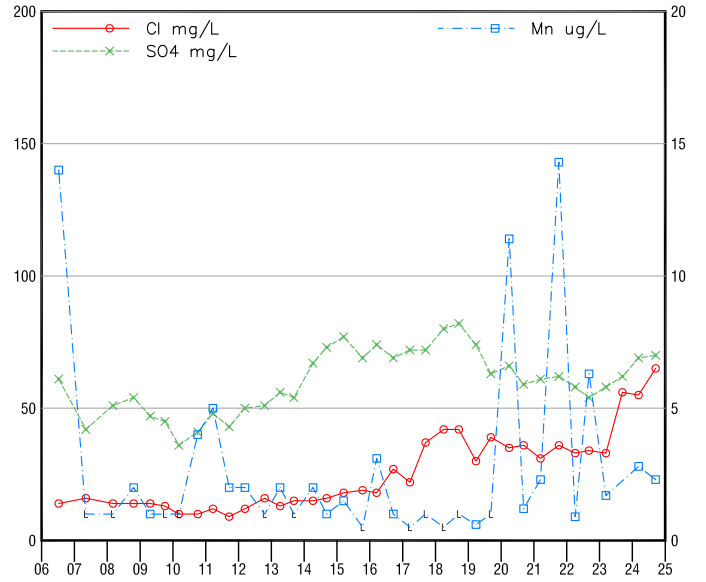


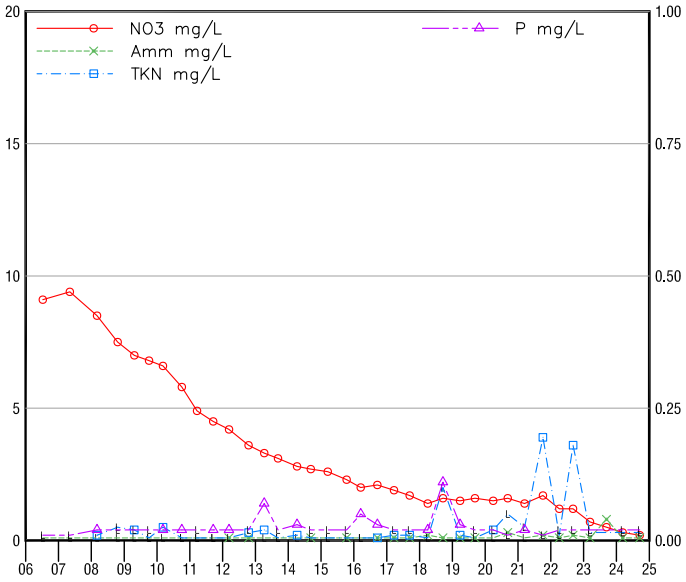
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
02-Mar-10	60954	244	748	359	7.7	27	77	113	18.6	9.7	1.63	1.4	7.8	<0.05	<0.1	400	-1.1
07-Sep-10	64029	249	701	307	7.6	18	57	103	12.0	13	1.67	2.4	5.0	<0.05	0.1	420	-2.3
01-Mar-11	66690	228	1450	521	7.4	**279**	46	179	17.9	54	1.56	1	4.1	<0.05	<0.1	836	-3.4
06-Sep-11	70158	226	693	295	7.6	52	37	102	9.8	24	1.64	3.9	2.4	0.11	<0.1	428	0.3
12-Mar-12	73372	217	1210	466	7.4	187	61	148	23.3	39	1.63	2.5	4.2	<0.05	0.1	750	-0.6
10-Sep-12	77144	249	654	186	7.5	45	21	67	4.8	60	1.48	**5.5**	0.2	<0.05	<0.1	370	-2.4
11-Mar-13	80781	213	2050	645	7.6	**459**	48	210	29.4	109	2.01	1.2	2.4	<0.05	<0.1	1130	-1.9
16-Sep-13	85202	250	1700	486	7.6	**349**	56	159	21.5	138	2.4	4.4	1.6	<0.05	0.1	1350	-1.0
10-Mar-14	88324	201	1710	673	7.4	**389**	62	206	38.6	74	2.2	1.5	2.6	<0.05	<0.1	950	0.9
02-Sep-14	92073	258	1520	419	7.6	249	38	141	16.2	123	2	3.7	0.7	<0.05	<0.1	790	2.8
09-Mar-15	95550	221	1970	586	7.2	**480**	56	182	31.9	86	1.79	2.6	2.4	<0.05	<0.1	1120	-10.9
05-Oct-15	100003	285	995	275	7.7	131	47	96	8.7	118	1.3	5	0.6	<0.05	<0.1	560	1.3
07-Mar-16	102771	244	2120	717	7.7	**513**	47	222	39.4	117	2.7	1.1	2.1	<0.05	<0.1	1390	-2.5
12-Sep-16	107308	233	1580	474	7.5	**385**	35	151	23.5	134	2.7	1.7	1.4	<0.05	0.2	950	-3.1
08-Mar-17	111340	232	2440	776	7.8	**657**	41	232	47.7	169	3.4	1.2	1.3	<0.05	0.1	1330	-2.5
12-Sep-17	116272	359	1230	281	7.7	162	25	97	9.1	136	1.3	3.1	0.4	<0.05	0.1	700	-3.0
12-Mar-18	120570	220	2820	823	7.3	**747**	41	277	32.0	**226**	2	1	1.0	<0.5	0.1	1470	-0.1
17-Sep-18	126163	259	1930	538	7.4	**418**	66	180	21.4	171	2.3	2	0.5	<0.05	0.1	1270	-0.3
14-Mar-19	130277	272	2040	628	7.4	**431**	36	206	27.7	186	1.9	1.7	0.6	<0.5	0.1	1170	6.0
04-Sep-19	134870	234	2320	727	7.3	**548**	45	230	37.0	185	3.3	2.8	1.4	<0.05	0.1	1930	3.5
04-Mar-20	139243	201	3220	842	7.4	**825**	39	280	34.6	**217**	2.2	1.6	1.1	<0.5	0.2	2470	-3.4
01-Sep-20	143837	280	947	162	7.7	104	23	58	4.1	148	1	**7.4**	<0.5	<0.5	0.2	600	3.9
03-Mar-21	148209	262	1960	764	7.5	**462**	22	240	39.9	**205**	3	1.7	0.6	<0.5	0.1	1080	12.8
20-Sep-21	153831	307	1120	293	7.5	158	15	102	9.3	123	1.1	3.4	<0.5	<0.5	0.2	610	1.6
08-Mar-22	158624	208	2370	640	7.4	**576**	38	210	28.2	**208**	2.2	1.4	1.4	<0.5	0.1	1610	1.4
06-Sep-22	164050	253	3110	793	7.3	**743**	60	250	41.1	**267**	4.5	1.1	2.4	0.06	0.2	2140	0.3
02-Mar-23	168427	221	4570	919	7.4	**1200**	41	327	24.8	**451**	1.7	1.6	<0.5	<0.5	0.1	2510	-1.4
06-Sep-23	173959	374	2570	586	7.3	**596**	57	197	22.9	**327**	2.5	1.7	0.7	<0.05	0.1	1470	1.0
04-Mar-24	178892	277	2430	640	7.4	**630**	58	208	29.3	**281**	2.3	1.8	1.1	<0.05	0.1	1570	1.5
03-Sep-24	184144	274	2680	624	7.4	**776**	70	200	30.2	**276**	3.8	1.8	1.4	<0.5	<0.1	2180	7.7
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		276	2555	632	7.4	703	64	204	29.8	279	3.1	1.8	1.3	<0.5	<0.1	1875	

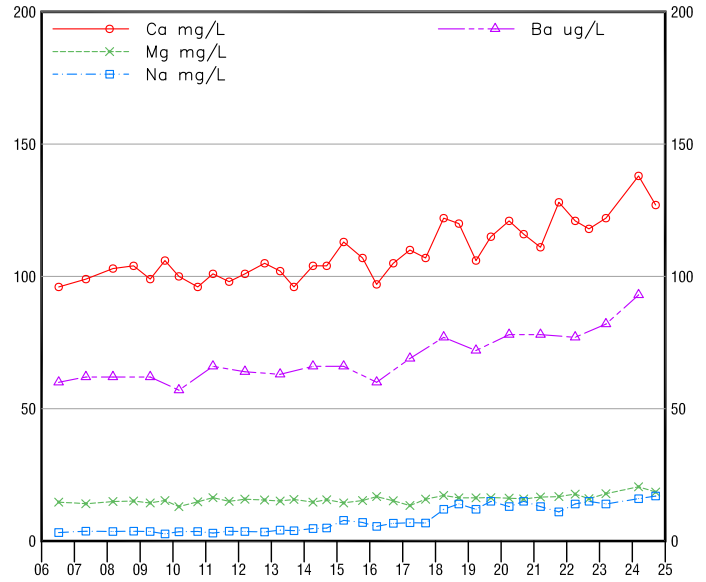
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



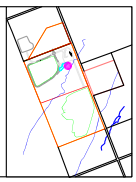








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-107-II

Overburden Formation

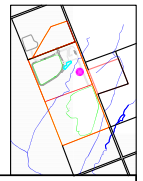
Screen 188.9 - 186.9 masl

CA008825 24 Mar 25	wsp	F124026

BH-107-II

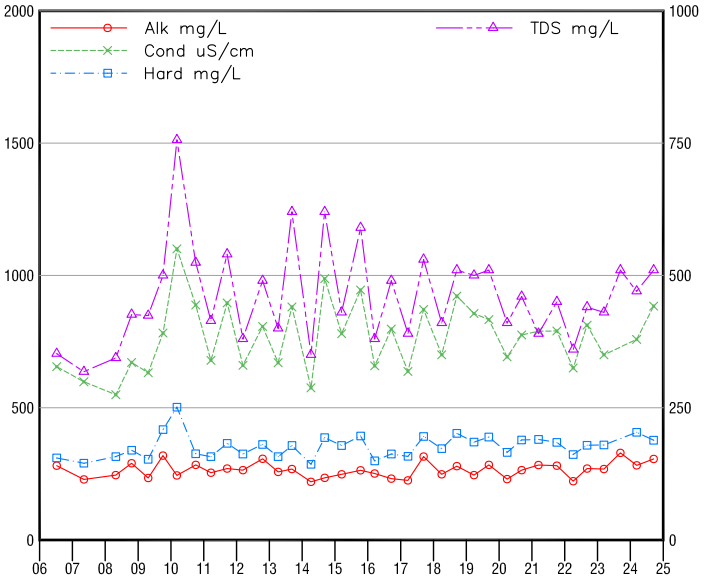
Overburden Formation

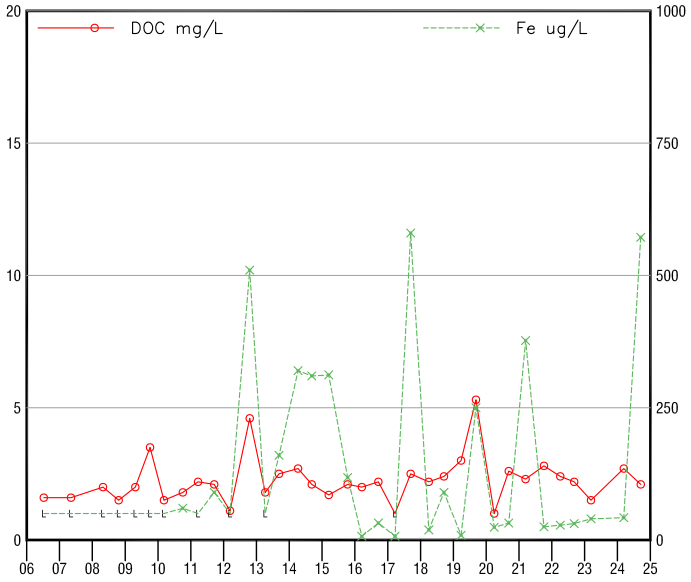
Stand Pipe Piezometer
Screen 188.9 - 186.9 masl

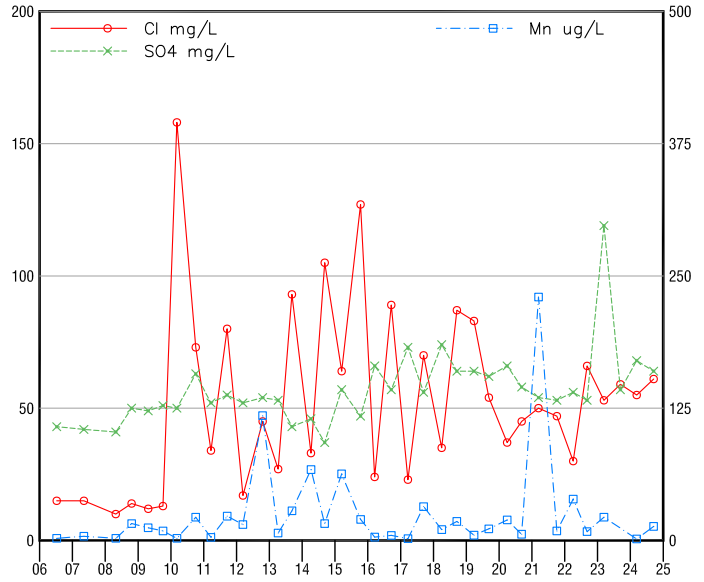


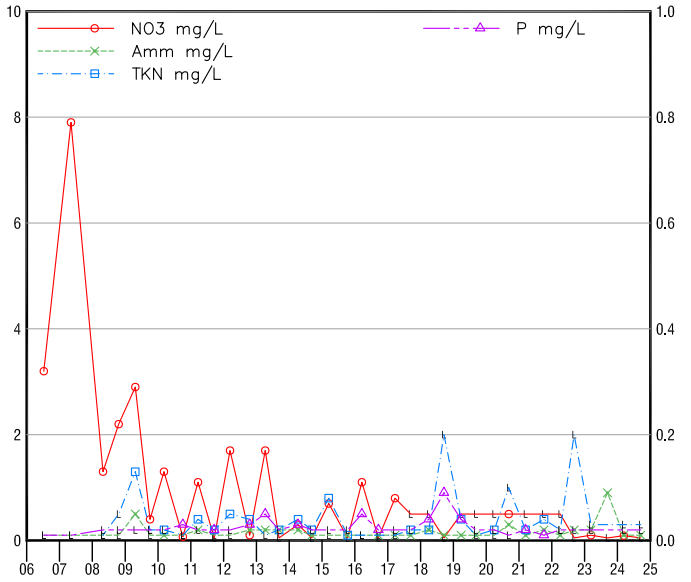
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
09-Mar-10	61125	227	610	303	7.8	10	36	100	13.0	3.5	1.32	<1	6.6	<0.05	<0.1	364	1.7
04-Oct-10	64475	239	618	302	7.7	10	41	96	14.8	3.6	1.32	<1	5.8	<0.05	<0.1	384	-0.8
22-Mar-11	67100	237	566	320	7.7	12	48	101	16.4	3.0	1.34	1.2	4.9	<0.05	<0.1	376	1.1
19-Sep-11	70357	239	624	306	7.7	9	43	98	15.0	3.7	1.43	2	4.5	<0.05	<0.1	380	0.5
12-Mar-12	73374	253	606	317	7.6	12	50	101	15.8	3.6	1.25	<1	4.2	<0.05	0.1	380	-1.6
17-Oct-12	78004	253	639	326	7.5	16	51	105	15.5	3.4	1.28	3	3.6	<0.05	0.1	400	-0.9
08-Apr-13	81442	254	635	317	7.6	13	56	102	15.1	4.1	1.35	1.4	3.3	<0.05	<0.1	380	-2.2
09-Sep-13	85033	238	649	304	7.8	15	54	96	15.7	3.9	1.5	1.2	3.1	<0.05	<0.1	390	-1.7
09-Apr-14	88949	217	646	320	7.6	15	67	104	14.7	4.7	1.3	1.6	2.8	<0.05	<0.1	380	2.3
08-Sep-14	92269	220	727	324	7.7	16	73	104	15.6	4.9	1.3	1.4	2.7	<0.05	0.1	410	1.3
16-Mar-15	95691	240	646	341	7.5	18	77	113	14.4	7.8	1.2	1	2.6	<0.05	<0.1	400	0.8
13-Oct-15	100138	239	658	330	7.7	19	69	107	15.3	7.0	1.3	1.7	2.3	<0.05	0.1	390	0.3
18-Mar-16	103025	256	627	311	7.5	18	74	97	16.8	5.5	1.3	1.6	2.0	<0.05	<0.1	390	-5.9
19-Sep-16	107505	228	652	325	7.8	27	69	105	15.2	6.7	1.5	<1	2.1	<0.05	0.1	410	-0.5
23-Mar-17	111763	235	634	330	7.6	22	72	110	13.4	6.9	1.5	1	1.9	<0.05	0.1	420	0.0
13-Sep-17	116303	240	657	332	7.8	37	72	107	15.8	6.8	1.3	2	1.7	<0.5	0.1	430	-3.4
03-Apr-18	121260	247	696	375	7.5	42	80	122	17.2	12	1.4	2.1	1.4	<0.5	0.2	440	1.3
18-Sep-18	126214	235	752	367	7.7	42	82	120	16.3	14	1.4	1.3	1.6	<0.05	0.1	430	1.8
28-Mar-19	130673	239	669	332	7.7	30	74	106	16.3	12	1.4	2	1.5	<0.5	0.1	420	-0.5
09-Sep-19	135004	244	709	355	7.7	39	63	115	16.4	15	1.6	**5.3**	1.6	<0.5	0.1	450	2.5
31-Mar-20	139936	236	706	369	7.7	35	66	121	16.2	13	1.6	<1	1.5	<0.5	<0.1	430	5.3
08-Sep-20	144014	238	661	355	7.7	36	59	116	15.9	15	1.6	1.4	1.6	<0.5	0.3	410	4.7
15-Mar-21	148532	260	705	346	7.6	31	61	111	16.6	13	1.5	<1	1.4	<0.5	<0.1	250	0.5
05-Oct-21	154357	264	731	389	7.7	36	62	128	16.8	11	1.6	1.7	1.7	<0.5	0.2	440	3.8
05-Apr-22	159591	267	732	375	7.7	33	58	121	17.7	14	1.6	1.6	1.2	<0.5	0.1	400	3.7
06-Sep-22	164055	279	648	361	7.6	34	54	118	16.0	15	1.6	1.4	1.2	<0.05	0.2	450	1.0
13-Mar-23	168682	292	733	378	7.4	33	58	122	17.9	14	1.6	1.2	0.7	<0.05	0.1	450	1.2
13-Sep-23	174179	302			7.4	56	62						0.5	<0.05	0.8	470	
11-Mar-24	179073	300	785	429	7.5	55	69	138	20.5	16	1.5	2.2	0.3	<0.05	0.1	460	3.0
16-Sep-24	184491	301	886	393	7.3	65	70	127	18.5	17	1.6	1.6	0.2	<0.05	0.1	520	2.4
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	35	36	36	36	36	
AVERAGE 2024		301	836	411	7.4	60	70	133	19.5	17	1.6	1.9	0.3	<0.05	0.1	490	

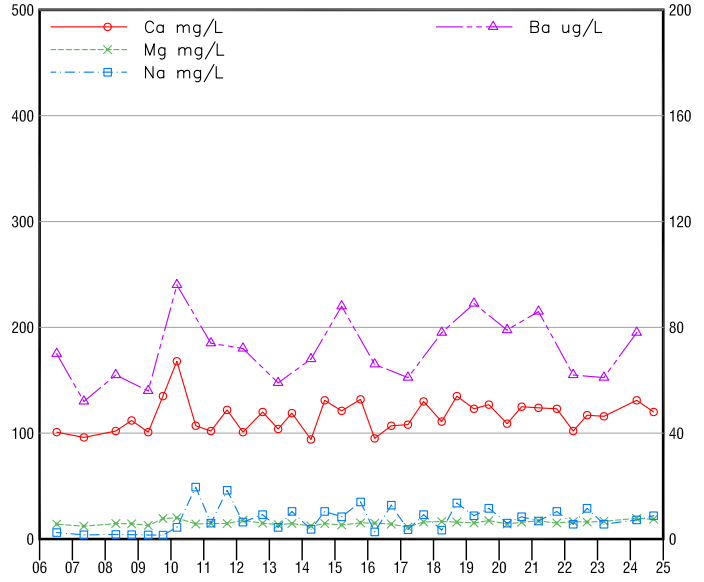
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



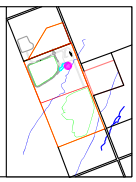








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-107-III

Shallow Overburden

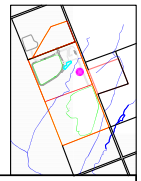
Screen 193.8 - 192.3 masl

CA008825 24 Mar 25	wsp	F124027

BH-107-III

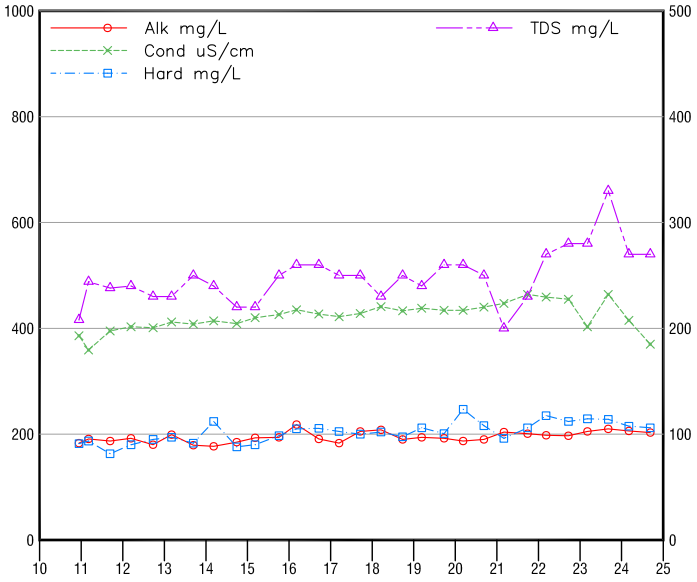
Shallow Overburden

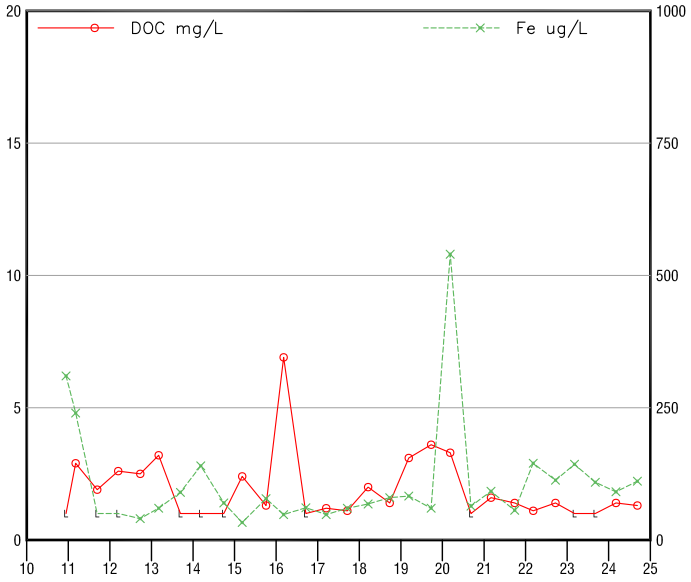
Monitoring Well
Screen 193.8 - 192.3 masl

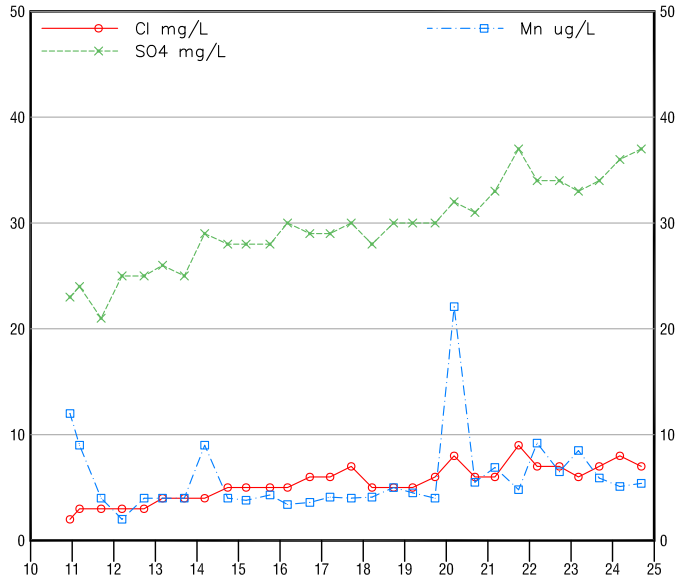


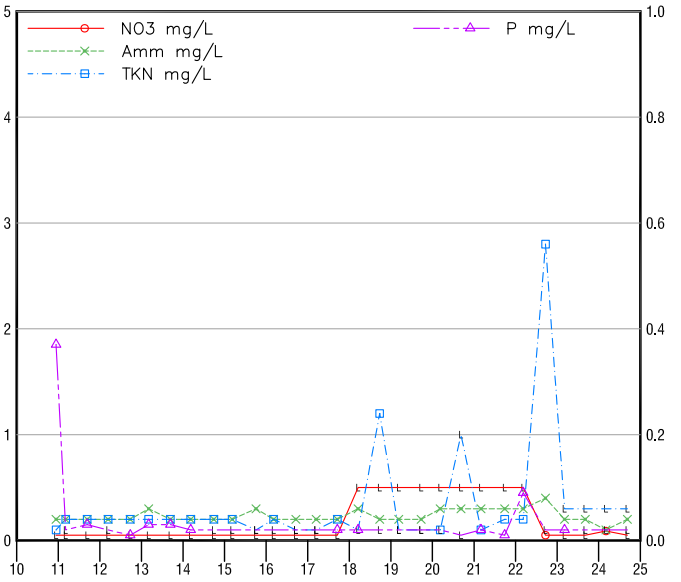
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
09-Mar-10	61126	244	1100	502	7.6	158	50	168	20.0	11	0.86	1.5	1.3	<0.05	0.1	756	0.2
04-Oct-10	64476	284	888	326	7.6	73	63	107	14.2	49	1.28	1.8	0.07	<0.05	<0.1	524	-2.2
22-Mar-11	67101	254	679	315	7.6	34	52	102	14.6	15	1.35	2.2	1.1	<0.05	0.2	414	-1.4
19-Sep-11	70358	270	896	365	7.6	80	55	122	14.6	46	1.45	2.1	<0.05	<0.05	<0.1	540	3.0
12-Mar-12	73375	264	660	325	7.5	17	52	101	17.6	16	1.22	1.1	1.7	<0.05	<0.1	380	1.9
17-Oct-12	78006	307	807	361	7.3	45	54	120	15.0	23	1.82	4.6	0.1	<0.05	0.2	490	-1.4
08-Apr-13	81443	257	670	315	7.5	27	53	104	13.5	11	0.83	1.8	1.7	<0.05	0.2	400	-2.1
09-Sep-13	85034	268	881	357	7.8	93	43	119	14.6	26	1.5	2.5	<0.05	<0.05	0.2	620	-3.2
09-Apr-14	88950	220	575	286	7.4	33	46	94	12.3	9.2	2.4	2.7	0.3	<0.05	0.2	350	-0.9
08-Sep-14	92270	235	988	387	7.5	105	37	131	14.6	26	1.2	2.1	<0.05	<0.05	0.1	620	3.0
16-Mar-15	95692	248	780	357	7.4	64	57	121	13.3	21	0.9	1.7	0.7	<0.05	<0.1	430	0.6
13-Oct-15	100139	263	945	393	7.5	127	47	132	15.3	35	1.3	2.1	<0.05	<0.05	0.1	590	-2.2
18-Mar-16	103026	251	658	299	7.5	24	66	95	15.0	6.7	1.2	2	1.1	<0.05	<0.1	380	-6.3
19-Sep-16	107506	232	797	325	7.7	89	57	107	14.1	32	1.3	2.2	<0.05	<0.05	0.1	490	-2.6
23-Mar-17	111765	225	637	316	7.4	23	73	108	11.3	8.9	0.7	<1	0.8	<0.05	0.1	390	0.2
13-Sep-17	116304	315	871	391	7.5	70	56	130	16.1	23	1.2	2.5	<0.5	<0.5	0.1	530	-3.1
03-Apr-18	121261	248	700	345	7.4	35	74	111	16.5	8.4	1.2	2.2	<0.5	<0.5	0.2	410	-1.2
18-Sep-18	126215	279	922	403	7.4	87	64	135	16.0	34	1.2	2.4	<0.05	<0.05	0.1	510	1.1
28-Mar-19	130674	245	856	370	7.6	83	64	123	15.2	22	1	3	<0.5	<0.5	0.1	500	-1.2
09-Sep-19	135005	284	833	389	7.4	54	62	127	17.4	29	1.4	**5.3**	<0.5	<0.5	0.1	510	3.3
31-Mar-20	139937	230	692	331	7.7	37	66	109	14.2	15	1.4	1	<0.5	<0.5	<0.1	410	2.1
08-Sep-20	144015	264	775	378	7.5	45	58	125	15.9	21	1.6	2.6	0.5	<0.5	0.3	460	4.5
15-Mar-21	148533	283	789	380	7.4	50	54	124	17.1	17	1.1	2.3	<0.5	<0.5	0.1	390	1.1
05-Oct-21	154358	281	790	369	7.4	47	53	123	15.1	26	1.4	2.8	<0.5	<0.5	0.2	450	3.1
05-Apr-22	159592	222	650	323	7.7	30	56	102	16.5	14	1.6	2.4	<0.5	<0.5	0.1	360	4.9
06-Sep-22	164056	270	812	358	7.6	66	53	117	16.0	29	1.3	2.2	<0.05	<0.05	0.2	440	0.5
13-Mar-23	168683	268	700	359	7.4	53	119	116	16.8	14	0.7	1.5	0.1	<0.05	0.2	430	-8.8
13-Sep-23	174180	329			7.3	59	57						<0.05	<0.05	0.9	510	
11-Mar-24	179074	282	758	407	7.6	55	68	131	19.5	18	0.9	2.7	0.09	<0.05	0.1	470	3.3
16-Sep-24	184493	306	884	377	7.2	61	64	120	18.8	22	1.5	2.1	<0.05	<0.05	0.1	510	2.2
TOTAL SAMPLES		36	35	35	34	36	36	35	35	35	35	35	36	36	36	36	
AVERAGE 2024		294	821	392	7.4	58	66	126	19.2	20	1.2	2.4	<0.05	<0.05	0.1	490	

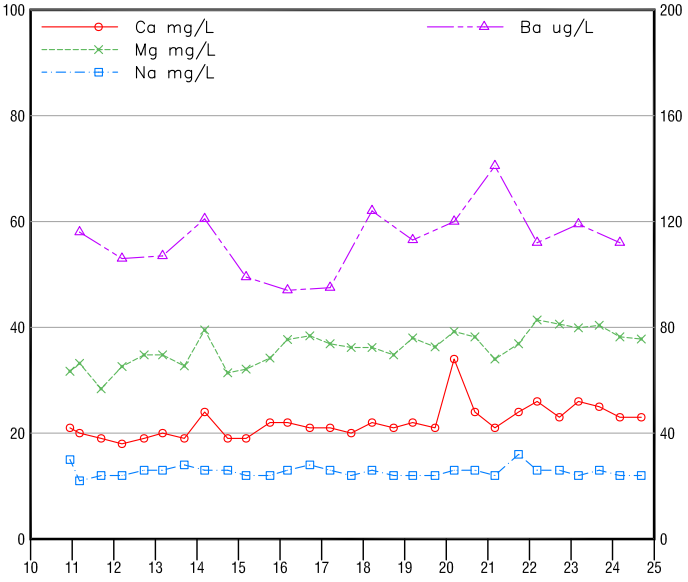
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









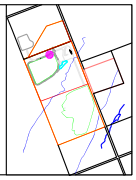


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-108-I

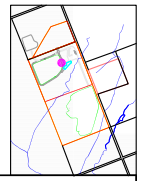
Overburden Formation

CA008825 24 Mar 25	wsp	F124028

BH-108-I

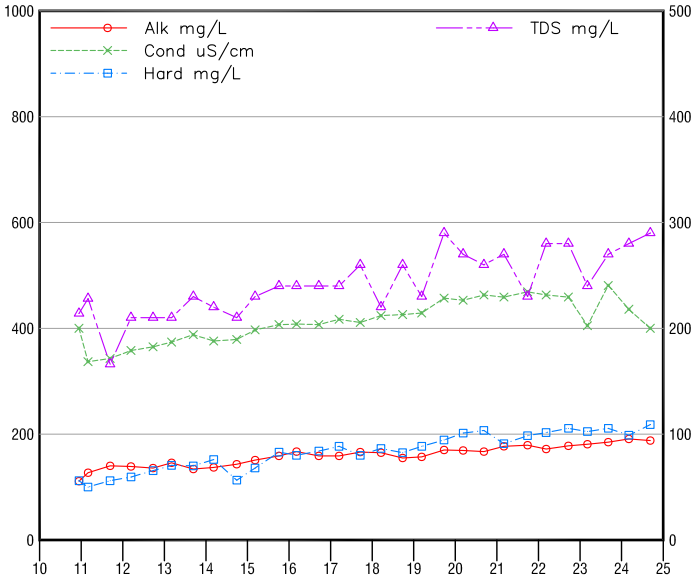
Overburden Formation

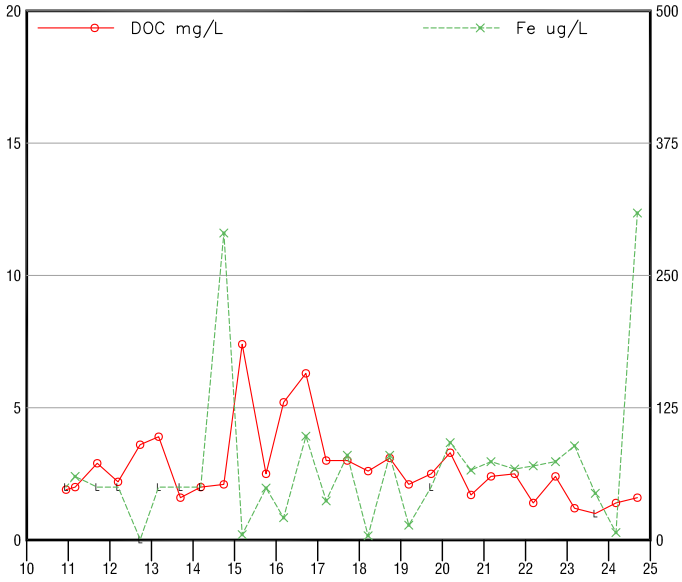
Stand Pipe Piezometer

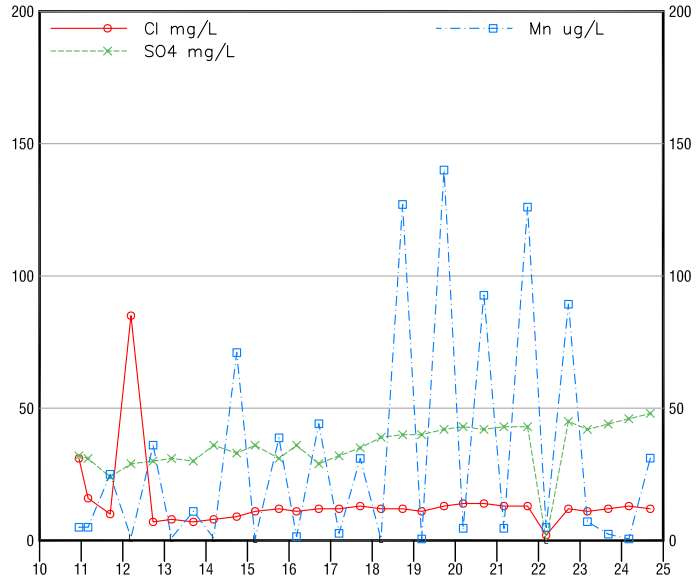


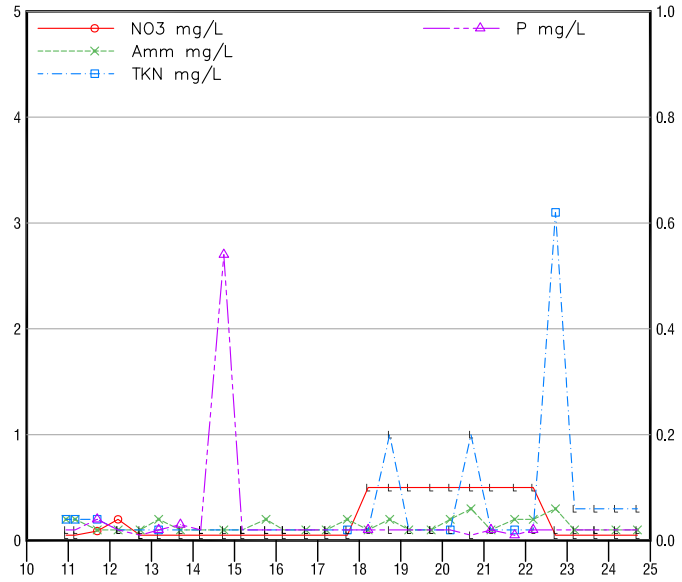
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Dec-10	65622	183	386	182	8.2	2	23	21	31.7	15	1.92	<1	<0.05	<0.05	0.2	208	2.1
07-Mar-11	66785	191	359	187	8.1	3	24	20	33.2	11	2.11	2.9	<0.05	<0.05	0.2	244	-1.3
12-Sep-11	70246	187	395	163	8.1	3	21	19	28.4	12	1.92	1.9	<0.05	<0.05	0.2	238	-5.0
14-Mar-12	73432	192	403	180	8.1	3	25	18	32.6	12	1.76	2.6	<0.05	<0.05	0.2	240	-3.1
24-Sep-12	77500	180	401	190	8.0	3	25	19	34.8	13	1.65	2.5	<0.05	0.05	0.2	230	2.4
05-Mar-13	80685	199	412	194	8.0	4	26	20	34.8	13	1.71	3.2	<0.05	<0.05	0.3	230	-1.2
12-Sep-13	85145	179	408	183	7.8	4	25	19	32.7	14	1.7	<1	<0.05	<0.05	0.2	250	1.4
10-Mar-14	88325	177	414	224	8.2	4	29	24	39.5	13	1.8	<1	<0.05	<0.05	0.2	240	9.2
29-Sep-14	92705	185	409	176	8.0	5	28	19	31.4	13	1.6	<1	<0.05	<0.05	0.2	220	-3.5
09-Mar-15	95551	193	420	180	8.1	5	28	19	32.1	12	1.58	2.4	<0.05	<0.05	0.2	220	-4.6
05-Oct-15	100007	194	426	197	8.1	5	28	22	34.2	12	1.8	1.3	<0.05	<0.05	0.3	250	-0.9
07-Mar-16	102773	218	435	210	8.3	5	30	22	37.7	13	1.9	**6.9**	<0.05	<0.05	0.2	260	-2.8
19-Sep-16	107507	191	427	211	8.2	6	29	21	38.4	14	2	<1	<0.05	<0.05	0.2	260	3.2
16-Mar-17	111461	183	422	205	8.2	6	29	21	36.9	13	1.9	1.2	<0.05	<0.05	0.2	250	3.1
18-Sep-17	116459	205	428	200	8.2	7	30	20	36.2	12	1.9	1.1	<0.05	<0.05	0.2	250	-3.4
19-Mar-18	120801	208	441	204	8.1	5	28	22	36.2	13	1.9	2	<0.5	<0.5	0.3	230	-1.5
25-Sep-18	126481	190	433	195	8.2	5	30	21	34.8	12	1.8	1.4	<0.5	<0.5	0.2	250	-0.9
12-Mar-19	130228	194	438	212	8.2	5	30	22	38.0	12	2	3.1	<0.5	<0.5	0.2	240	2.0
24-Sep-19	135336	192	434	201	8.1	6	30	21	36.3	12	1.8	3.6	<0.5	<0.5	0.2	260	-0.1
10-Mar-20	139360	187	434	247	8.2	8	32	34	39.2	13	2.4	3.3	<0.5	<0.5	0.3	260	9.3
08-Sep-20	144016	190	440	216	8.2	6	31	24	38.2	13	2.2	<1	<0.5	<0.5	0.3	250	3.5
03-Mar-21	148214	204	447	192	8.1	6	33	21	34.0	12	1.9	1.6	<0.5	<0.5	0.3	200	-5.2
27-Sep-21	154086	201	464	212	8.2	9	37	24	36.9	16	2	1.4	<0.5	<0.5	0.3	230	-0.4
09-Mar-22	158655	198	459	235	8.1	7	34	26	41.4	13	2.1	1.1	<0.5	<0.5	0.3	270	4.8
21-Sep-22	164481	197	455	224	8.1	7	34	23	40.6	13	2	1.4	0.05	<0.05	0.4	280	2.7
07-Mar-23	168535	205	403	229	8.2	6	33	26	39.9	12	2.1	<1	<0.05	<0.05	0.2	280	2.3
06-Sep-23	173960	210	464	228	8.1	7	34	25	40.4	13	2.1	<1	<0.05	<0.05	0.2	330	1.0
05-Mar-24	178936	206	415	215	7.9	8	36	23	38.2	12	2.1	1.4	0.09	<0.05	0.1	270	0.7
09-Sep-24	184299	203	370	212	7.6	7	37	23	37.8	12	2	1.3	<0.05	<0.05	0.2	270	0.4
TOTAL SAMPLES		29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
AVERAGE 2024		205	393	214	7.8	8	37	23	38.0	12	2.1	1.4	<0.05	<0.05	0.2	270	

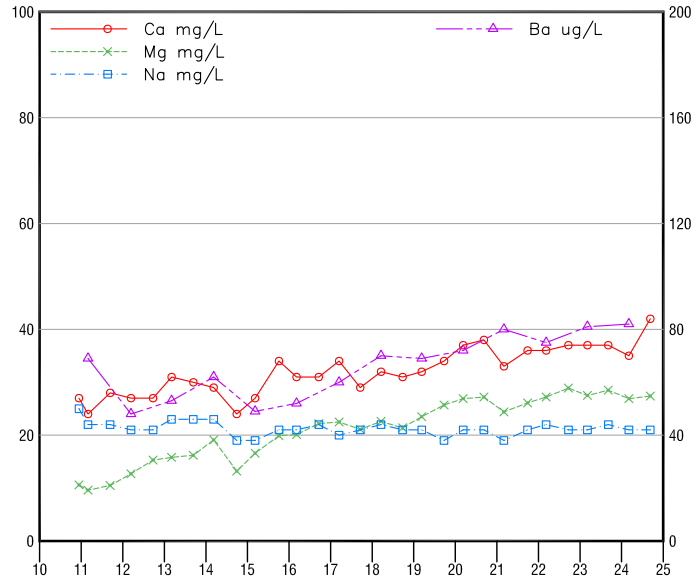
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









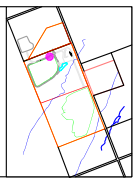


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-108-II

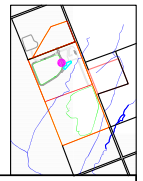
Overburden Formation

CA008825 24 Mar 25	wsp	F124029

BH-108-II

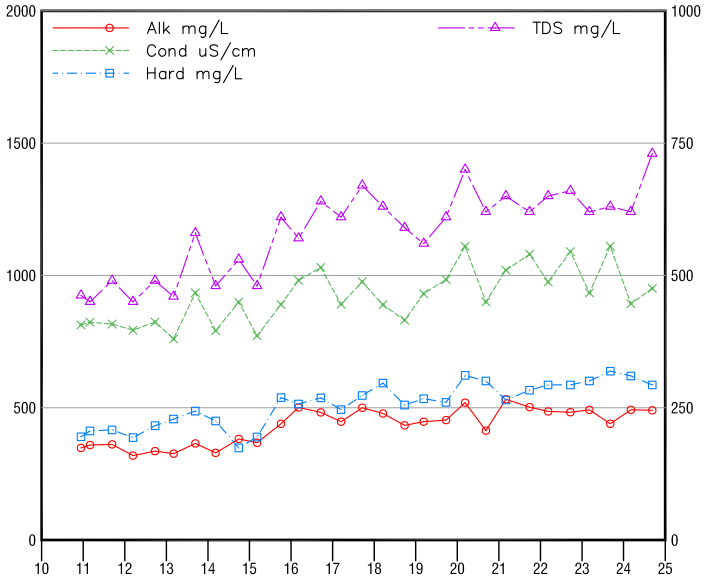
Overburden Formation

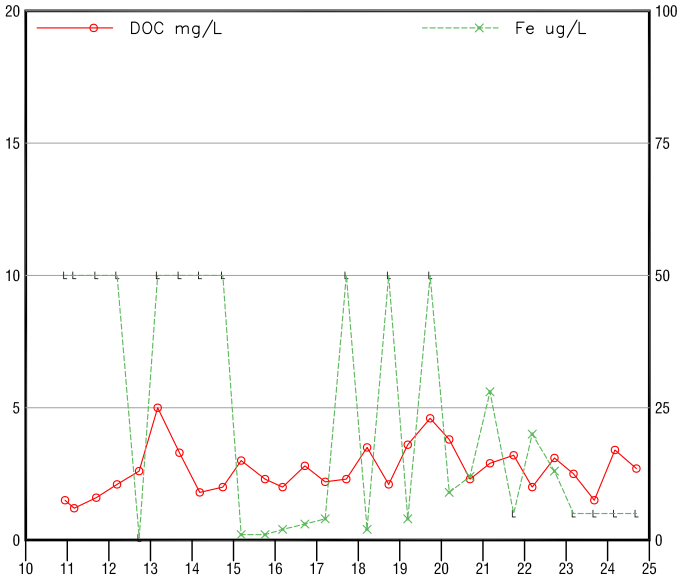
Stand Pipe Piezometer

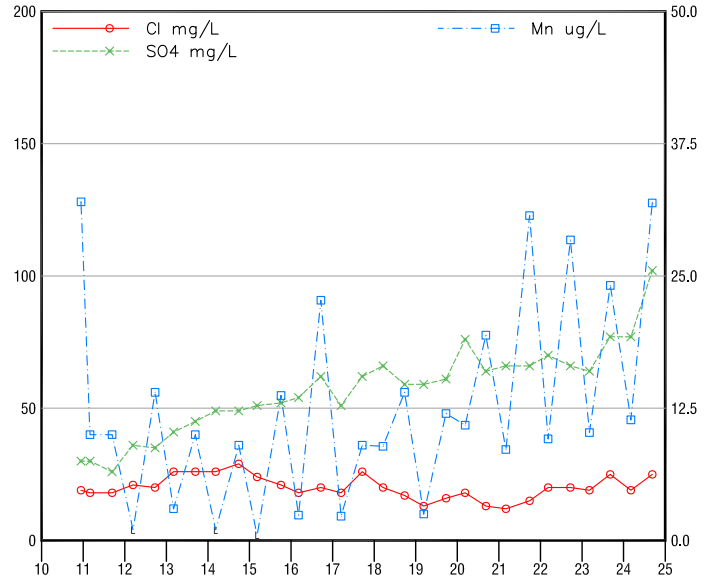


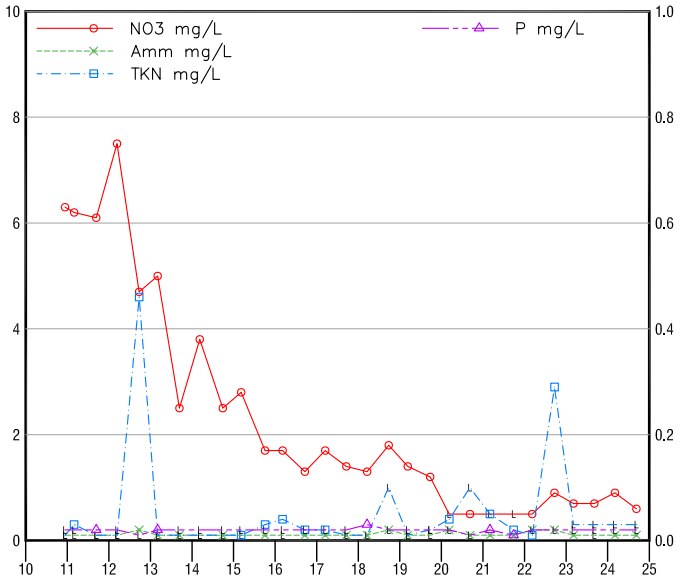
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Dec-10	65623	111	400	112	8.2	31	32	27	10.6	25	4.91	1.9	<0.05	<0.05	0.2	214	-4.1
02-Mar-11	66734	127	337	100	8.0	16	31	24	9.6	22	4.6	2	<0.05	<0.05	0.2	228	-8.4
12-Sep-11	70247	140	343	112	8.1	10	24	28	10.5	22	3.28	2.9	0.09	<0.05	0.1	166	-4.4
14-Mar-12	73433	139	358	119	8.1	85	29	27	12.7	21	2.64	2.2	0.2	<0.05	0.1	210	-26.8
24-Sep-12	77501	136	365	131	7.9	7	30	27	15.3	21	2.31	3.6	<0.05	<0.05	0.1	210	0.6
05-Mar-13	80686	146	374	141	8.0	8	31	31	15.8	23	2.25	3.9	<0.05	<0.05	0.2	210	1.3
12-Sep-13	85146	134	388	140	7.8	7	30	30	16.2	23	2.2	1.6	<0.05	<0.05	0.1	230	5.3
10-Mar-14	88326	137	376	152	8.1	8	36	29	19.1	23	2.1	2	<0.05	<0.05	<0.1	220	4.5
29-Sep-14	92706	143	379	113	8.1	9	33	24	13.2	19	1.9	2.1	<0.05	<0.05	0.1	210	-9.6
09-Mar-15	95552	151	397	136	7.9	11	36	27	16.6	19	1.73	**7.4**	<0.05	<0.05	<0.1	230	-6.0
05-Oct-15	100008	159	407	166	8.0	12	31	34	19.9	21	1.9	2.5	<0.05	<0.05	0.2	240	1.6
07-Mar-16	102774	167	408	160	8.1	11	36	31	20.1	21	2	**5.2**	<0.05	<0.05	<0.1	240	-2.7
19-Sep-16	107508	159	407	168	8.1	12	29	31	22.2	22	2.2	**6.3**	<0.05	<0.05	0.1	240	3.3
16-Mar-17	111462	159	417	177	8.0	12	32	34	22.5	20	2.2	3	<0.05	<0.05	0.1	240	3.2
18-Sep-17	116460	166	411	160	8.0	13	35	29	21.1	21	2	3	<0.05	<0.05	0.2	260	-2.7
19-Mar-18	120802	165	424	173	7.9	12	39	32	22.6	22	2	2.6	<0.5	<0.5	0.1	220	0.4
25-Sep-18	126482	155	426	165	7.9	12	40	31	21.4	21	1.8	3.1	<0.5	<0.5	0.2	260	0.0
12-Mar-19	130229	157	429	177	8.1	11	40	32	23.5	21	2.1	2.1	<0.5	<0.5	0.1	230	2.8
24-Sep-19	135337	170	457	189	8.0	13	42	34	25.7	19	1.9	2.5	<0.5	<0.5	0.1	290	0.4
10-Mar-20	139361	169	453	202	8.1	14	43	37	26.9	21	2.2	3.3	<0.5	<0.5	0.2	270	3.6
08-Sep-20	144017	167	463	207	8.1	14	42	38	27.2	21	2.3	1.7	<0.5	<0.5	0.3	260	5.4
03-Mar-21	148216	177	459	182	8.0	13	43	33	24.4	19	2	2.4	<0.5	<0.5	0.1	270	-2.6
27-Sep-21	154087	179	469	197	8.0	13	43	36	26.1	21	2.1	2.5	<0.5	<0.5	0.2	230	0.5
09-Mar-22	158656	172	463	203	8.0	2	<0.2	36	27.2	22	2.2	1.4	<0.5	<0.5	0.2	280	18.5
21-Sep-22	164482	178	459	211	8.0	12	45	37	28.9	21	2.1	2.4	<0.05	<0.05	0.3	280	3.8
07-Mar-23	168536	181	405	205	8.2	11	42	37	27.5	21	2.2	1.2	<0.05	<0.05	0.1	240	3.0
06-Sep-23	173961	185	481	211	7.9	12	44	37	28.5	22	2.2	<1	<0.05	<0.05	<0.1	270	2.6
05-Mar-24	178937	191	436	198	7.9	13	46	35	26.9	21	2.1	1.4	<0.05	<0.05	0.1	280	0.6
09-Sep-24	184300	188	400	218	7.5	12	48	42	27.4	21	2.2	1.6	<0.05	<0.05	0.1	290	3.6
TOTAL SAMPLES		29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
AVERAGE 2024		190	418	208	7.7	13	47	39	27.2	21	2.2	1.5	<0.05	<0.05	0.1	285	

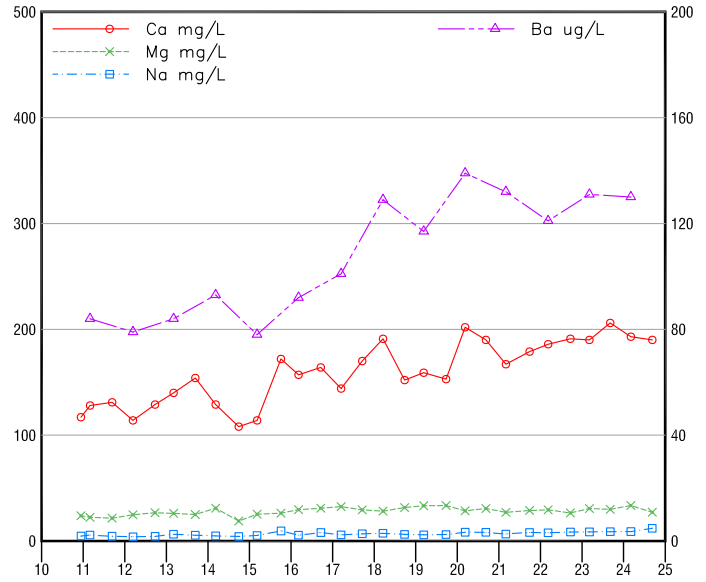
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



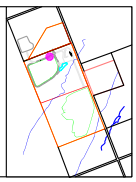








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-108-III

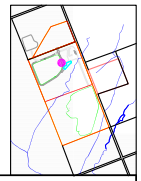
Shallow Overburden

CA008825 24 Mar 25	wsp	F124030

BH-108-III

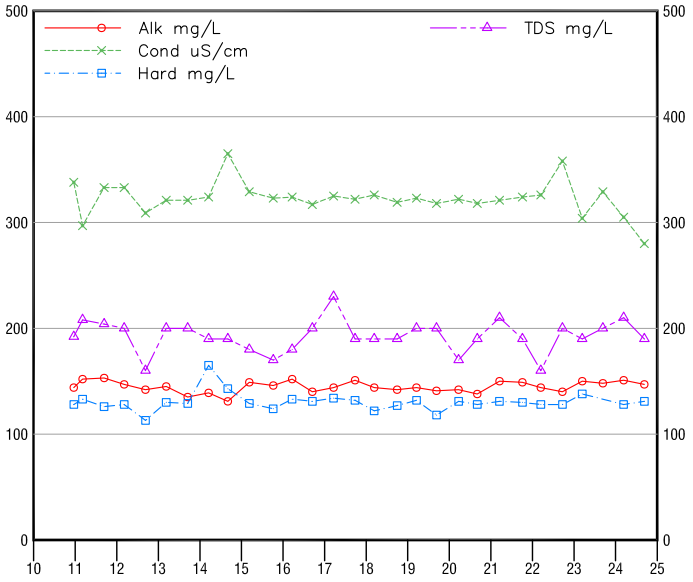
Shallow Overburden

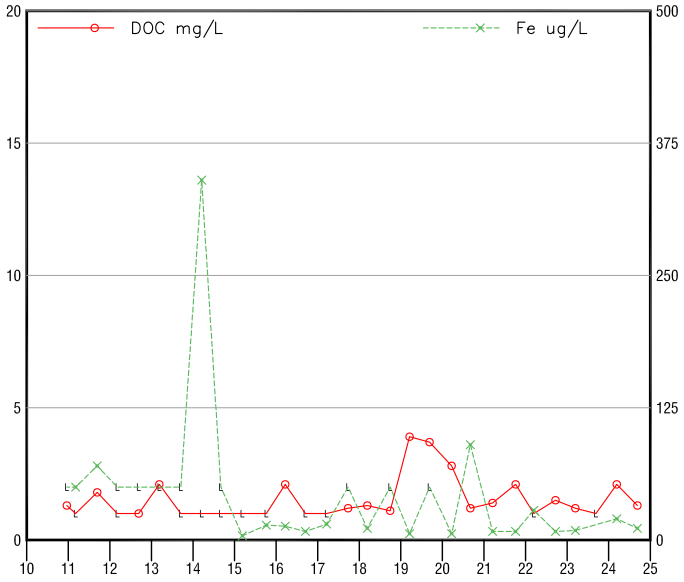
Monitoring Well

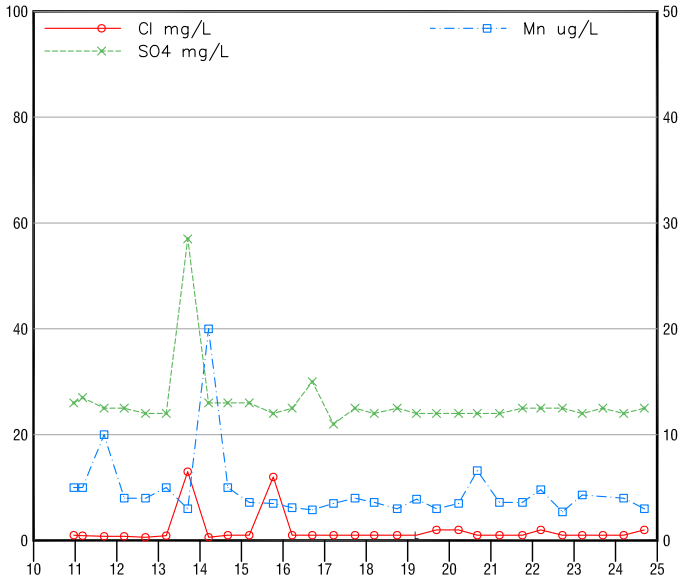


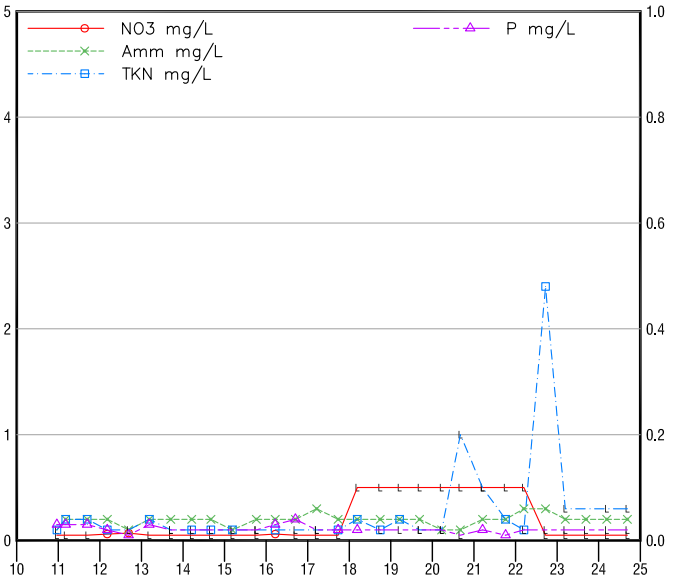
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Dec-10	65624	348	813	390	7.3	19	30	117	23.8	4.7	1.96	1.5	6.3	<0.05	<0.1	462	-2.9
02-Mar-11	66735	359	823	412	7.5	18	30	128	22.4	5.6	1.46	1.2	6.2	<0.05	<0.1	450	-1.3
12-Sep-11	70248	361	816	416	7.4	18	26	131	21.6	4.5	1.91	1.6	6.1	<0.05	<0.1	490	-0.7
14-Mar-12	73434	319	793	387	7.5	21	36	114	24.8	4.0	1.51	2.1	7.5	<0.05	<0.1	450	-1.9
24-Sep-12	77503	336	824	432	7.5	20	35	129	26.7	4.4	1.54	2.6	4.7	<0.05	0.2	490	3.2
05-Mar-13	80687	326	760	457	7.8	26	41	140	26.1	6.4	1.28	5	5.0	<0.05	0.1	460	5.6
12-Sep-13	85147	365	934	487	7.4	26	45	154	25.0	5.4	1.4	3.3	2.5	<0.05	0.1	580	4.7
10-Mar-14	88327	329	791	450	7.4	26	49	129	31.0	4.8	1.4	1.8	3.8	<0.05	<0.1	480	3.5
29-Sep-14	92707	382	899	348	7.1	29	49	108	18.9	4.3	1.4	2	2.5	<0.05	0.1	530	-14.7
09-Mar-15	95553	367	772	389	7.3	24	51	114	25.3	5.2	1.21	3	2.8	<0.05	<0.1	480	-7.1
05-Oct-15	100009	439	890	538	7.2	21	52	172	26.3	9.5	1.4	2.3	1.7	<0.05	0.1	610	3.0
07-Mar-16	102775	501	981	514	7.5	18	54	157	29.6	5.5	1.3	2	1.7	<0.05	<0.1	570	-5.5
19-Sep-16	107509	482	1030	537	7.4	20	62	164	31.0	8.0	1.8	2.8	1.3	<0.05	0.1	640	-2.0
16-Mar-17	111463	447	891	493	7.2	18	51	144	32.5	5.8	1.3	2.2	1.7	<0.05	0.1	610	-2.2
18-Sep-17	116461	500	976	546	7.5	26	62	170	29.4	6.8	1.5	2.3	1.4	<0.05	0.1	670	-3.7
19-Mar-18	120803	478	889	593	7.1	20	66	191	28.2	7.3	1	3.5	1.3	<0.5	0.1	630	2.6
25-Sep-18	126483	433	831	510	7.1	17	59	152	31.6	6.3	1.6	2.1	1.8	<0.5	0.2	590	0.1
12-Mar-19	130230	447	931	534	7.3	13	59	159	33.3	5.8	1.4	3.6	1.4	<0.5	0.1	560	1.5
24-Sep-19	135338	453	984	520	7.2	16	61	153	33.5	6.1	1.6	4.6	1.2	<0.5	<0.1	610	-0.6
10-Mar-20	139362	519	1110	622	7.2	18	76	202	28.5	8.3	1.1	3.8	<0.5	<0.5	0.2	700	1.4
08-Sep-20	144018	413	900	601	7.3	13	64	190	30.7	8.2	1.7	2.3	0.5	<0.5	0.1	620	10.8
03-Mar-21	148217	532	1020	529	7.2	12	66	167	27.1	6.6	1.1	2.9	<0.5	<0.5	0.1	650	-6.3
27-Sep-21	154088	502	1080	566	7.1	15	66	179	28.8	8.1	1.6	3.2	<0.5	<0.5	0.1	620	-0.6
09-Mar-22	158657	486	975	586	7.1	20	70	186	29.4	7.7	1.2	2	0.5	<0.5	0.2	650	1.4
21-Sep-22	164483	483	1090	586	7.1	20	66	191	26.5	8.5	1.2	3.1	0.9	<0.05	0.2	660	2.0
07-Mar-23	168537	492	934	601	7.2	19	64	190	30.7	8.6	1.2	2.5	0.7	<0.05	0.1	620	2.9
06-Sep-23	173962	439	1110	638	7.1	25	77	206	29.9	8.8	1.4	1.5	0.7	<0.05	<0.1	630	8.4
05-Mar-24	178938	492	893	620	7.1	19	77	193	33.5	8.9	1.1	3.4	0.9	<0.05	0.1	620	4.7
09-Sep-24	184301	490	951	586	6.6	25	102	190	27.2	12	1.2	2.7	0.6	<0.05	0.1	730	0.1
TOTAL SAMPLES		29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	
AVERAGE 2024		491	922	603	6.9	22	90	192	30.4	10	1.2	3.1	0.8	<0.05	0.1	675	

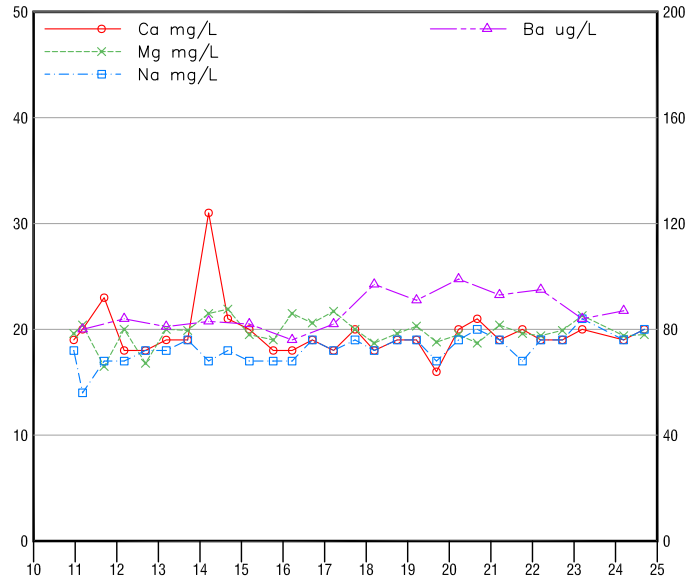
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



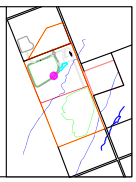








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-109-I

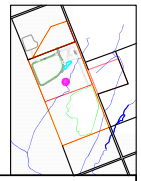
Overburden Formation

CA008825 24 Mar 25	wsp	F124031

BH-109-I

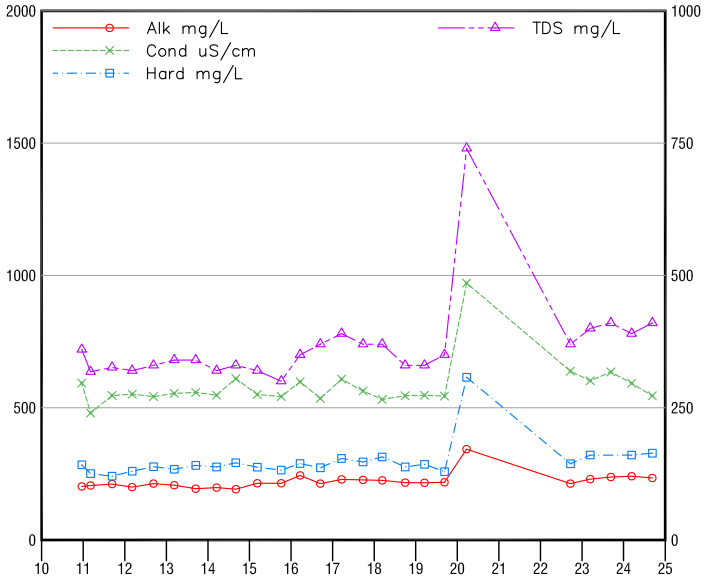
Overburden Formation

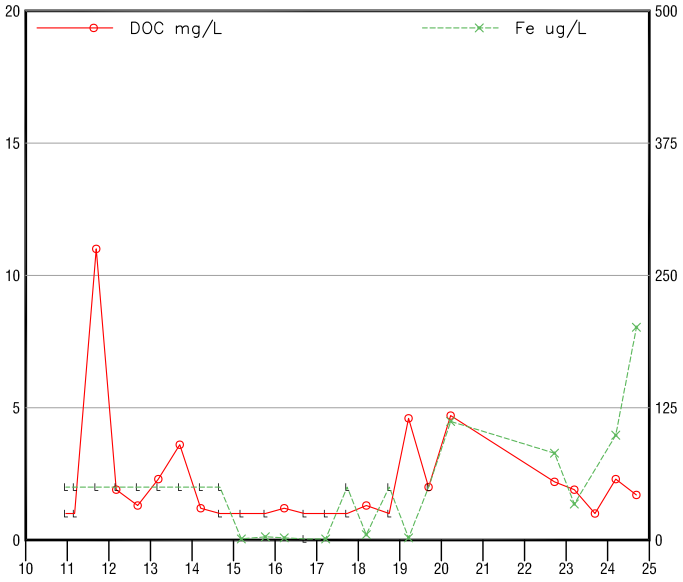
Stand Pipe Piezometer

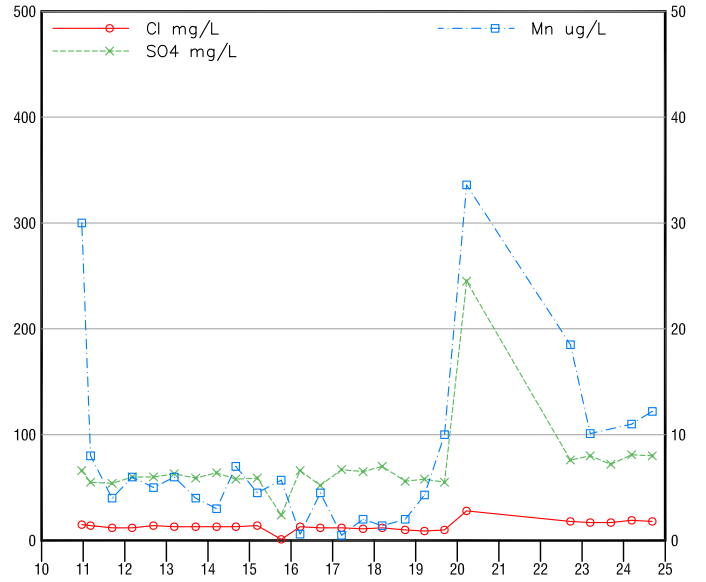


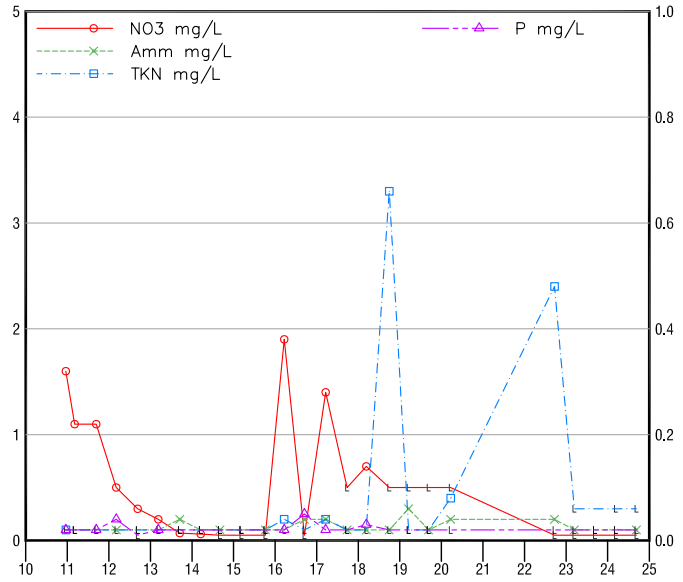
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Dec-10	65708	144	338	128	8.0	1	26	19	19.6	18	1.9	1.3	<0.05	<0.05	<0.1	192	-1.2
07-Mar-11	66789	152	297	133	8.2	0.9	27	20	20.4	14	1.3	<1	<0.05	<0.05	0.2	208	-4.1
12-Sep-11	70249	153	333	126	8.2	0.8	25	23	16.5	17	1.46	1.8	<0.05	<0.05	0.2	204	-4.4
07-Mar-12	73302	147	333	128	8.1	0.8	25	18	20.0	17	1.14	<1	0.06	<0.05	0.2	200	-2.1
10-Sep-12	77145	142	309	113	8.2	0.6	24	18	16.8	18	1.19	1	0.07	<0.05	0.1	160	-4.5
11-Mar-13	80782	145	321	130	8.3	0.9	24	19	20.0	18	1.09	2.1	<0.05	<0.05	0.2	200	-0.2
16-Sep-13	85203	135	321	129	7.9	13	57	19	19.9	19	1.1	<1	<0.05	<0.05	0.2	200	-10.2
18-Mar-14	88519	139	324	165	8.1	0.6	26	31	21.5	17	1.3	<1	<0.05	<0.05	0.2	190	10.2
03-Sep-14	92155	131	365	143	8.1	1	26	21	21.9	18	1.2	<1	<0.05	<0.05	0.2	190	7.4
11-Mar-15	95592	149	329	129	8.2	1	26	20	19.5	17	1.1	<1	<0.05	<0.05	0.1	180	-2.5
07-Oct-15	100055	146	323	124	8.2	12	24	18	19.0	17	1.1	<1	<0.05	<0.05	0.2	170	-7.7
21-Mar-16	103099	152	324	133	8.3	1	25	18	21.5	17	1.1	2.1	0.06	<0.05	0.2	180	-2.4
15-Sep-16	107394	140	317	131	8.3	1	30	19	20.6	19	1.3	<1	<0.05	<0.05	0.2	200	0.5
20-Mar-17	111701	144	325	134	8.3	1	22	18	21.7	18	1.1	<1	<0.05	<0.05	0.3	230	2.1
25-Sep-17	116633	151	322	132	8.2	1	25	20	20.0	19	1	1.2	<0.05	<0.05	0.2	190	-1.0
12-Mar-18	120574	144	326	122	8.2	1	24	18	18.7	18	1.1	1.3	<0.5	<0.5	0.2	190	-2.5
30-Sep-18	126586	142	319	127	8.2	1	25	19	19.6	19	1.2	1.1	<0.5	<0.5	0.2	190	0.5
19-Mar-19	130442	144	323	132	8.3	<1	24	19	20.3	19	1.2	3.9	<0.5	<0.5	0.2	200	1.8
11-Sep-19	135033	141	318	118	8.3	2	24	16	18.8	17	1.1	3.7	<0.5	<0.5	0.2	200	-3.6
23-Mar-20	139733	142	322	131	8.2	2	24	20	19.5	19	1.2	2.8	<0.5	<0.5	0.1	170	1.2
03-Sep-20	143899	138	318	128	8.3	1	24	21	18.7	20	1.5	1.2	<0.5	<0.5	0.1	190	2.7
17-Mar-21	148593	150	321	131	8.3	1	24	19	20.4	19	1.3	1.4	<0.5	<0.5	0.2	210	-0.6
05-Oct-21	154359	149	324	130	8.3	1	25	20	19.6	17	1.2	2.1	<0.5	<0.5	0.2	190	-2.4
15-Mar-22	158871	144	326	128	8.0	2	25	19	19.4	19	1.3	<1	<0.5	<0.5	0.3	160	-0.4
21-Sep-22	164484	140	358	128	8.3	1	25	19	19.9	19	1.2	1.5	<0.05	<0.05	0.3	200	1.4
14-Mar-23	168724	150	304	138	8.2	1	24	20	21.3	21	1.3	1.2	<0.05	<0.05	0.2	190	2.2
11-Sep-23	174077	148	329		8.1	1	25					<1	<0.05	<0.05	0.2	200	
12-Mar-24	179129	151	305	128	8.3	1	24	19	19.4	19	1.3	2.1	<0.05	<0.05	0.2	210	0.0
10-Sep-24	184344	147	280	131	7.9	2	25	20	19.5	20	1.4	1.3	<0.05	<0.05	0.2	190	2.1
TOTAL SAMPLES		29	29	28	29	29	29	28	28	28	28	29	29	29	29	29	
AVERAGE 2024		149	293	130	8.1	2	25	20	19.5	20	1.4	1.7	<0.05	<0.05	0.2	200	

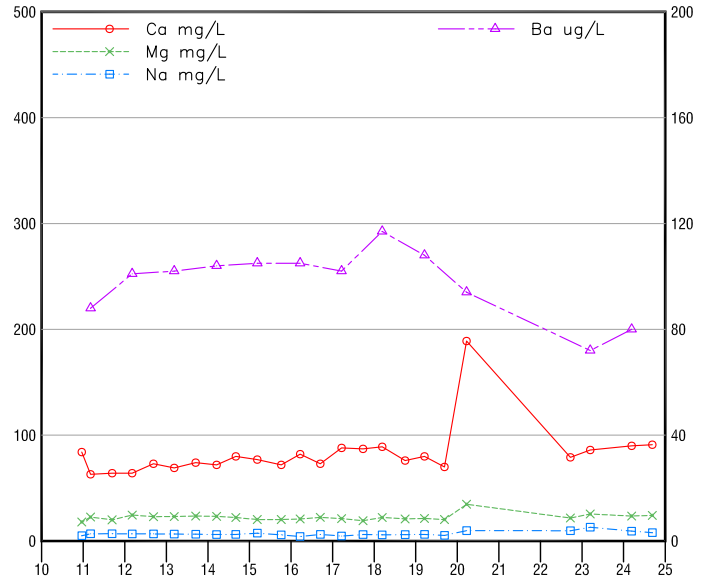
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



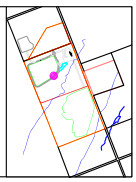








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-109-II

Overburden Formation

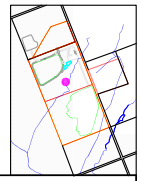
Screen 190.1 - 188.6 masl

CA008825 24 Mar 25	wsp	F124032

BH-109-II

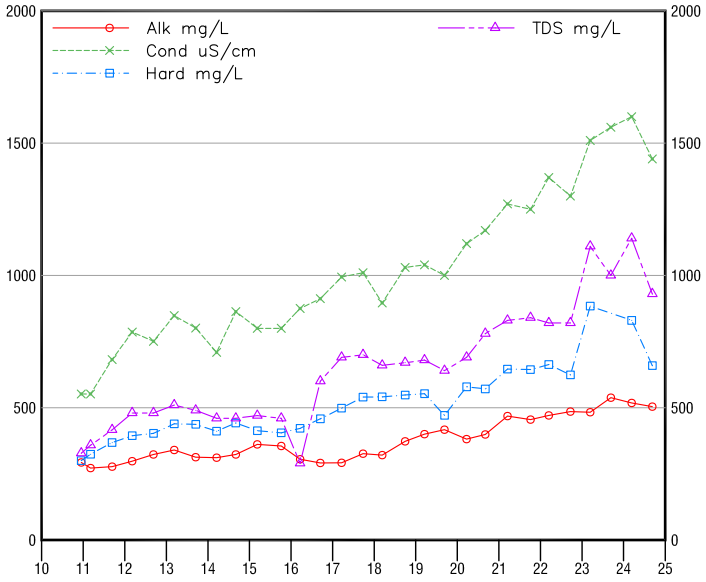
Overburden Formation

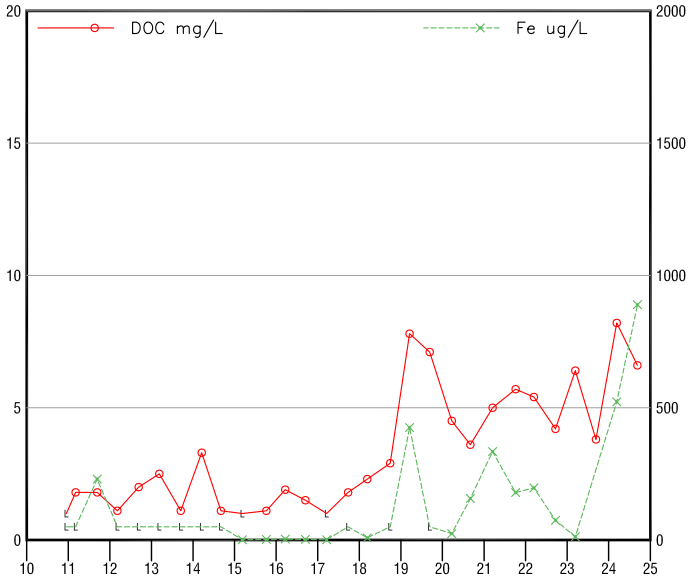
Stand Pipe Piezometer
Screen 190.1 - 188.6 masl

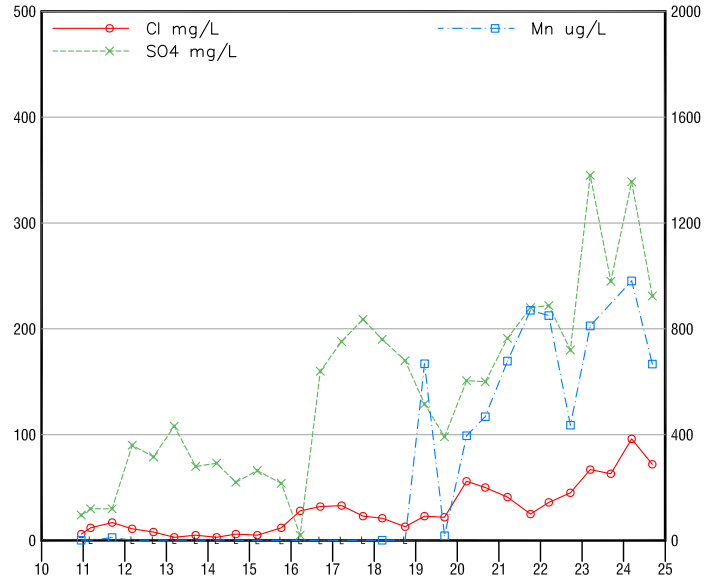


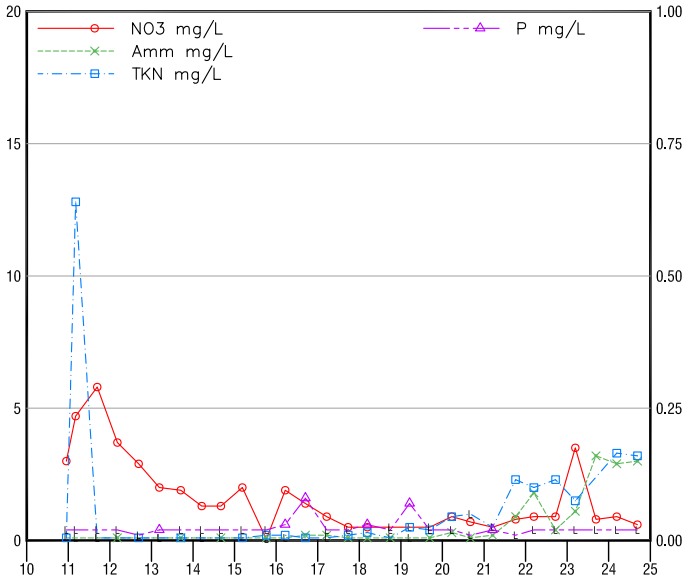
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Dec-10	65709	202	593	284	7.8	15	66	84	18.0	5.0	1.13	<1	1.6	<0.05	<0.1	360	−0.1
07-Mar-11	66790	206	480	251	7.7	14	55	63	22.6	6.8	1.35	<1	1.1	<0.05	<0.1	318	−3.4
12-Sep-11	70250	211	546	241	7.8	12	54	64	20.0	6.9	1.37	**11**	1.1	<0.05	<0.1	326	−5.5
07-Mar-12	73303	200	551	260	7.7	12	60	64	24.5	6.7	1.28	1.9	0.5	<0.05	0.1	320	−1.0
10-Sep-12	77146	213	542	277	7.7	14	60	73	23.0	6.7	1.33	1.3	0.3	<0.05	<0.1	330	−0.5
11-Mar-13	80783	207	554	267	7.7	13	63	69	23.1	6.6	1.25	2.3	0.2	<0.05	<0.1	340	−1.5
16-Sep-13	85204	194	558	282	7.8	13	59	74	23.6	6.4	1.2	3.6	0.07	<0.05	0.2	340	4.2
18-Mar-14	88520	198	547	276	7.7	13	64	72	23.3	6.1	1.3	1.2	0.06	<0.05	<0.1	320	1.3
03-Sep-14	92156	192	610	292	7.7	13	58	80	22.2	6.2	1.3	<1	<0.05	<0.05	0.1	330	6.3
11-Mar-15	95593	214	550	275	7.7	14	59	77	20.3	7.4	1.2	<1	<0.05	<0.05	<0.1	320	−0.4
07-Oct-15	100056	214	542	264	7.6	1	24	72	20.3	5.8	1.2	<1	<0.05	<0.05	0.1	300	7.4
21-Mar-16	103100	244	598	289	7.8	13	66	82	20.8	4.3	1.1	1.2	1.9	<0.05	<0.1	350	−5.9
15-Sep-16	107395	213	535	273	7.8	12	52	73	22.3	6.2	1.4	<1	<0.05	<0.05	0.2	370	1.0
20-Mar-17	111702	229	608	308	7.8	12	67	88	21.2	4.7	1.2	<1	1.4	<0.05	0.2	390	0.0
25-Sep-17	116634	227	563	295	7.8	11	65	87	19.2	6.1	1.1	<1	<0.5	<0.5	0.1	370	0.1
12-Mar-18	120575	225	531	314	7.7	12	70	89	22.2	5.8	1.4	1.3	0.7	<0.5	0.1	370	1.9
30-Sep-18	126587	217	545	276	7.7	10	56	76	20.9	6.0	1.4	<1	<0.5	<0.5	0.1	330	0.2
19-Mar-19	130443	216	547	286	7.8	9	58	80	21.3	6.2	1.4	4.6	<0.5	<0.5	0.3	330	2.3
11-Sep-19	135034	218	544	258	7.7	10	55	70	20.3	5.3	1.2	2	<0.5	<0.5	0.1	350	−3.3
23-Mar-20	139734	343	971	615	7.4	28	245	189	34.7	9.8	1.4	4.7	<0.5	<0.5	0.2	740	0.1
21-Sep-22	164485	213	638	288	7.8	18	76	79	21.7	9.7	4.7	2.2	<0.05	<0.05	0.2	370	−0.3
14-Mar-23	168725	230	602	321	7.7	17	80	86	25.5	13	3.2	1.9	<0.05	<0.05	0.1	400	2.4
11-Sep-23	174078	238	635		7.7	17	72					1	<0.05	<0.05	<0.1	410	
12-Mar-24	179130	241	592	321	7.7	19	81	90	23.6	9.3	2	2.3	<0.05	<0.05	<0.1	390	0.3
10-Sep-24	184345	234	545	328	7.4	18	80	91	24.2	7.9	1.8	1.7	<0.05	<0.05	0.1	410	2.2
TOTAL SAMPLES		25	25	24	25	25	25	24	24	24	24	25	25	25	25	25	
AVERAGE 2024		238	569	325	7.6	19	81	91	23.9	8.6	2	2.0	<0.05	<0.05	<0.1	400	

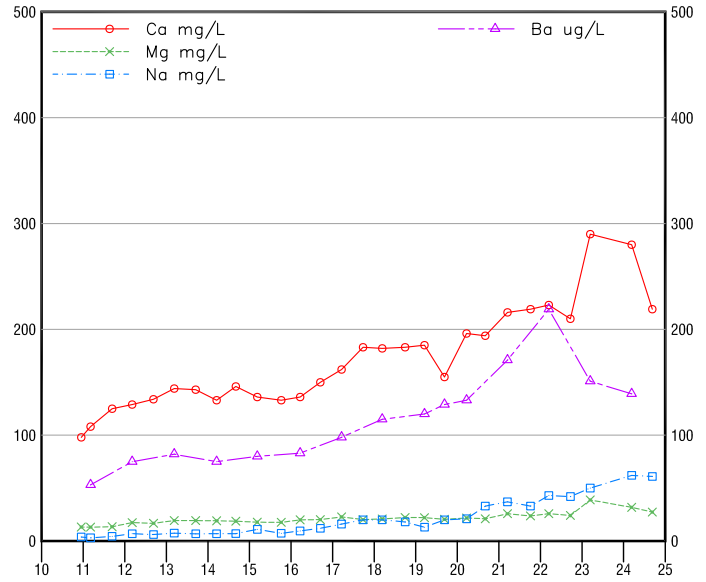
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



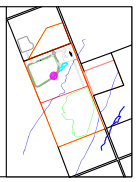








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-109-III

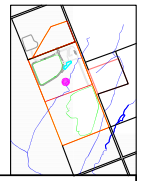
Shallow Overburden

CA008825 24 Mar 25	wsp	F124033

BH-109-III

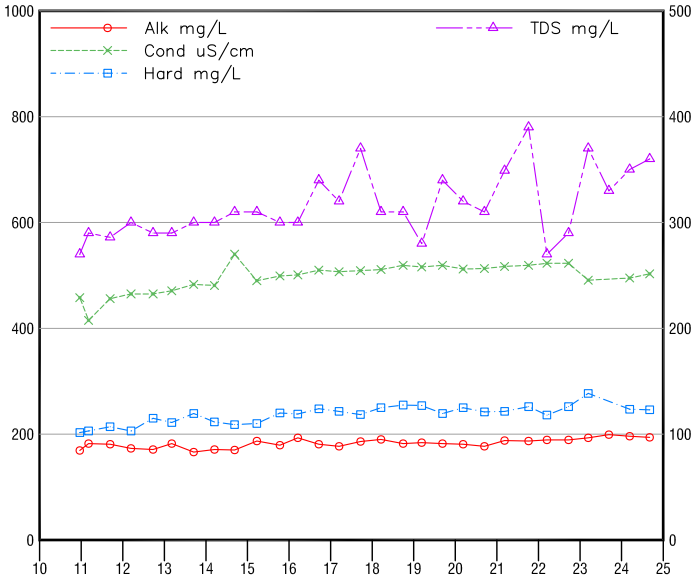
Shallow Overburden

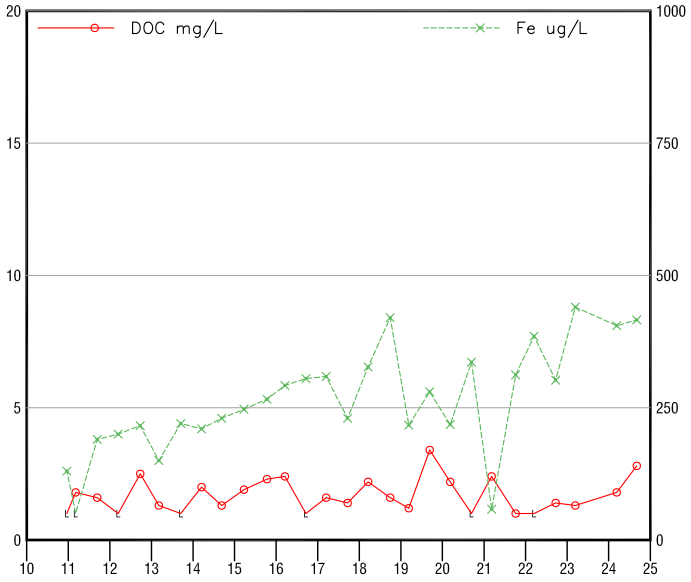
Monitoring Well

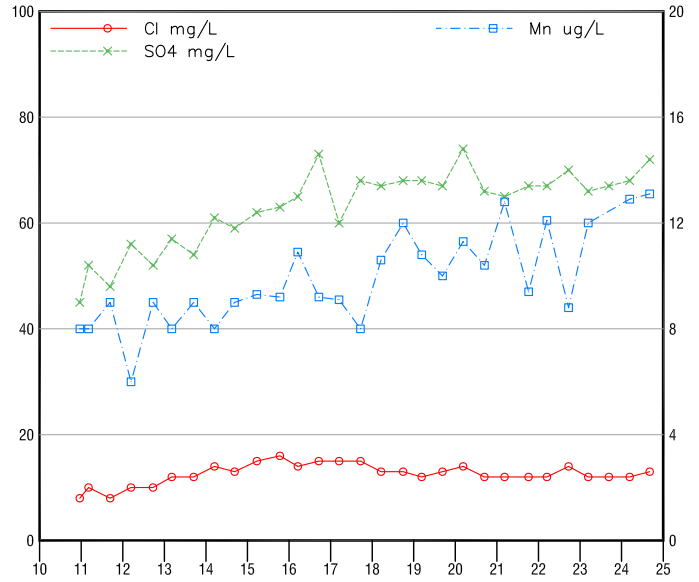


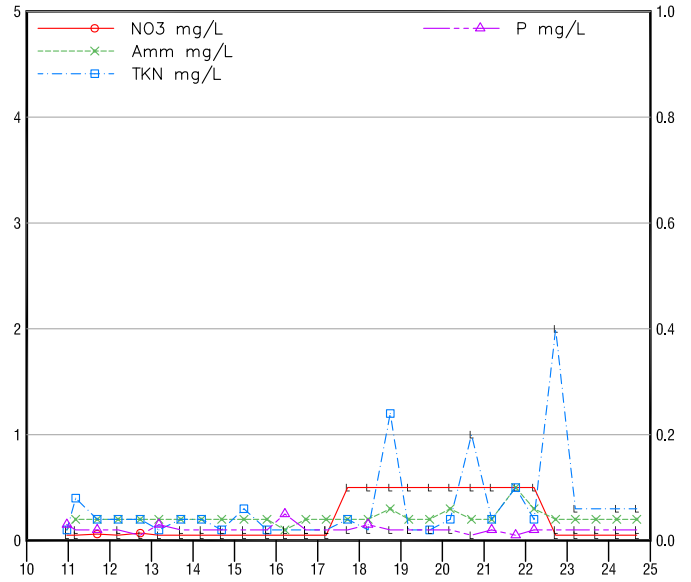
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
15-Dec-10	65672	293	552	300	7.4	6	24	98	13.2	3.8	0.82	<1	3.0	<0.05	<0.1	328	-4.4
07-Mar-11	66791	272	552	324	7.7	12	30	108	13.1	3.0	0.64	1.8	4.7	<0.05	<0.1	358	-0.8
12-Sep-11	70251	277	682	368	7.5	17	30	125	13.5	4.4	1.03	1.8	5.8	<0.05	<0.1	416	3.5
07-Mar-12	73304	298	786	394	7.6	11	90	129	17.4	6.9	0.58	1.1	3.7	<0.05	0.1	480	-1.2
10-Sep-12	77147	323	751	403	7.4	8	79	134	16.7	6.1	0.97	2	2.9	<0.05	<0.1	480	-0.9
11-Mar-13	80784	340	848	439	7.7	3	108	144	19.3	7.4	0.64	2.5	2.0	<0.05	<0.1	510	-0.9
16-Sep-13	85205	313	801	437	7.7	5	70	143	19.3	6.8	0.8	1.1	1.9	<0.05	0.1	490	6.3
18-Mar-14	88521	311	709	411	7.6	3	73	133	19.1	6.9	0.6	3.3	1.3	<0.05	<0.1	460	3.7
03-Sep-14	92157	323	863	442	7.5	6	55	146	18.7	7.0	0.8	1.1	1.3	<0.05	0.1	460	7.6
11-Mar-15	95594	361	800	413	7.5	5	66	136	17.8	11	0.7	<1	2.0	<0.05	<0.1	470	-0.6
07-Oct-15	100058	355	800	405	7.2	12	54	133	17.6	7.3	0.8	1.1	<0.05	<0.05	0.1	460	-0.8
21-Mar-16	103102	305	875	422	7.7	28	5	136	20.0	9.5	0.6	1.9	1.9	<0.05	<0.1	290	10.9
15-Sep-16	107396	291	912	458	7.6	32	160	150	20.2	12	1.1	1.5	1.4	<0.05	0.2	600	-2.1
20-Mar-17	111703	292	994	498	7.4	33	188	162	22.8	16	0.8	<1	0.9	<0.05	0.2	690	-0.3
25-Sep-17	116635	326	1010	540	7.5	23	209	183	20.2	20	0.9	1.8	0.5	<0.5	0.1	700	0.7
12-Mar-18	120576	321	896	541	7.4	21	190	182	20.9	20	0.8	2.3	0.5	<0.5	0.1	660	3.1
30-Sep-18	126588	373	1030	548	7.3	13	170	183	22.2	18	1.2	2.9	<0.5	<0.5	0.1	670	1.8
19-Mar-19	130445	400	1040	553	7.3	23	129	185	22.1	13	0.9	**7.8**	<0.5	<0.5	<0.1	680	1.4
11-Sep-19	135036	417	1000	471	7.3	22	98	155	20.5	20	1.1	**7.1**	<0.5	<0.5	0.1	640	-3.3
23-Mar-20	139735	381	1120	579	7.1	56	151	196	21.8	21	1	4.5	0.9	<0.5	0.3	690	0.5
03-Sep-20	143901	399	1170	571	7.1	50	150	194	21.0	33	1.9	3.6	0.7	<0.5	0.1	780	1.4
17-Mar-21	148594	468	1270	646	7.2	41	191	216	25.8	37	1.5	5	<0.5	<0.5	0.2	830	0.3
05-Oct-21	154361	455	1250	644	7.0	25	220	219	23.7	33	3	**5.7**	0.8	<0.5	0.9	840	0.1
15-Mar-22	158873	471	1370	663	6.9	36	222	223	25.8	43	3.5	**5.4**	0.9	<0.5	1.8	820	0.9
21-Sep-22	164486	485	1300	624	7.0	45	180	210	24.1	42	2.9	4.2	0.9	<0.05	0.4	820	-1.3
14-Mar-23	168726	483	1510	884	7.0	67	345	290	38.8	50	3.7	**6.4**	3.5	<0.05	1.1	1110	2.7
11-Sep-23	174080	538	1560		7.0	63	245					3.8	0.8	<0.05	3.2	1000	
12-Mar-24	179131	518	1600	830	7.1	96	339	280	31.8	62	4.8	**8.2**	0.9	<0.05	2.9	1140	0.4
10-Sep-24	184346	504	1440	659	6.9	72	231	219	27.3	61	5.2	**6.6**	0.6	<0.05	3	930	1.3
TOTAL SAMPLES		29	29	28	29	29	29	28	28	28	28	29	29	29	29	29	
AVERAGE 2024		511	1520	745	7.0	84	285	250	29.6	62	5.0	7.40	0.8	<0.05	3	1035	

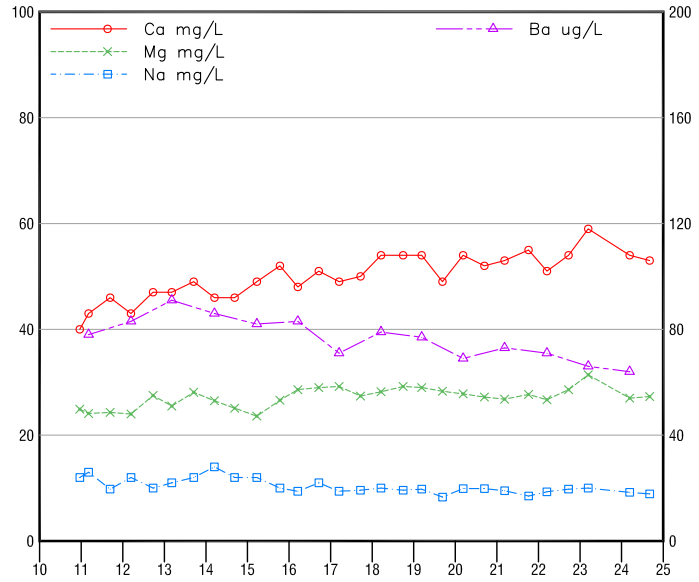
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



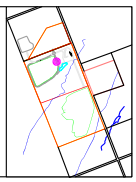








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-110-I

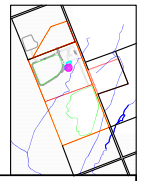
Overburden Formation

CA008825 24 Mar 25	wsp	F124034

BH-110-I

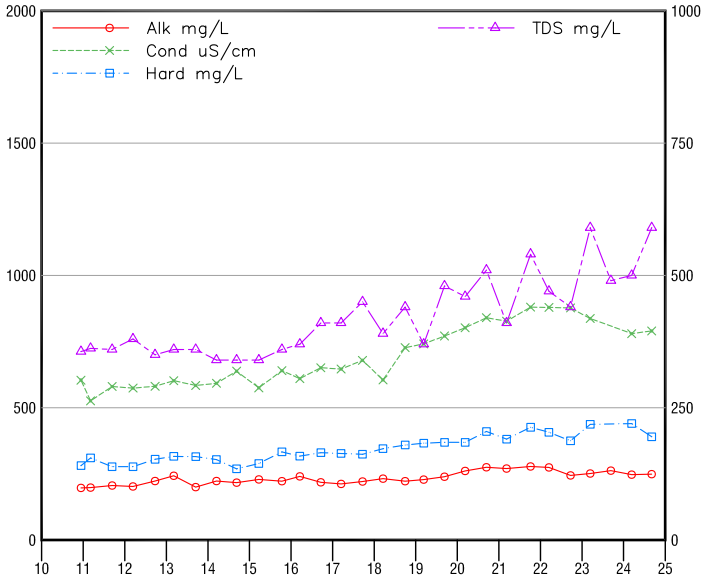
Overburden Formation

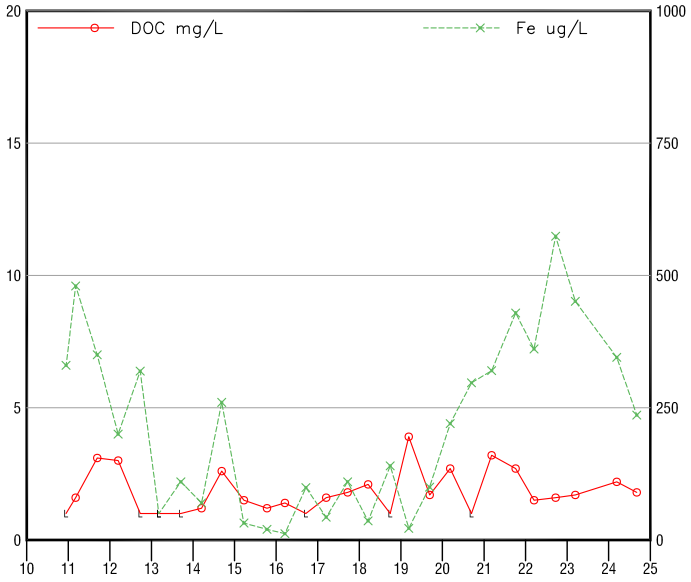
Stand Pipe Piezometer

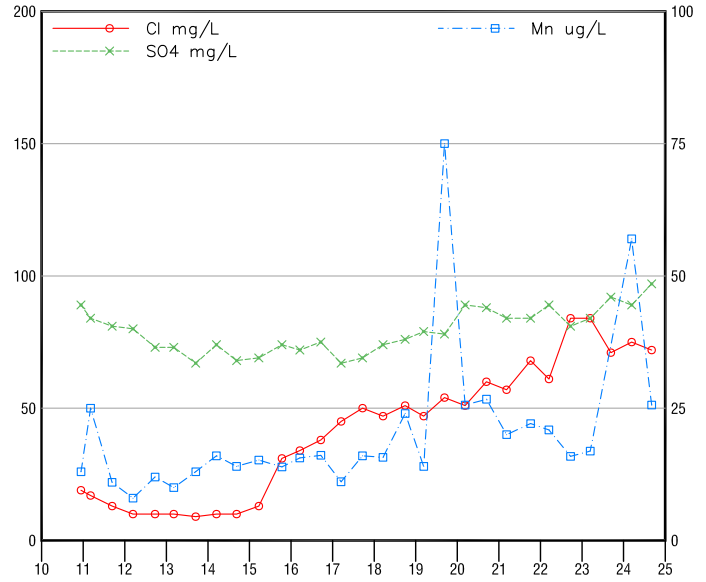


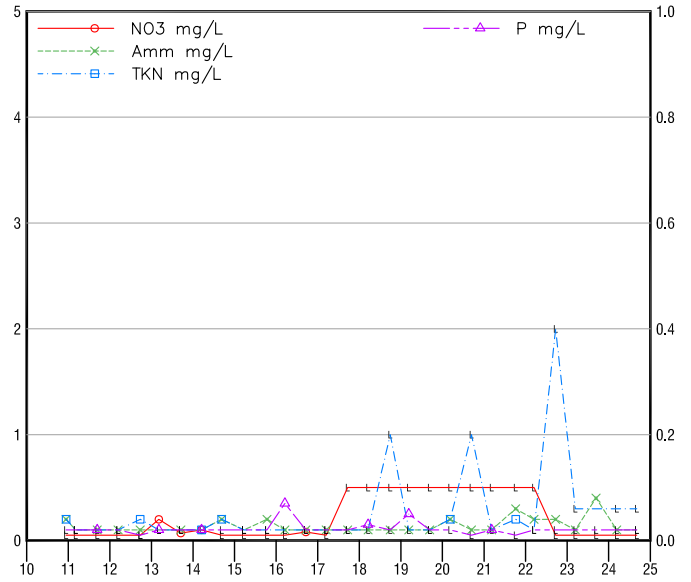
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Dec-10	65711	169	458	203	7.9	8	45	40	24.9	12	1.58	<1	<0.05	<0.05	<0.1	270	0.8
07-Mar-11	66786	182	415	206	7.9	10	52	43	24.1	13	1.65	1.8	<0.05	<0.05	0.2	290	-2.8
12-Sep-11	70252	181	456	214	7.7	8	48	46	24.3	9.8	1.45	1.6	0.06	<0.05	0.2	286	-0.7
14-Mar-12	73429	173	465	206	7.8	10	56	43	24.0	12	1.42	<1	<0.05	<0.05	0.2	300	-1.8
24-Sep-12	77504	171	465	230	7.8	10	52	47	27.5	10	1.33	2.5	0.07	<0.05	0.2	290	3.3
07-Mar-13	80738	182	471	222	8.0	12	57	47	25.5	11	1.33	1.3	<0.05	<0.05	0.2	290	-2.0
16-Sep-13	85206	166	483	239	7.8	12	54	49	28.1	12	1.3	<1	<0.05	<0.05	0.2	300	5.6
17-Mar-14	88489	171	481	223	5.9	14	61	46	26.5	14	1.4	2	<0.05	<0.05	0.2	300	0.4
10-Sep-14	92329	170	540	218	7.9	13	59	46	25.1	12	1.4	1.3	<0.05	<0.05	0.2	310	-0.6
24-Mar-15	95919	187	490	220	8.2	15	62	49	23.6	12	1.2	1.9	<0.05	<0.05	0.2	310	-4.6
13-Oct-15	100146	179	499	240	7.9	16	63	52	26.6	10	1.3	2.3	<0.05	<0.05	0.2	300	-0.4
18-Mar-16	103027	193	501	238	7.8	14	65	48	28.6	9.4	1.3	2.4	<0.05	<0.05	0.1	300	-3.7
19-Sep-16	107511	181	510	248	8.1	15	73	51	29.0	11	1.5	<1	<0.05	<0.05	0.2	340	-0.7
16-Mar-17	111464	177	507	243	8.0	15	60	49	29.2	9.4	1.5	1.6	<0.05	<0.05	0.2	320	1.3
20-Sep-17	116505	186	509	237	8.0	15	68	50	27.4	9.6	1.4	1.4	<0.5	<0.5	0.2	370	-3.2
19-Mar-18	120804	190	511	250	7.8	13	67	54	28.2	10	1.4	2.2	<0.5	<0.5	0.2	310	-0.6
30-Sep-18	126580	182	519	255	7.9	13	68	54	29.2	9.6	1.5	1.6	<0.5	<0.5	0.3	310	1.5
12-Mar-19	130231	184	516	254	8.0	12	68	54	29.0	9.8	1.6	1.2	<0.5	<0.5	0.2	280	1.2
11-Sep-19	135037	182	519	239	8.0	13	67	49	28.3	8.3	1.4	3.4	<0.5	<0.5	0.2	340	-1.8
10-Mar-20	139363	181	512	250	8.0	14	74	54	27.8	9.9	1.5	2.2	<0.5	<0.5	0.3	320	-0.5
13-Sep-20	144100	177	513	242	7.9	12	66	52	27.2	9.9	1.5	<1	<0.5	<0.5	0.2	310	0.8
09-Mar-21	148436	188	517	243	8.1	12	65	53	26.8	9.5	1.5	2.4	<0.5	<0.5	0.2	349	-1.2
06-Oct-21	154475	187	519	252	7.9	12	67	55	27.7	8.5	1.4	1	<0.5	<0.5	0.5	390	0.2
16-Mar-22	158951	189	523	236	7.8	12	67	51	26.7	9.3	1.4	<1	<0.5	<0.5	0.3	270	-3.0
22-Sep-22	164538	189	523	252	7.9	14	70	54	28.6	9.8	1.4	1.4	<0.05	<0.05	0.2	290	-0.9
14-Mar-23	168721	193	491	277	7.8	12	66	59	31.4	10	1.6	1.3	<0.05	<0.05	0.2	370	4.2
12-Sep-23	174123	199			7.7	12	67						<0.05	<0.05	0.2	330	
12-Mar-24	179123	196	495	247	7.9	12	68	54	27.0	9.2	1.4	1.8	<0.05	<0.05	0.2	350	1.3
04-Sep-24	184207	194	503	246	7.5	13	72	53	27.3	8.9	1.6	2.8	<0.05	<0.05	0.2	360	2.3
TOTAL SAMPLES		29	28	28	29	29	29	28	28	28	28	28	29	29	29	29	
AVERAGE 2024		195	499	247	7.7	13	70	54	27.2	9.1	1.5	2.3	<0.05	<0.05	0.2	355	

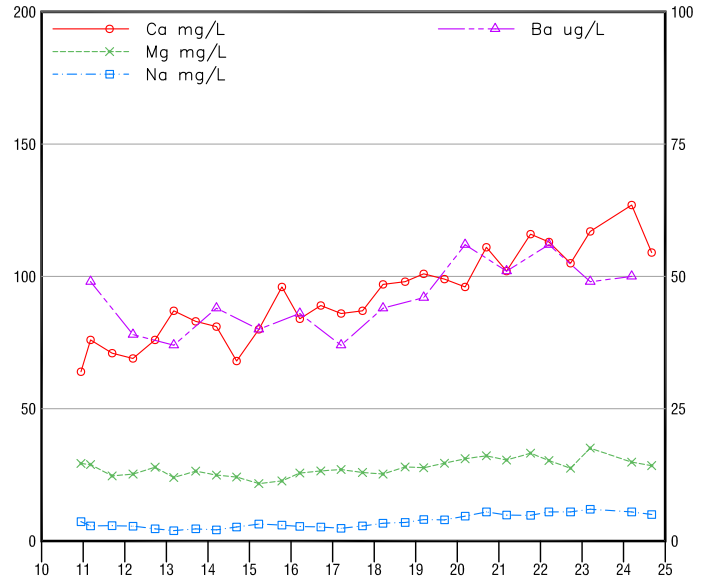
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



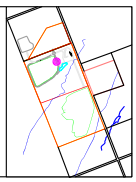








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-110-II

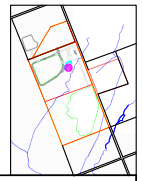
Overburden Formation

CA008825 24 Mar 25	wsp	F124035

BH-110-II

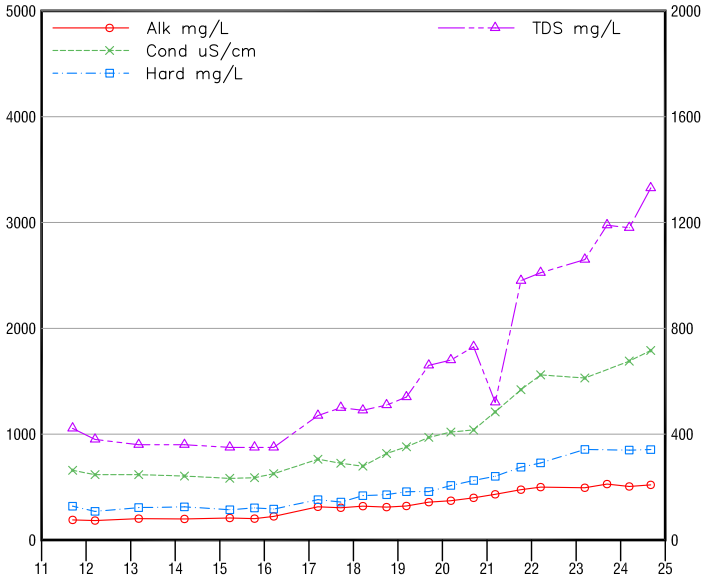
Overburden Formation

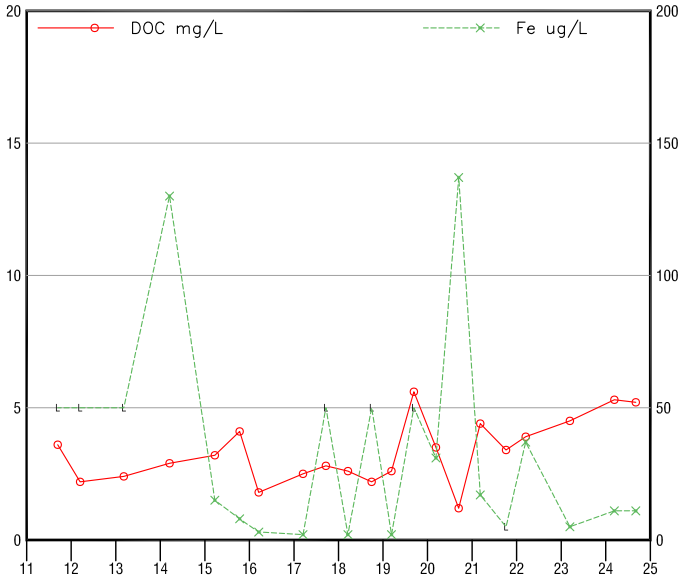
Stand Pipe Piezometer

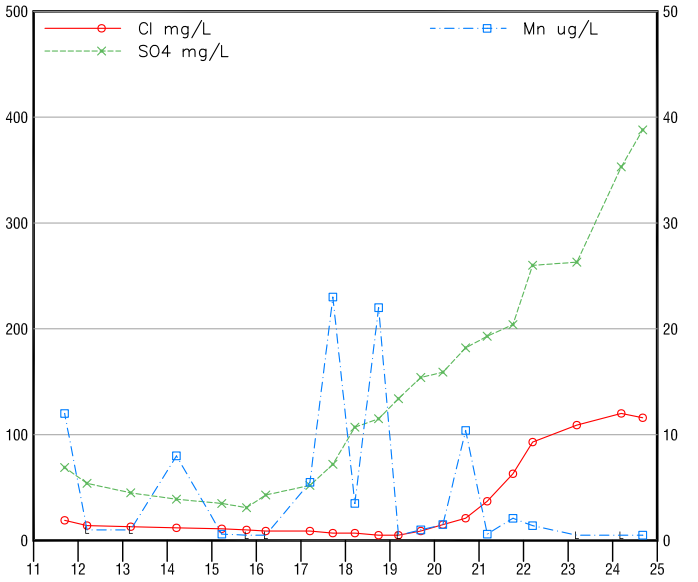


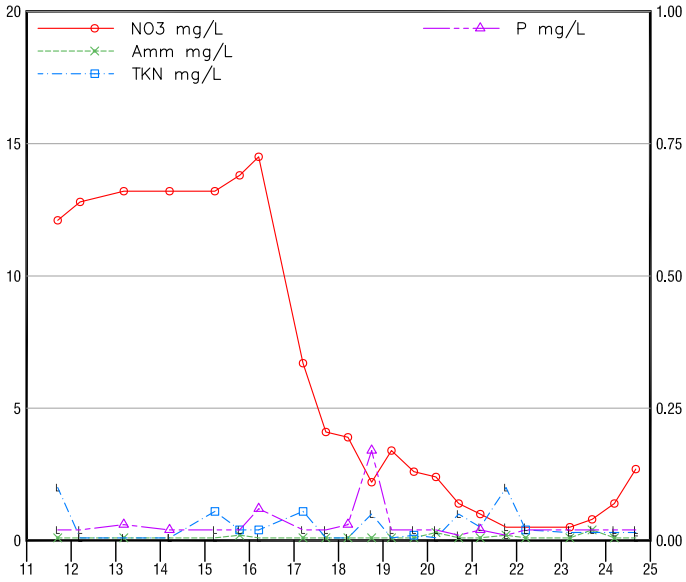
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Dec-10	65625	197	604	281	7.7	19	89	64	29.3	7.3	1.61	<1	<0.05	<0.05	0.2	356	-2.5
07-Mar-11	66787	198	526	310	7.7	17	84	76	28.9	5.7	1.77	1.6	<0.05	<0.05	<0.1	362	2.4
12-Sep-11	70253	206	580	277	7.7	13	81	71	24.6	5.8	1.84	3.1	<0.05	<0.05	0.1	360	-2.5
14-Mar-12	73430	202	574	277	7.7	10	80	69	25.3	5.6	1.84	3	<0.05	<0.05	0.1	380	-1.3
24-Sep-12	77505	223	581	305	7.7	10	73	76	27.9	4.6	1.92	<1	<0.05	<0.05	0.1	350	0.9
07-Mar-13	80739	243	602	316	7.7	10	73	87	24.0	3.9	2.09	<1	0.2	0.13	<0.1	360	-1.1
16-Sep-13	85207	200	584	315	7.9	9	67	83	26.4	4.6	1.9	<1	0.07	<0.05	0.1	360	7.4
17-Mar-14	88490	223	592	304	7.7	10	74	81	24.9	4.2	1.9	1.2	0.1	0.10	<0.1	340	0.1
10-Sep-14	92330	217	638	269	7.6	10	68	68	24.2	5.3	1.7	2.6	<0.05	<0.05	0.2	340	-3.0
24-Mar-15	95920	229	575	289	8.0	13	69	80	21.7	6.4	1.6	1.5	<0.05	<0.05	<0.1	340	-2.2
13-Oct-15	100148	222	640	333	7.7	31	74	96	22.7	6.0	2.1	1.2	<0.05	<0.05	0.2	360	0.8
18-Mar-16	103028	240	610	317	7.6	34	72	84	25.7	5.5	1.9	1.4	<0.05	<0.05	0.1	370	-4.5
19-Sep-16	107512	218	651	330	7.9	38	75	89	26.5	5.3	2.2	<1	0.08	<0.05	0.1	410	-0.7
16-Mar-17	111465	212	646	327	7.6	45	67	86	27.0	4.8	2.1	1.6	<0.05	<0.05	0.1	410	-0.7
20-Sep-17	116506	221	679	324	7.9	50	69	87	25.9	5.7	2	1.8	<0.5	<0.5	0.1	450	-3.4
19-Mar-18	120805	232	605	345	7.6	47	74	97	25.3	6.7	1.9	2.1	<0.5	<0.5	0.1	390	-1.6
30-Sep-18	126581	222	727	359	7.6	51	76	98	28.0	7.0	2.1	<1	<0.5	<0.5	0.1	440	0.5
12-Mar-19	130232	228	741	366	7.7	47	79	101	27.7	8.1	2	3.9	<0.5	<0.5	0.1	370	1.3
11-Sep-19	135038	239	771	369	7.7	54	78	99	29.4	8.0	2	1.7	<0.5	<0.5	0.1	480	-0.9
10-Mar-20	139364	261	802	369	7.6	51	89	96	31.1	9.4	2	2.7	<0.5	<0.5	0.2	460	-4.1
13-Sep-20	144101	275	840	410	7.4	60	88	111	32.2	11	2.2	<1	<0.5	<0.5	0.1	510	-1.5
09-Mar-21	148437	270	827	381	7.7	57	84	102	30.6	9.8	2	3.2	<0.5	<0.5	0.1	410	-3.8
06-Oct-21	154476	278	880	426	7.5	68	84	116	33.2	9.7	2.1	2.7	<0.5	<0.5	0.3	540	-1.1
16-Mar-22	158952	274	879	407	7.3	61	89	113	30.4	11	2	1.5	<0.5	<0.5	0.2	470	-2.0
22-Sep-22	164539	244	877	375	7.6	84	81	105	27.5	11	2.2	1.6	<0.05	<0.05	0.2	440	-5.1
14-Mar-23	168722	251	837	437	7.5	84	84	117	35.1	12	2.2	1.7	<0.05	<0.05	0.1	590	0.9
12-Sep-23	174124	262			7.4	71	92						<0.05	<0.05	0.4	490	
12-Mar-24	179124	247	780	440	7.5	75	89	127	29.8	11	2.1	2.2	<0.05	<0.05	0.1	500	3.4
04-Sep-24	184208	249	790	390	7.2	72	97	109	28.5	10	2.1	1.8	<0.05	<0.05	<0.1	590	3.1
TOTAL SAMPLES		29	28	28	29	29	29	28	28	28	28	28	29	29	29	29	
AVERAGE 2024		248	785	415	7.4	74	93	118	29.2	11	2.1	2.0	<0.05	<0.05	<0.1	545	

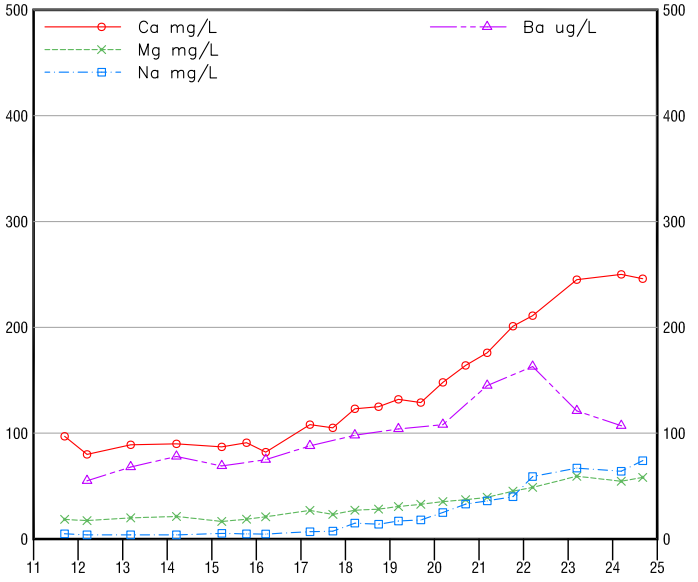
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



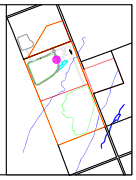








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-110-III

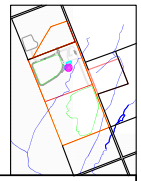
Shallow Overburden

CA008825 24 Mar 25	wsp	F124036

BH-110-III

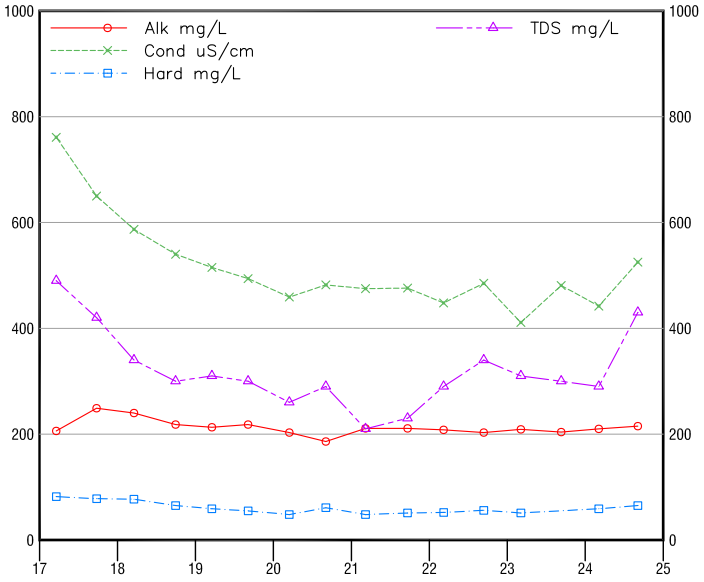
Shallow Overburden

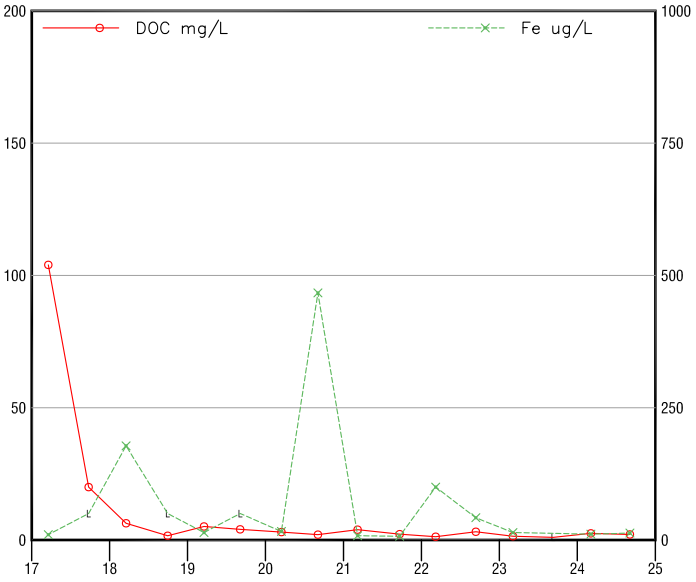
Monitoring Well

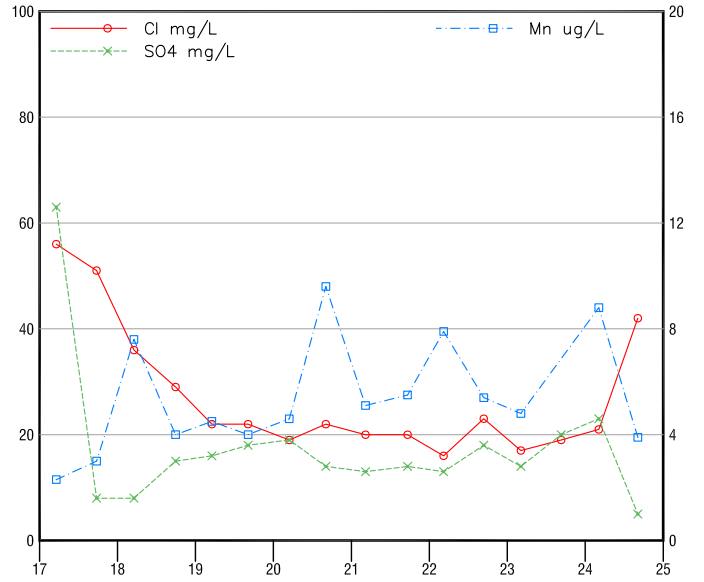


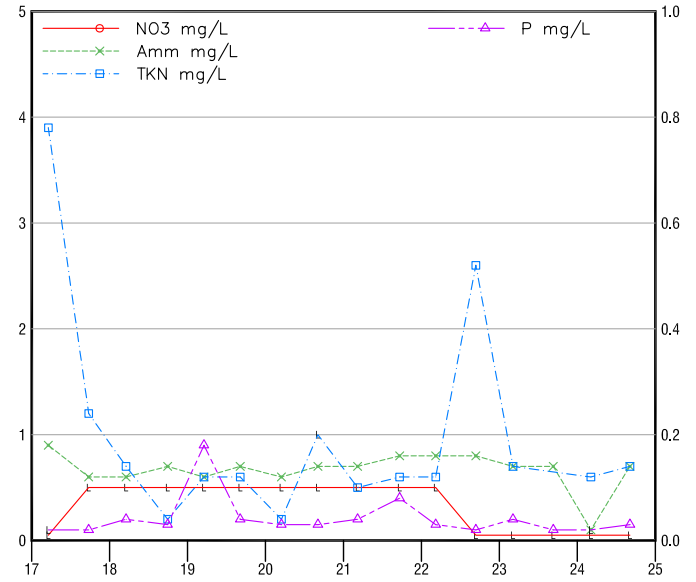
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
12-Sep-11	70254	189	658	319	7.7	19	69	97	18.5	4.9	3.7	3.6	**12.1**	<0.05	0.1	422	0.6
14-Mar-12	73431	184	617	270	7.8	14	54	80	17.4	3.9	2.41	2.2	**12.8**	<0.05	<0.1	380	-4.0
07-Mar-13	80740	201	617	306	7.9	13	45	89	20.0	3.9	1.94	2.4	**13.2**	<0.05	0.1	360	0.6
17-Mar-14	88491	198	604	313	7.8	12	39	90	21.3	3.9	1.8	2.9	**13.2**	<0.05	<0.1	360	3.4
24-Mar-15	95922	208	582	286	8.1	11	35	87	16.6	5.3	1.5	3.2	**13.2**	<0.05	<0.1	350	-1.3
13-Oct-15	100149	202	588	303	7.6	10	31	91	18.7	4.8	1.7	4.1	**13.8**	<0.05	0.2	350	3.0
18-Mar-16	103029	223	626	292	7.6	9	43	82	21.0	4.7	1.4	1.8	**14.5**	<0.05	<0.1	350	-4.5
16-Mar-17	111466	314	763	381	7.6	9	52	108	27.0	6.9	1.9	2.5	6.7	0.13	0.1	470	-0.7
20-Sep-17	116507	305	725	358	7.5	7	72	105	23.2	7.4	1.9	2.8	4.1	0.56	0.1	500	-3.4
19-Mar-18	120806	320	697	419	7.5	7	107	123	27.2	15	1.8	2.6	3.9	<0.5	0.1	490	-0.2
30-Sep-18	126582	311	817	428	7.4	5	115	125	28.2	14	2.2	2.2	2.2	<0.5	0.1	510	1.7
12-Mar-19	130233	321	880	456	7.6	5	134	132	30.7	17	1.8	2.6	3.4	<0.5	0.1	540	1.6
11-Sep-19	135039	358	969	457	7.5	9	154	129	32.8	18	2	**5.6**	2.6	<0.5	0.1	660	-4.0
10-Mar-20	139365	371	1020	515	7.6	15	159	148	35.3	25	2.1	3.5	2.4	<0.5	0.3	680	0.7
13-Sep-20	144102	398	1040	562	7.3	21	182	164	37.1	33	2.5	1.2	1.4	<0.5	0.1	730	1.3
09-Mar-21	148438	431	1210	602	7.5	37	193	176	39.4	36	2.1	4.4	1.0	<0.5	0.1	520	-0.4
06-Oct-21	154478	476	1420	688	7.2	63	204	201	45.2	40	2.4	3.4	<0.5	<0.5	0.2	980	0.0
16-Mar-22	158953	500	1560	728	7.1	93	260	211	48.8	59	2.2	3.9	<0.5	<0.5	0.1	1010	-2.5
14-Mar-23	168723	494	1530	856	7.2	109	263	245	59.3	67	2.4	4.5	0.5	<0.05	0.1	1060	4.3
12-Sep-23	174125	528			7.0								0.8	<0.05	0.4	1190	
12-Mar-24	179125	506	1690	849	7.1	120	353	250	54.6	64	2.4	**5.3**	1.4	<0.05	0.1	1180	1.8
04-Sep-24	184209	521	1790	854	6.9	116	388	246	58.2	74	2.9	**5.2**	2.7	<0.05	<0.1	1330	2.8
TOTAL SAMPLES		22	21	21	22	21	21	21	21	21	21	21	22	22	22	22	
AVERAGE 2024		514	1740	852	7.0	118	371	248	56.4	69	2.7	5.25	2.1	<0.05	<0.1	1255	

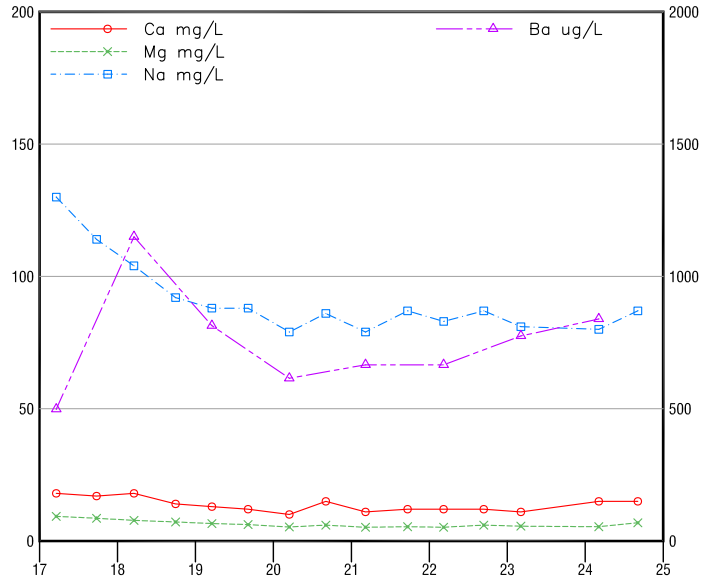
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-111-I

Overburden Formation

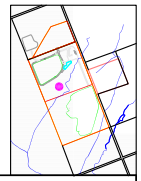
Screen 186.3 - 184.8 masl

CA008825 24 Mar 25	wsp	F124037

BH-111-I

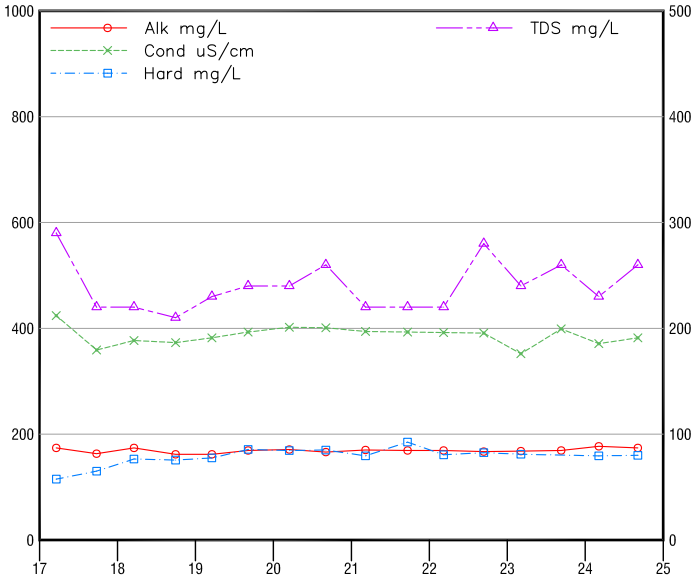
Overburden Formation

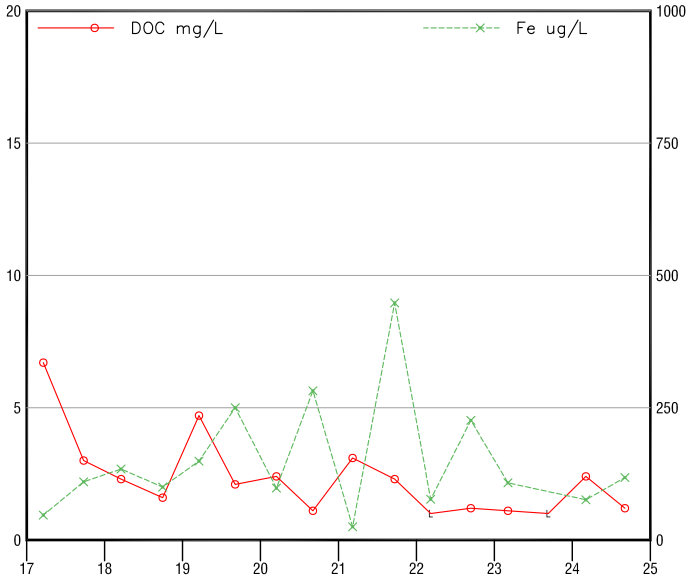
Stand Pipe Piezometer
Screen 186.3 - 184.8 masl

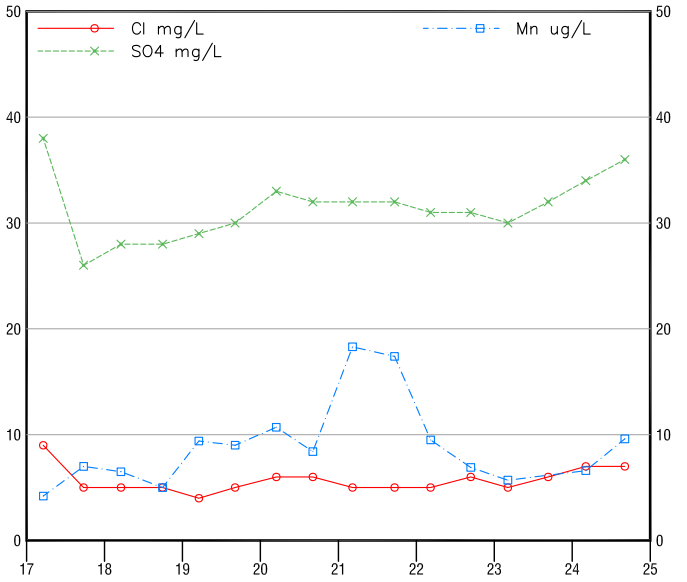


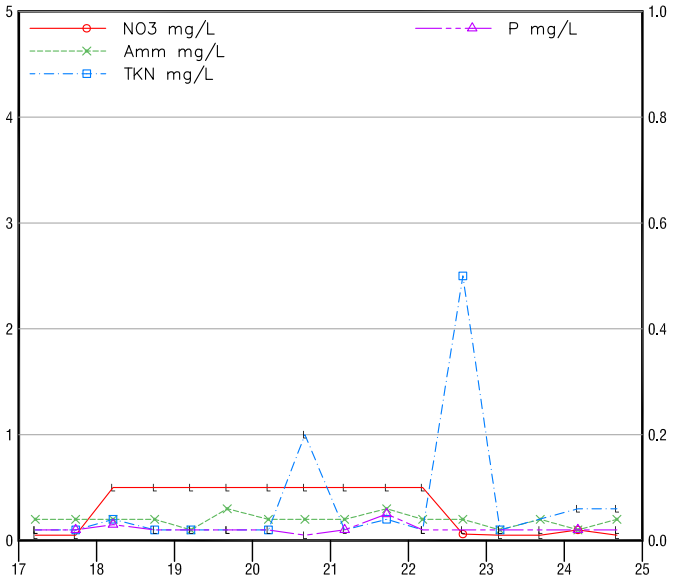
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Mar-17	111704	206	761	82	8.8	56	63	18	9.3	130	6.8	**104**	<0.05	<0.05	0.9	490	3.5
25-Sep-17	116636	249	650	78	8.8	51	8	17	8.6	114	4.1	**20**	<0.5	<0.5	0.6	420	0.7
19-Mar-18	120810	240	587	77	8.6	36	8	18	7.8	104	4.4	**6.3**	<0.5	<0.5	0.6	340	2.0
30-Sep-18	126589	218	540	65	8.5	29	15	14	7.2	92	3.8	1.6	<0.5	<0.5	0.7	300	−0.2
19-Mar-19	130439	213	515	59	8.7	22	16	13	6.6	88	3.6	**5.1**	<0.5	<0.5	0.6	310	−0.8
05-Sep-19	134881	218	494	55	8.8	22	18	12	6.2	88	3.8	4	<0.5	<0.5	0.7	300	−2.6
16-Mar-20	139465	203	459	48	8.7	19	19	10	5.3	79	3.3	3	<0.5	<0.5	0.6	260	−5.1
03-Sep-20	143902	186	482	61	8.6	22	14	15	6.0	86	4.5	2	<0.5	<0.5	0.7	290	5.2
08-Mar-21	148380	211	475	48	8.7	20	13	11	5.2	79	3.3	3.9	<0.5	<0.5	0.7	210	−5.1
21-Sep-21	153894	211	476	51	8.7	20	14	12	5.4	87	4	2.2	<0.5	<0.5	0.8	230	−1.0
09-Mar-22	158661	208	448	52	8.7	16	13	12	5.2	83	3.5	1.2	<0.5	<0.5	0.8	290	−0.6
13-Sep-22	164240	203	485	56	8.5	23	18	12	6.0	87	3.6	3.1	<0.05	<0.05	0.8	340	−0.3
06-Mar-23	168495	209	411	51	8.7	17	14	11	5.6	81	3.6	1.4	<0.05	<0.05	0.7	310	−2.5
11-Sep-23	174074	204	481		8.2	19	20					<1	<0.05	<0.05	0.7	300	
05-Mar-24	178939	210	442	59	8.3	21	23	15	5.4	80	3.4	2.5	<0.05	<0.05	0.1	290	3.7
04-Sep-24	184210	215	525	65	8.2	42	5	15	6.9	87	4.1	2.1	<0.05	<0.05	0.7	430	1.8
TOTAL SAMPLES		16	16	15	16	16	16	15	15	15	15	16	16	16	16	16	
AVERAGE 2024		213	484	62	8.3	32	14	15	6.2	84	3.8	2.3	<0.05	<0.05	0.4	360	

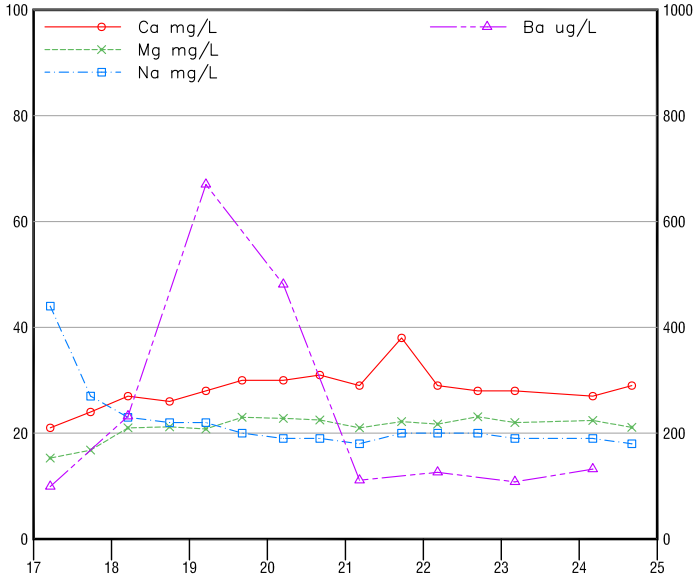
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



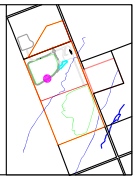








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-111-II

Overburden Formation

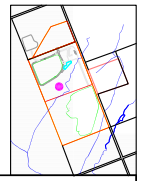
Screen 188.2 - 186.7 masl

CA008825 24 Mar 25	wsp	F124038

BH-111-II

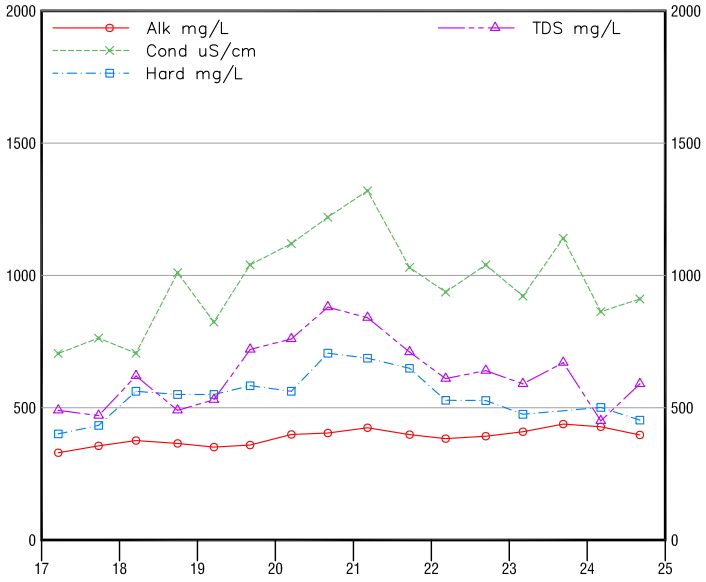
Overburden Formation

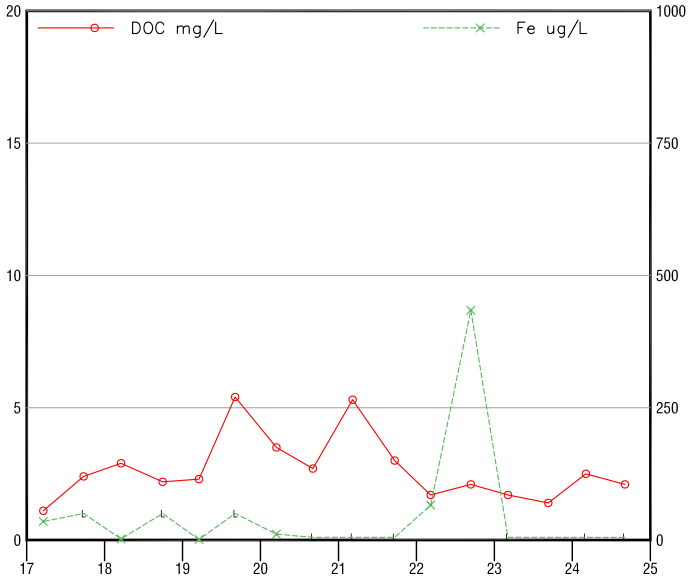
Stand Pipe Piezometer
Screen 188.2 - 186.7 masl

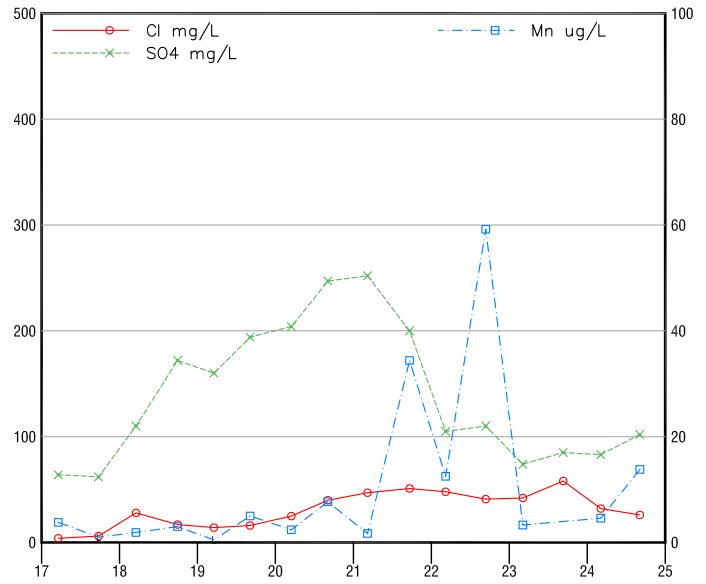


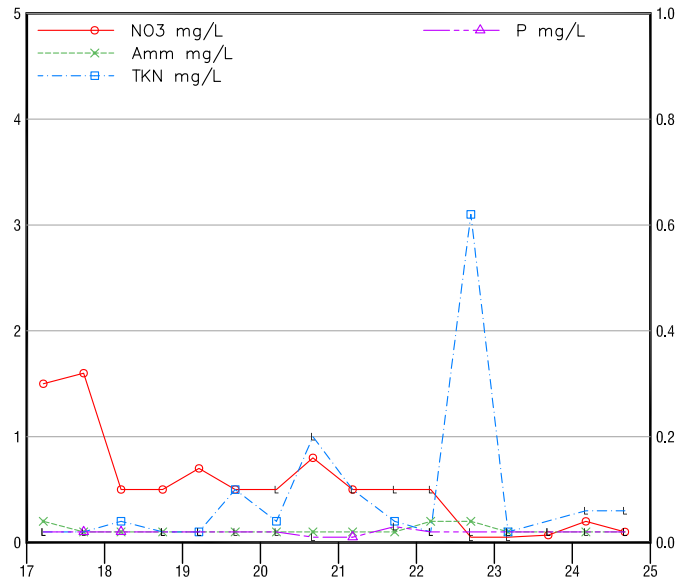
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Mar-17	111705	174	424	115	8.3	9	38	21	15.3	44	2.8	**6.7**	<0.05	<0.05	0.2	290	-2.5
25-Sep-17	116637	163	359	130	8.2	5	26	24	16.8	27	1.4	3	<0.05	<0.05	0.2	220	-1.3
19-Mar-18	120811	174	377	153	8.2	5	28	27	21.0	23	1.2	2.3	<0.5	<0.5	0.2	220	-1.1
30-Sep-18	126590	162	373	151	8.1	5	28	26	21.2	22	1.1	1.6	<0.5	<0.5	0.2	210	0.9
19-Mar-19	130440	162	382	155	8.2	4	29	28	20.8	22	1.8	4.7	<0.5	<0.5	0.1	230	1.6
05-Sep-19	134882	169	393	171	8.2	5	30	30	23.0	20	1.4	2.1	<0.5	<0.5	0.3	240	2.5
16-Mar-20	139466	171	402	169	8.1	6	33	30	22.8	19	1.4	2.4	<0.5	<0.5	0.2	240	-0.5
03-Sep-20	143903	166	401	170	8.1	6	32	31	22.5	19	1.4	1.1	<0.5	<0.5	0.2	260	1.9
08-Mar-21	148381	170	394	159	8.1	5	32	29	21.0	18	1.2	3.1	<0.5	<0.5	0.2	220	-2.5
21-Sep-21	153895	169	393	185	8.1	5	32	38	22.2	20	1.5	2.3	<0.5	<0.5	0.3	220	5.1
09-Mar-22	158662	169	392	161	8.1	5	31	29	21.7	20	1.2	<1	<0.5	<0.5	0.2	220	-0.7
13-Sep-22	164241	167	391	165	8.0	6	31	28	23.1	20	1.2	1.2	0.06	<0.05	0.2	280	0.8
06-Mar-23	168496	168	352	162	8.2	5	30	28	22.0	19	1.2	1.1	<0.05	<0.05	0.1	240	-0.4
11-Sep-23	174075	169	399		8.0	6	32					<1	<0.05	<0.05	0.2	260	
05-Mar-24	178940	177	371	159	8.0	7	34	27	22.4	19	1.3	2.4	0.1	<0.05	0.1	230	3.2
04-Sep-24	184211	174	382	160	7.7	7	36	29	21.1	18	1.2	1.2	<0.05	<0.05	0.2	260	3
TOTAL SAMPLES		16	16	15	16	16	16	15	15	15	15	16	16	16	16	16	
AVERAGE 2024		176	377	160	7.9	7	35	28	21.8	19	1.3	1.8	0.1	<0.05	0.2	245	

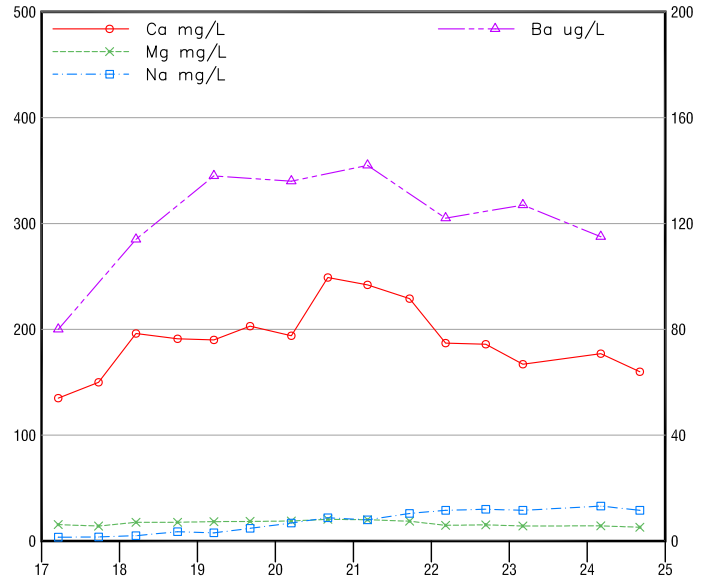
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-111-III

Shallow Overburden

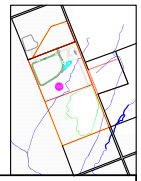
Screen 196.1 - 193.1 masl

CA008825 24 Mar 25	wsp	F124039

BH-111-III

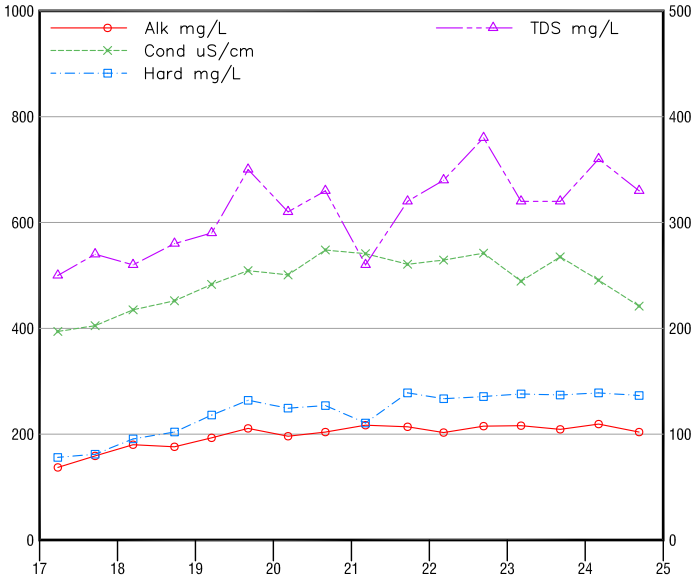
Shallow Overburden

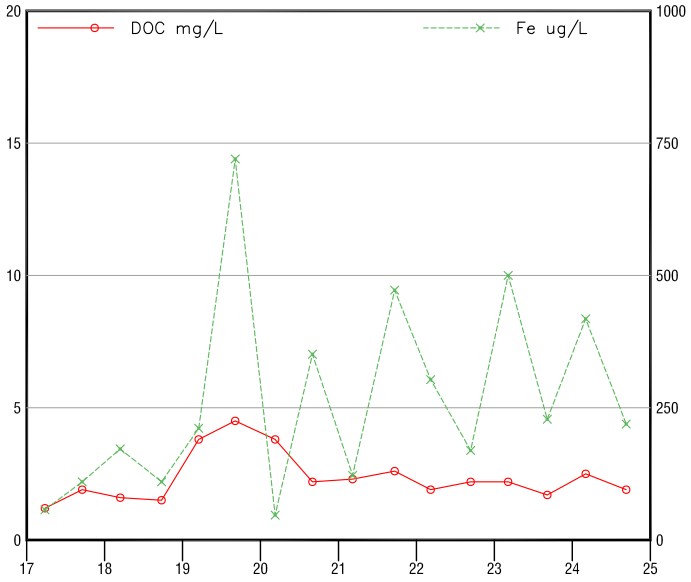
Monitoring Well
Screen 196.1 - 193.1 masl

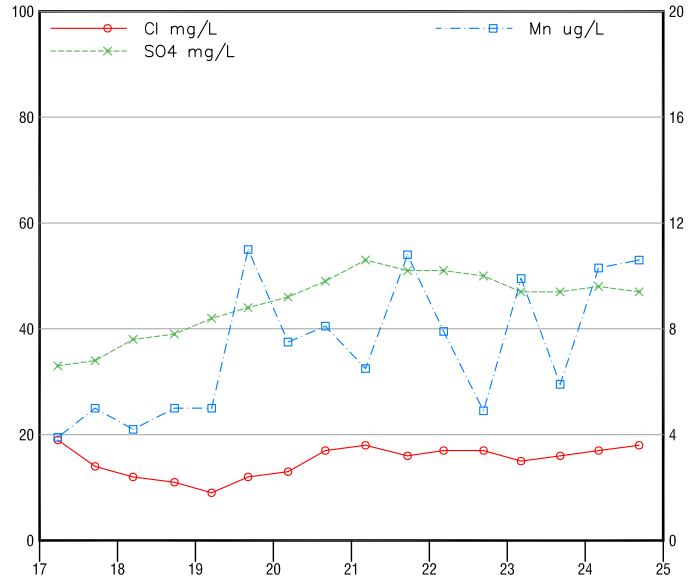


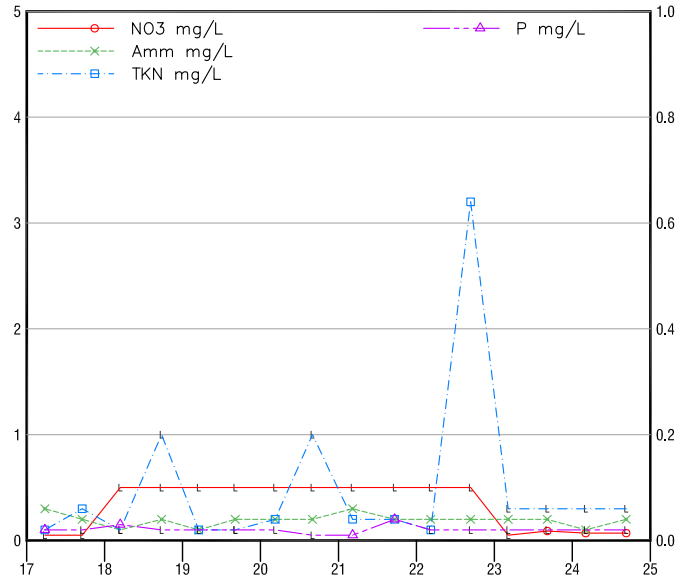
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Mar-17	111706	330	705	401	7.5	4	64	135	15.5	3.6	1.2	1.1	1.5	<0.05	0.2	490	0.4
25-Sep-17	116638	356	763	433	7.6	6	62	150	14.1	3.8	1.1	2.4	1.6	<0.5	0.1	470	0.8
19-Mar-18	120812	376	706	562	7.3	28	110	196	17.7	5.0	1	2.9	0.5	<0.5	0.1	620	3.9
30-Sep-18	126591	365	1010	550	7.3	17	172	191	17.7	8.8	1.3	2.2	0.5	<0.5	0.1	490	0.1
19-Mar-19	130441	351	824	550	7.4	14	160	190	18.3	7.7	1.2	2.3	0.7	<0.5	<0.1	530	2.5
05-Sep-19	134883	359	1040	583	7.4	16	194	203	18.5	12	1.3	**5.4**	0.5	<0.5	0.1	720	2.1
16-Mar-20	139467	399	1120	562	7.4	25	204	194	18.9	17	1.2	3.5	<0.5	<0.5	0.1	760	-3.7
03-Sep-20	143904	404	1220	706	7.1	40	247	249	20.5	22	1.6	2.7	0.8	<0.5	0.1	880	2.4
08-Mar-21	148382	424	1320	687	7.3	47	252	242	20.1	20	1.3	**5.3**	0.5	<0.5	0.1	840	-1.5
21-Sep-21	153896	398	1030	649	7.3	51	200	229	18.7	26	1.6	3	<0.5	<0.5	0.1	710	2.1
09-Mar-22	158663	383	937	528	7.2	48	105	187	14.8	29	1.3	1.7	<0.5	<0.5	0.2	610	3.0
13-Sep-22	164242	392	1040	527	7.2	41	110	186	15.3	30	1.6	2.1	<0.05	<0.05	0.2	640	2.7
06-Mar-23	168497	409	922	475	7.5	42	74	167	14.2	29	1.2	1.7	<0.05	<0.05	0.1	590	-0.5
11-Sep-23	174076	438	1140		7.1	58	85					1.4	0.07	<0.05	<0.1	670	
05-Mar-24	178941	428	863	501	7.2	32	83	177	14.3	33	1.2	2.5	0.2	<0.05	0.1	450	2.6
04-Sep-24	184212	397	911	453	7.1	26	102	160	13.0	29	1.3	2.1	0.1	<0.05	<0.1	590	0.8
TOTAL SAMPLES		16	16	15	16	16	16	15	15	15	15	16	16	16	16	16	
AVERAGE 2024		413	887	477	7.2	29	93	169	13.7	31	1.3	2.3	0.2	<0.05	<0.1	520	

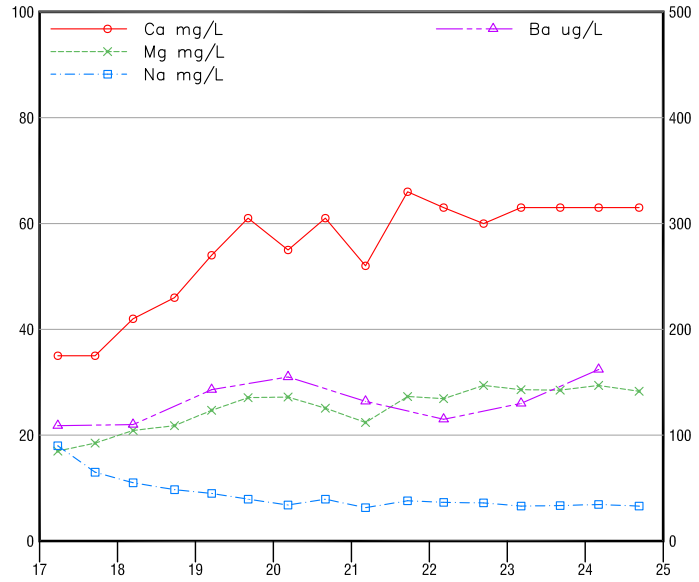
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-112-I

Overburden Formation

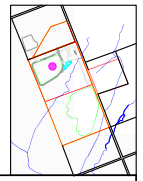
Screen 190.9 - 189.3 masl

CA008825 24 Mar 25	wsp	F124040

BH-112-I

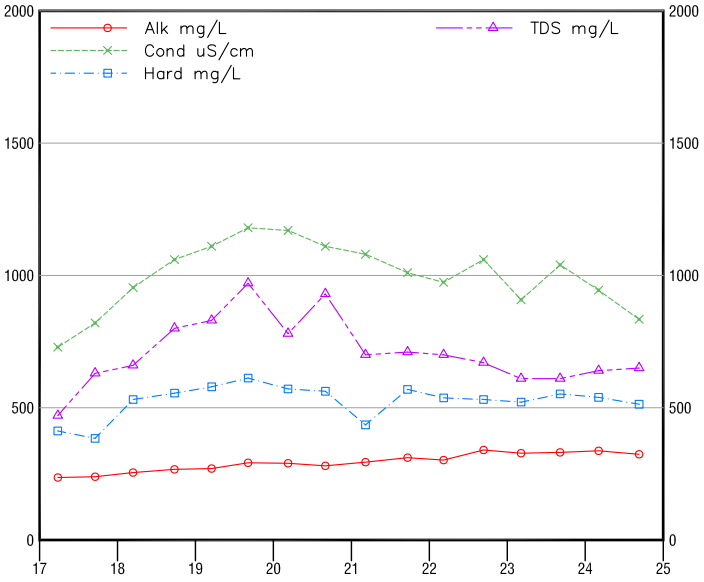
Overburden Formation

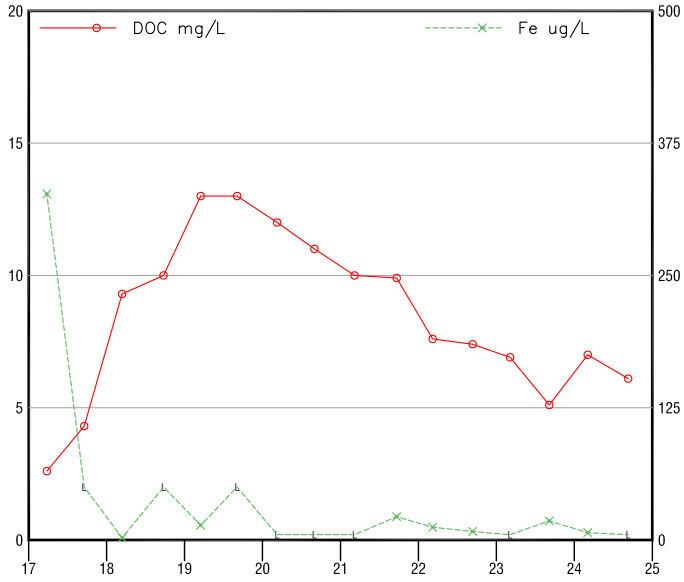
Stand Pipe Piezometer
Screen 190.9 - 189.3 masl

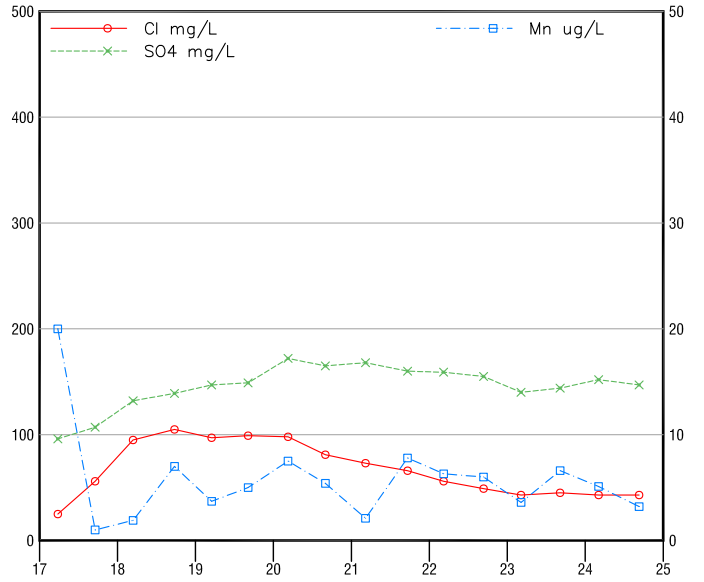


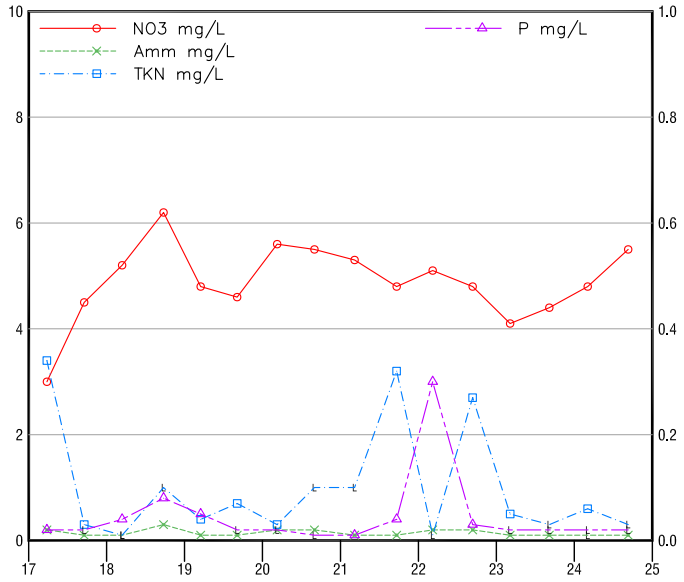
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Mar-17	111803	137	394	156	8.1	19	33	35	17.0	18	7.9	1.2	<0.05	<0.05	0.3	250	2.0
18-Sep-17	116456	159	405	162	8.1	14	34	35	18.5	13	7.1	1.9	<0.05	<0.05	0.2	270	-3.2
15-Mar-18	120686	180	435	191	7.9	12	38	42	20.9	11	5.5	1.6	<0.5	<0.5	<0.1	260	-2.8
25-Sep-18	126484	176	452	204	7.9	11	39	46	21.8	9.7	4.7	1.5	<0.5	<0.5	0.2	280	0.1
18-Mar-19	130363	193	483	236	8.1	9	42	54	24.7	9.0	3.8	3.8	<0.5	<0.5	0.1	290	2.4
05-Sep-19	134884	211	509	264	7.9	12	44	61	27.1	7.9	2.5	4.5	<0.5	<0.5	0.2	350	2.4
10-Mar-20	139366	196	501	249	8.1	13	46	55	27.2	6.8	3.2	3.8	<0.5	<0.5	0.2	310	1.1
01-Sep-20	143844	204	548	254	7.9	17	49	61	25.1	7.9	2.8	2.2	<0.5	<0.5	0.2	330	-0.4
08-Mar-21	148377	217	541	221	7.8	18	53	52	22.4	6.3	2	2.3	<0.5	<0.5	0.3	260	-11.0
21-Sep-21	153897	214	521	278	7.9	16	51	66	27.3	7.6	2.5	2.6	<0.5	<0.5	0.2	320	1.6
09-Mar-22	158658	203	529	267	7.9	17	51	63	26.9	7.3	2.2	1.9	<0.5	<0.5	0.2	340	1.2
12-Sep-22	164197	215	542	271	7.9	17	50	60	29.4	7.2	2.2	2.2	<0.5	<0.5	0.2	380	0.0
07-Mar-23	168538	216	489	276	7.9	15	47	63	28.6	6.6	2.2	2.2	<0.05	<0.05	0.2	320	1.3
06-Sep-23	173963	209	535	274	7.9	16	47	63	28.5	6.7	2.2	1.7	0.09	<0.05	0.2	320	2.1
04-Mar-24	178894	219	491	278	7.9	17	48	63	29.4	6.9	2.6	2.5	0.07	<0.05	0.1	360	2.0
10-Sep-24	184338	204	442	273	7.7	18	47	63	28.3	6.6	2.4	1.9	0.07	<0.05	0.2	330	3.7
TOTAL SAMPLES		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
AVERAGE 2024		212	467	276	7.8	18	48	63	28.9	6.8	2.5	2.2	0.07	<0.05	0.2	345	

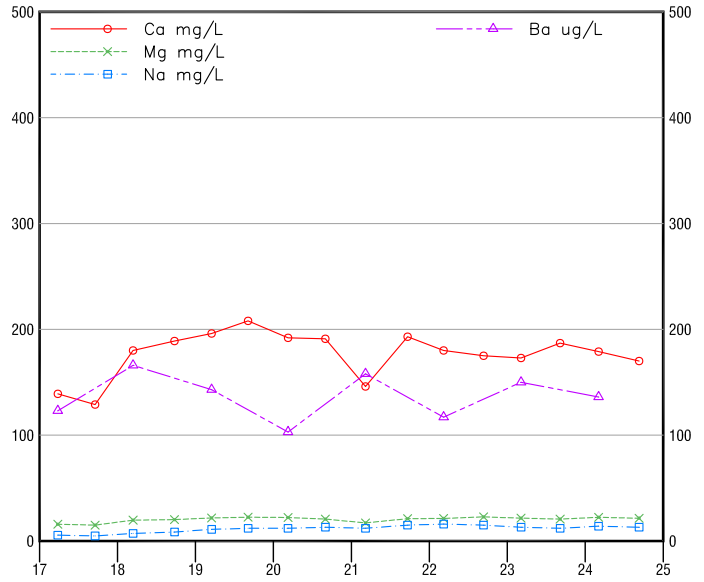
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



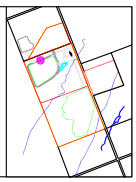








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-112-II

Overburden Formation

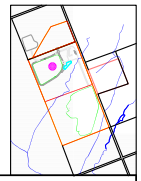
Screen 196.5 - 194.9 masl

CA008825 24 Mar 25	wsp	F124041

BH-112-II

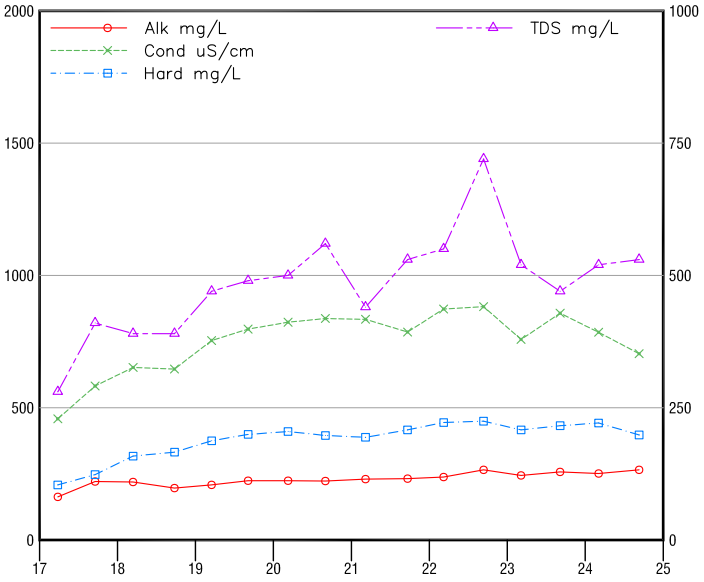
Overburden Formation

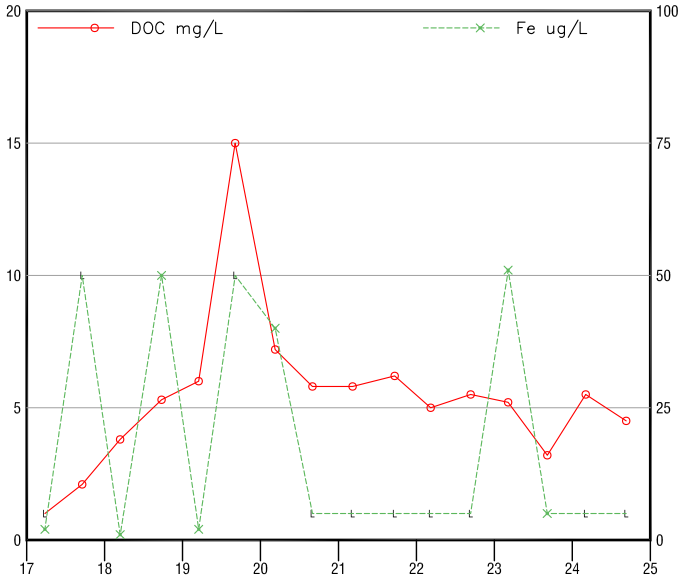
Stand Pipe Piezometer
Screen 196.5 - 194.9 masl

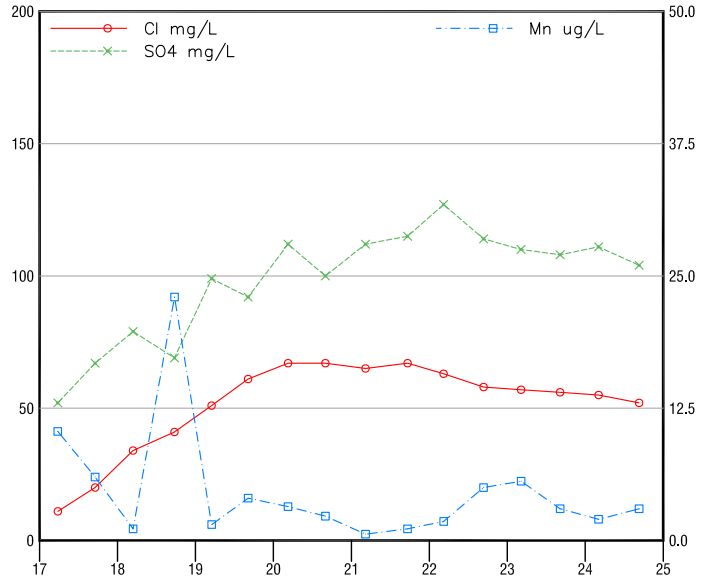


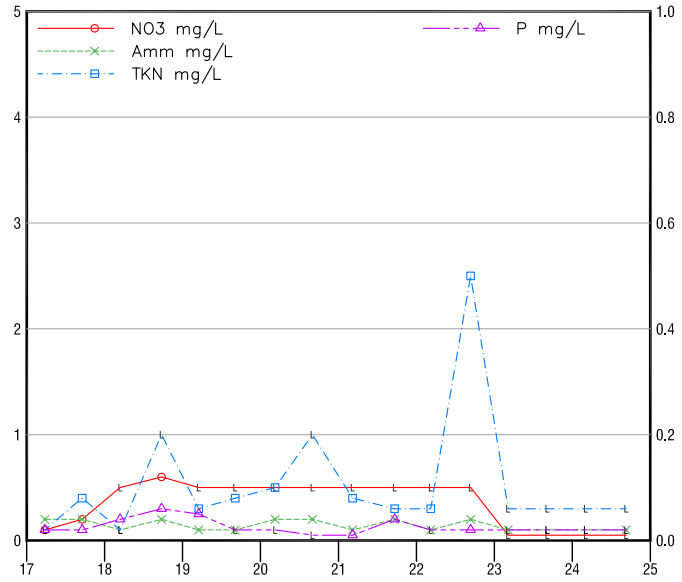
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Mar-17	111804	236	729	412	7.5	25	96	139	15.8	5.5	1.4	2.6	3.0	<0.05	0.2	470	5.6
18-Sep-17	116457	239	820	384	7.7	56	107	129	15.0	4.8	1.2	4.3	4.5	<0.05	0.1	630	-5.9
15-Mar-18	120687	255	954	531	7.4	95	132	180	19.7	7.2	1.2	**9.3**	5.2	<0.5	<0.1	660	0.2
25-Sep-18	126485	267	1060	555	7.4	105	139	189	20.2	8.5	1.3	**10**	6.2	<0.5	0.3	800	-0.5
18-Mar-19	130364	270	1110	579	7.6	97	147	196	21.8	11	1.5	**13**	4.8	<0.5	0.1	830	2.3
05-Sep-19	134885	292	1180	612	7.4	99	149	208	22.5	12	1.5	**13**	4.6	<0.5	0.1	970	2.9
10-Mar-20	139367	290	1170	571	7.5	98	172	192	22.2	12	1.6	**12**	5.6	<0.5	0.2	780	-2.3
01-Sep-20	143845	280	1110	562	7.4	81	165	191	20.7	13	1.7	**11**	5.5	<0.5	0.2	930	0.7
08-Mar-21	148378	294	1080	435	7.4	73	168	146	17.1	12	1.1	**10**	5.3	<0.5	0.1	700	-12.2
21-Sep-21	153898	311	1010	569	7.4	66	160	193	21.1	15	1.6	**9.9**	4.8	<0.5	0.1	710	1.5
09-Mar-22	158659	302	974	537	7.3	56	159	180	21.3	16	1.5	**7.6**	5.1	<0.5	0.2	700	0.8
12-Sep-22	164198	340	1060	531	7.3	49	155	175	22.8	15	1.4	**7.4**	4.8	<0.5	0.2	670	-2.0
07-Mar-23	168539	328	908	521	7.5	43	140	173	21.6	13	1.4	**6.9**	4.1	<0.05	0.1	610	0.2
06-Sep-23	173964	331	1040	552	7.3	45	144	187	20.7	12	1.4	**5.1**	4.4	<0.05	0.1	610	1.8
04-Mar-24	178895	337	944	539	7.3	43	152	179	22.4	14	1.4	**7**	4.8	<0.05	<0.1	640	0.9
10-Sep-24	184339	324	834	513	7.2	43	147	170	21.5	13	1.5	**6.1**	5.5	<0.05	0.1	650	0.0
TOTAL SAMPLES		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
AVERAGE 2024		331	889	526	7.3	43	150	175	22.0	14	1.5	7	5.2	<0.05	<0.1	645	

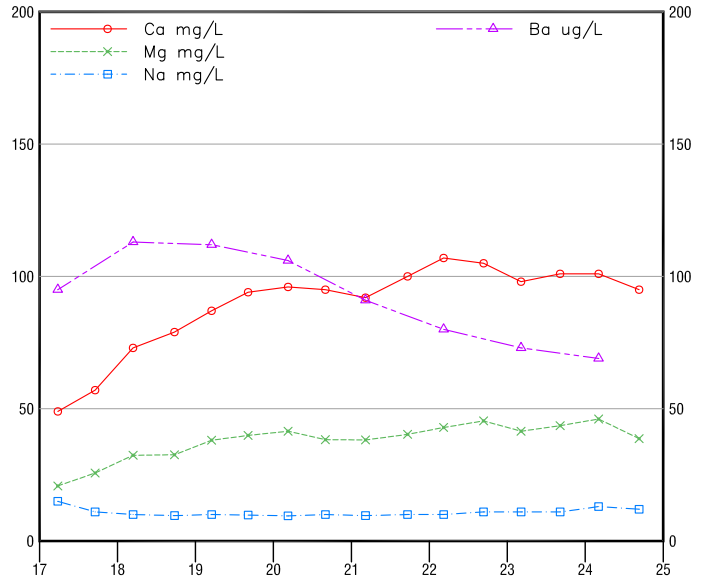
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



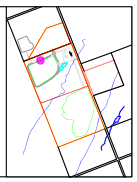








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-112-III

Shallow Overburden

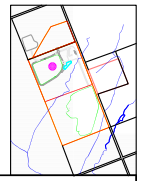
Screen 203.9 - 200.9 masl

CA008825 24 Mar 25	wsp	F124042

BH-112-III

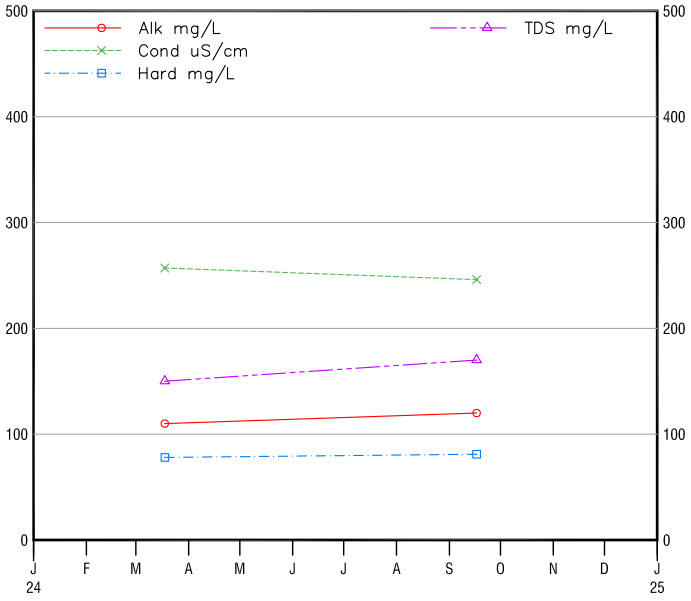
Shallow Overburden

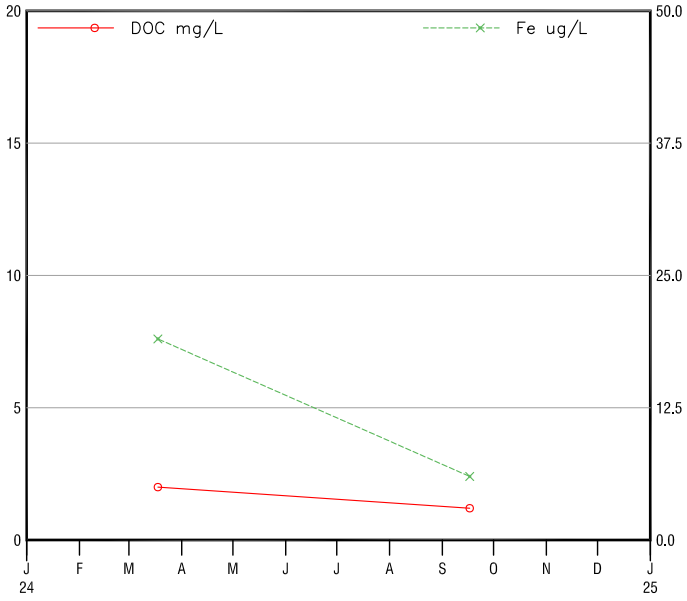
Monitoring Well
Screen 203.9 - 200.9 masl

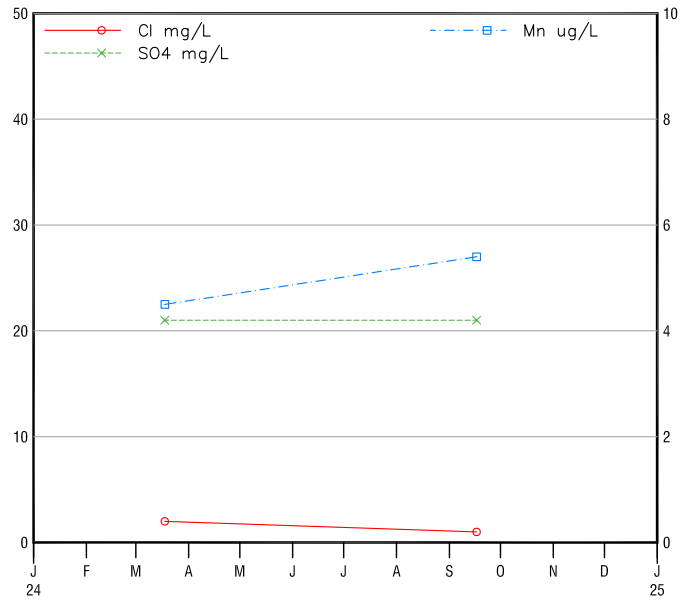


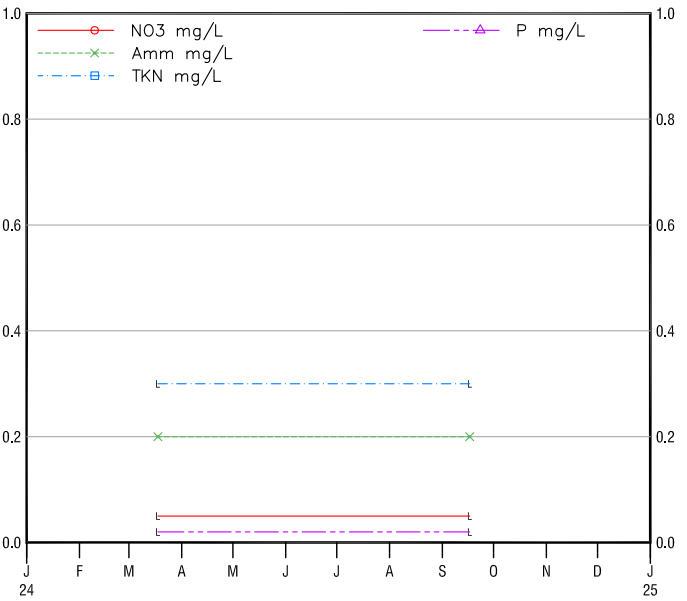
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Mar-17	111805	163	458	208	8.0	11	52	49	20.8	15	5	<1	0.1	<0.05	0.2	280	3.0
18-Sep-17	116458	221	582	247	8.1	20	67	57	25.7	11	4.7	2.1	0.2	<0.05	0.2	410	-7.0
15-Mar-18	120688	219	652	317	7.8	34	79	73	32.4	10	3.6	3.8	<0.5	<0.5	<0.1	390	-0.8
25-Sep-18	126486	196	646	332	7.8	41	69	79	32.6	9.6	3.7	**5.3**	0.6	<0.5	0.2	390	4.5
18-Mar-19	130365	208	754	375	8.1	51	99	87	38.1	10	3.6	**6**	<0.5	<0.5	0.1	470	2.4
05-Sep-19	134886	224	797	399	7.8	61	92	94	39.9	9.8	3.6	**15**	<0.5	<0.5	0.1	490	2.3
10-Mar-20	139368	224	823	410	8.0	67	112	96	41.5	9.5	3.4	**7.2**	<0.5	<0.5	0.2	500	0.0
01-Sep-20	143846	223	837	395	7.7	67	100	95	38.3	10	3.7	**5.8**	<0.5	<0.5	0.2	560	0.1
08-Mar-21	148379	230	834	388	7.8	65	112	92	38.2	9.6	3.2	**5.8**	<0.5	<0.5	0.1	440	-2.9
21-Sep-21	153899	232	786	416	7.8	67	115	100	40.3	10	3.6	**6.2**	<0.5	<0.5	0.2	530	-0.4
09-Mar-22	158660	238	873	444	8.7	63	127	107	42.9	10	3.2	5	<0.5	<0.5	0.1	550	1.3
12-Sep-22	164199	265	882	449	7.6	58	114	105	45.4	11	3.1	**5.5**	<0.5	<0.5	0.2	720	1.2
07-Mar-23	168540	244	758	416	8.0	57	110	98	41.5	11	3.1	**5.2**	<0.05	<0.05	0.1	520	0.6
06-Sep-23	173965	257	857	432	7.8	56	108	101	43.6	11	3.2	3.2	<0.05	<0.05	<0.1	470	1.4
04-Mar-24	178896	251	785	442	7.8	55	111	101	46.1	13	2.8	**5.5**	<0.05	<0.05	<0.1	520	4.3
10-Sep-24	184340	265	704	397	7.4	52	104	95	38.7	12	2.9	4.5	<0.05	<0.05	0.1	530	0.9
TOTAL SAMPLES		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
AVERAGE 2024		258	745	420	7.6	54	108	98	42.4	13	2.9	5.00	<0.05	<0.05	<0.1	525	

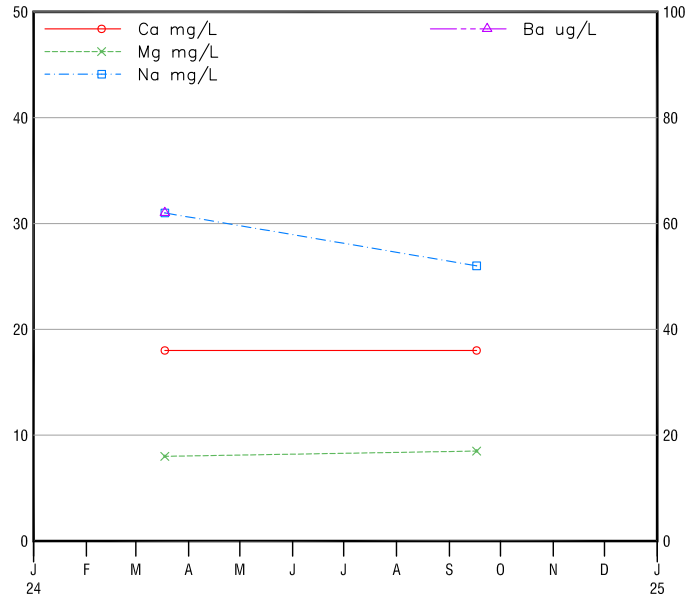
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-114-I

Lower Screened Overburden

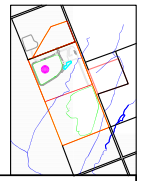
Screen 191.1 - 189.6 masl

CA008825 24 Mar 25	wsp	F124043

BH-114-I

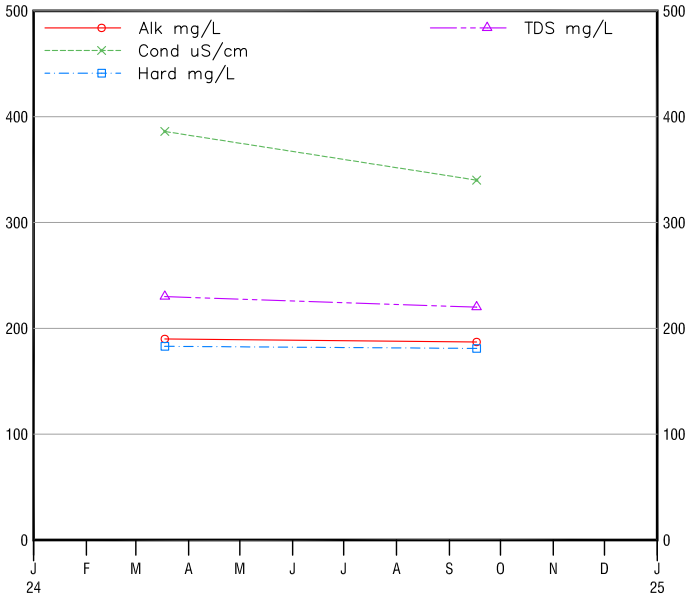
Lower Screened Overburden

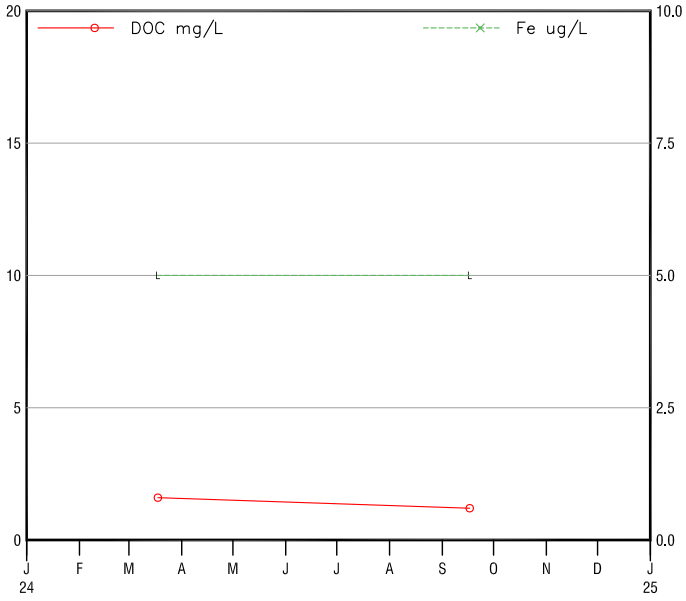
Monitoring Well
Screen 191.1 - 189.6 masl

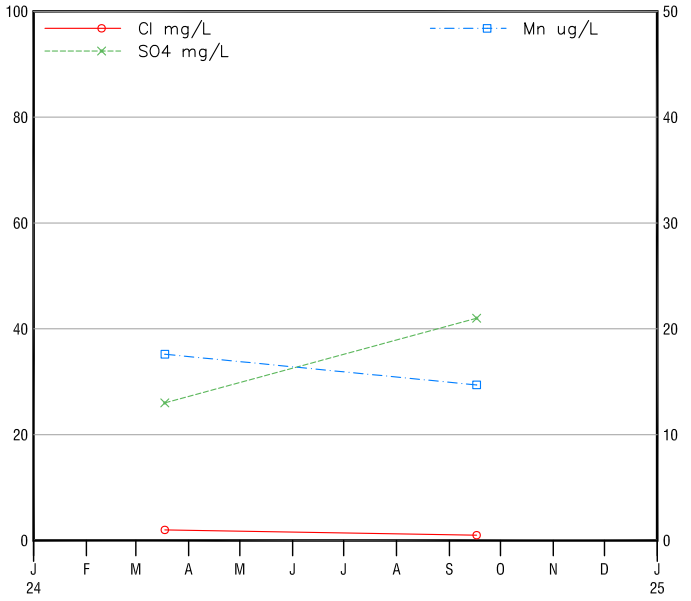


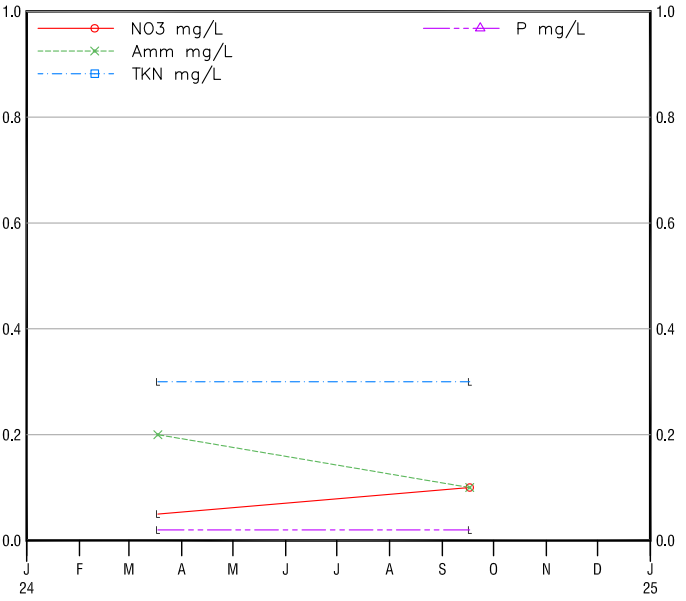
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
18-Mar-24	179262	110	257	78	8.3	2	21	18	8.0	31	2.4	2	<0.05	<0.05	0.2	150	6.3
17-Sep-24	184543	120	246	81	7.9	1	21	18	8.5	26	2.5	1.2	<0.05	<0.05	0.2	170	0.5
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		115	252	80	8.1	2	21	18	8.3	29	2.5	2	<0.05	<0.05	0.2	160	

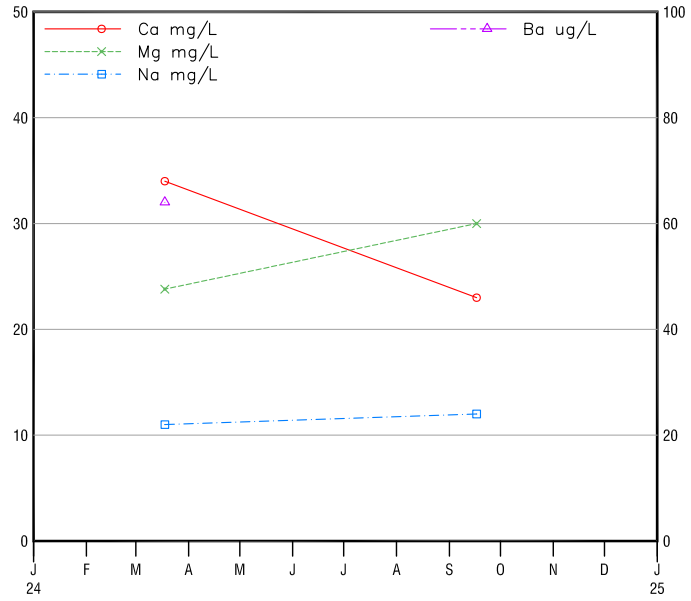
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



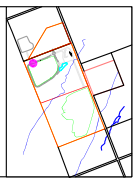








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-114-II

Overburden Formation

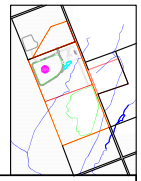
Screen 197.8 - 196.3 masl

CA008825 24 Mar 25	wsp	F124044

BH-114-II

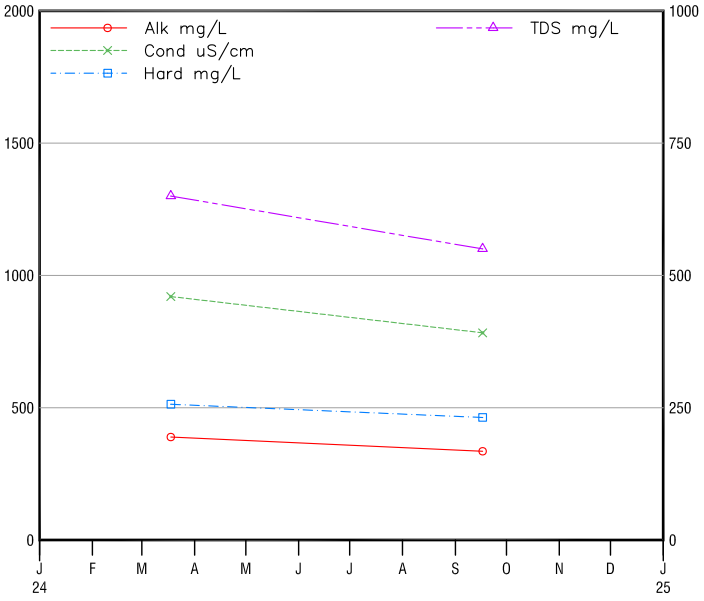
Overburden Formation

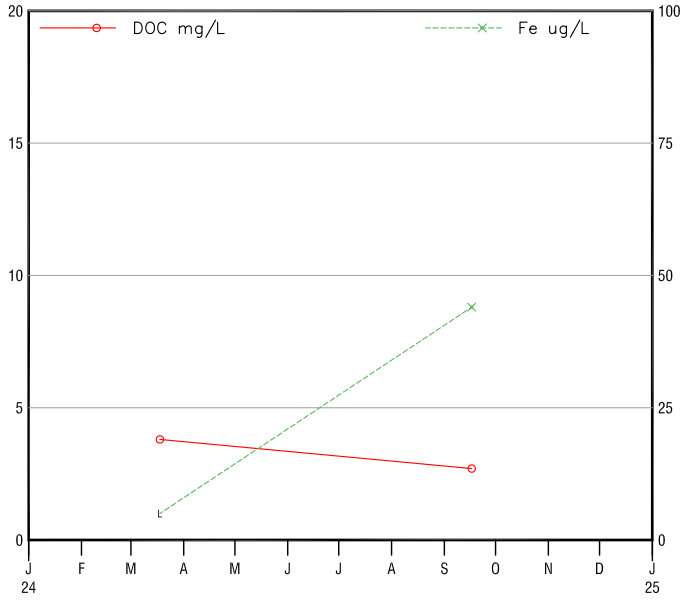
Monitoring Well
Screen 197.8 - 196.3 masl

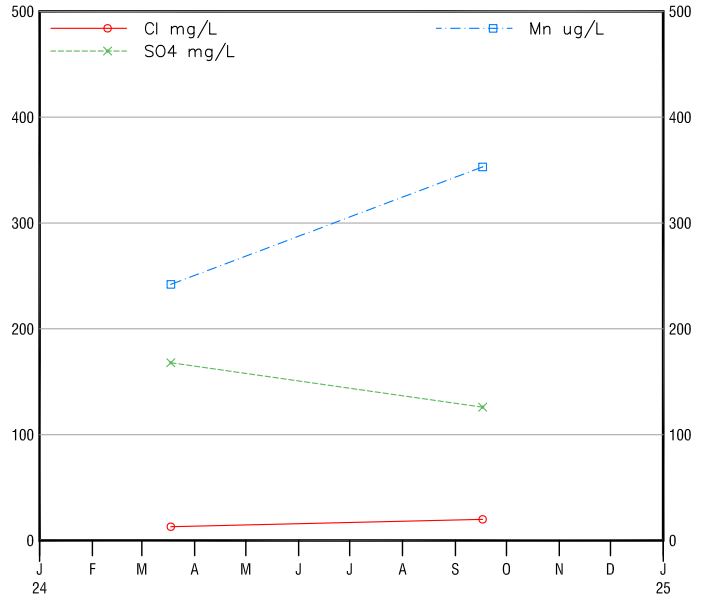


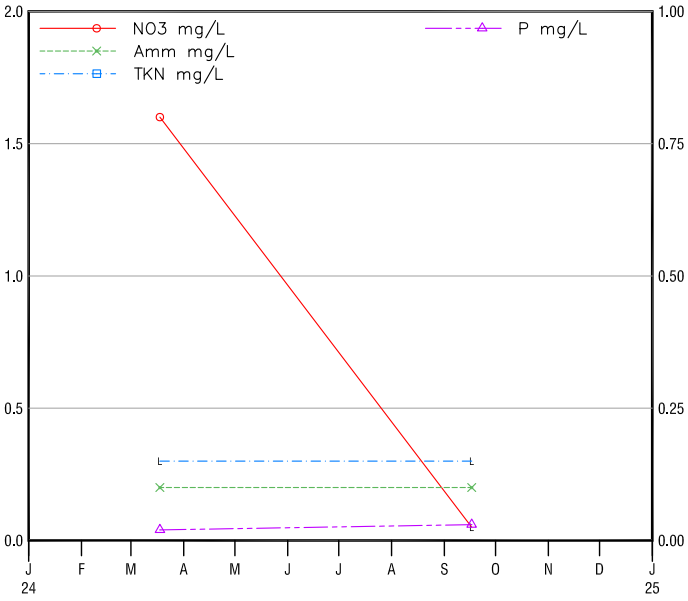
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
18-Mar-24	179263	190	386	183	8.1	2	26	34	23.8	11	2.3	1.6	<0.05	<0.05	0.2	230	0.2
17-Sep-24	184544	187	340	181	7.8	1	42	23	30.0	12	1.6	1.2	0.1	<0.05	0.1	220	3.5
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		189	363	182	8.0	2	34	29	26.9	12	2.0	1.4	0.1	<0.05	0.2	225	

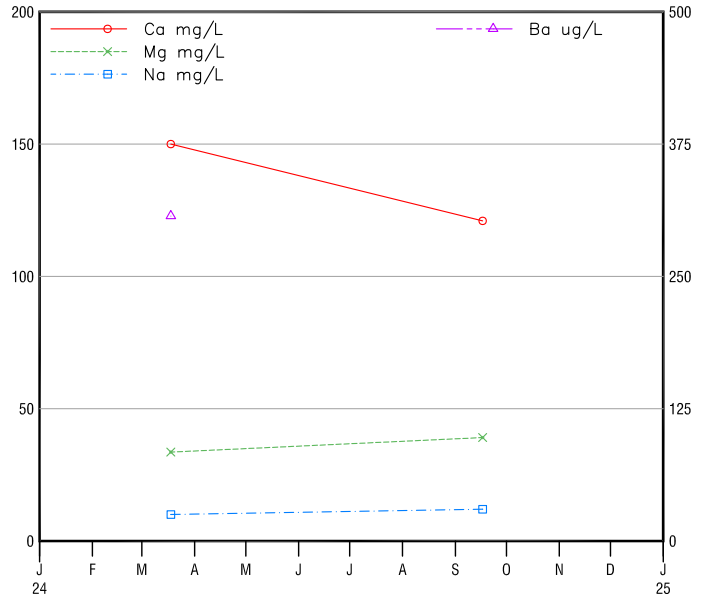
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









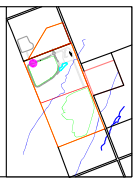


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-114-III

Shallow Overburden

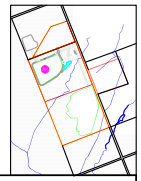
Screen 204.9 - 201.9 masl

CA008825 24 Mar 25	wsp	F124045

BH-114-III

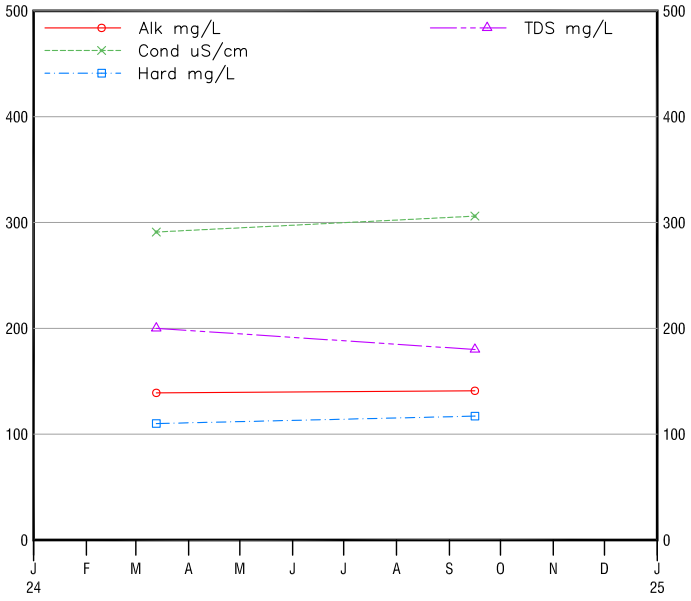
Shallow Overburden

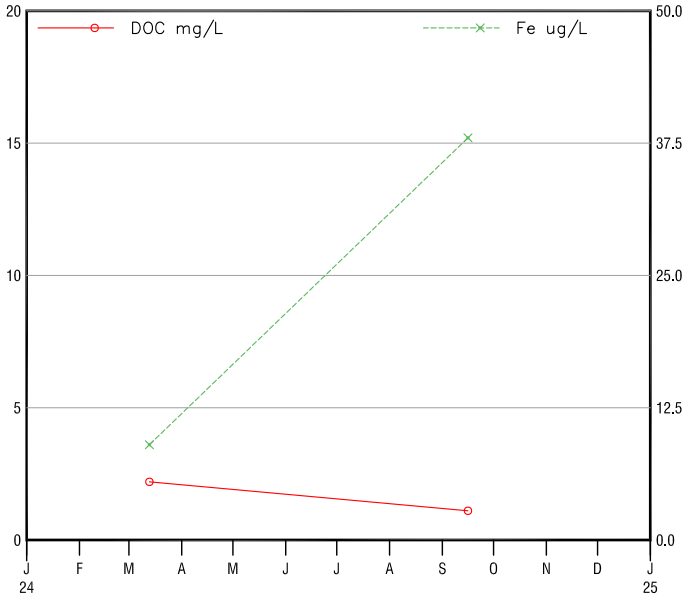
Monitoring Well
Screen 204.9 - 201.9 masl

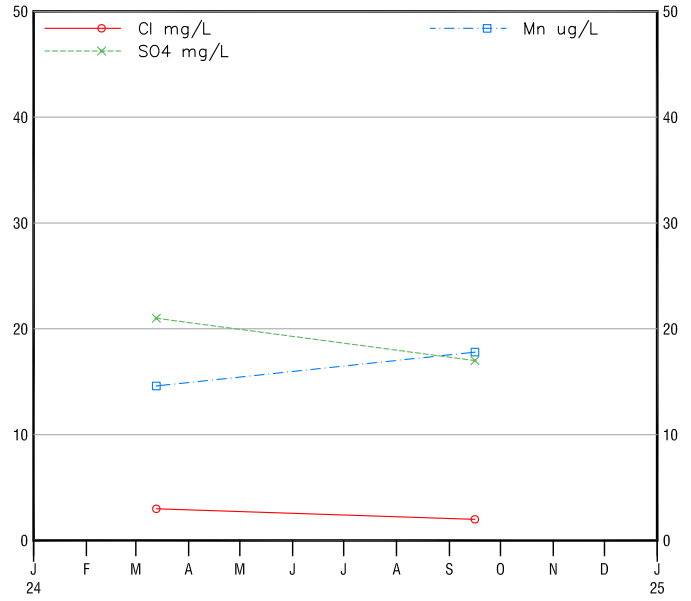


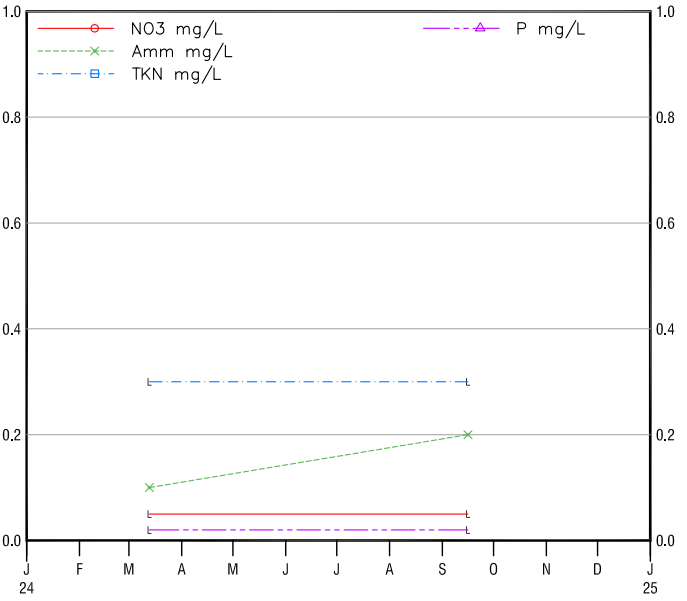
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
18-Mar-24	179264	389	920	513	7.4	13	168	150	33.6	10	7.1	3.8	1.6	0.36	0.2	650	2.7
17-Sep-24	184545	335	783	463	7.2	20	126	121	39.1	12	5.5	2.7	<0.05	<0.05	0.2	550	1.6
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		362	852	488	7.3	17	147	136	36.4	11	6.3	3.3	0.8	0.18	0.2	600	

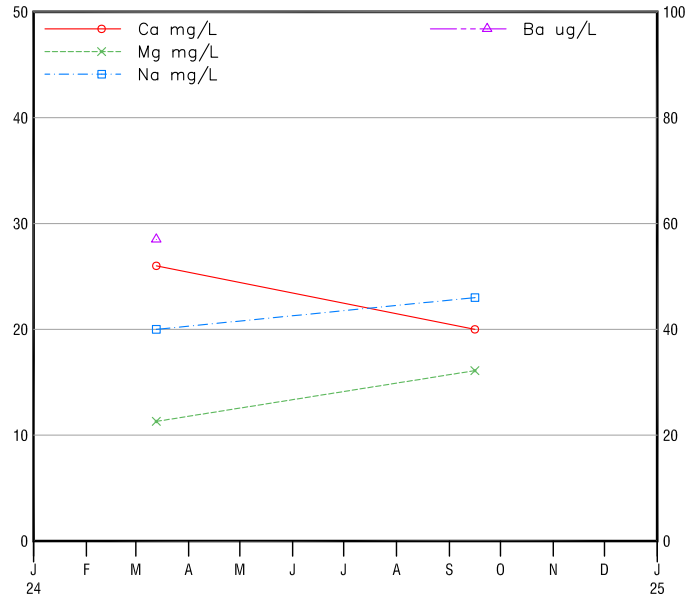
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



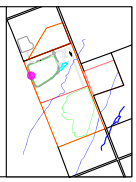








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-115-I

Lower Screened Overburden

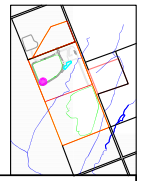
Screen 190.2 - 188.7 masl

CA008825 24 Mar 25	wsp	F124046

BH-115-I

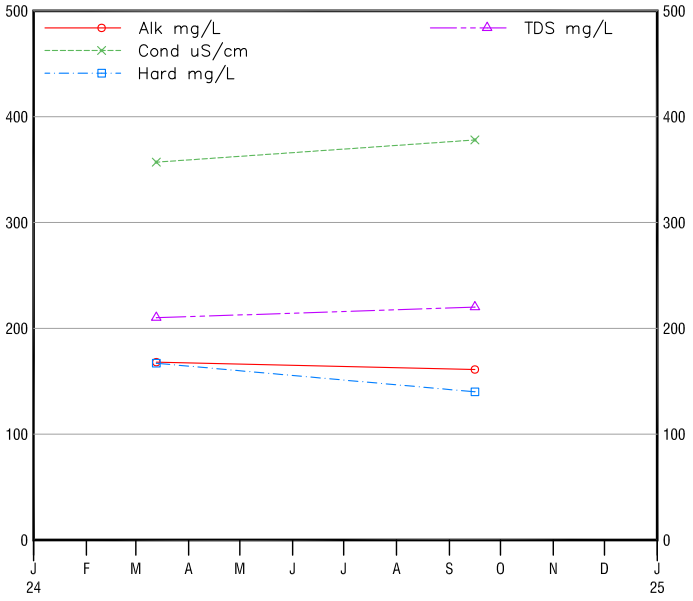
Lower Screened Overburden

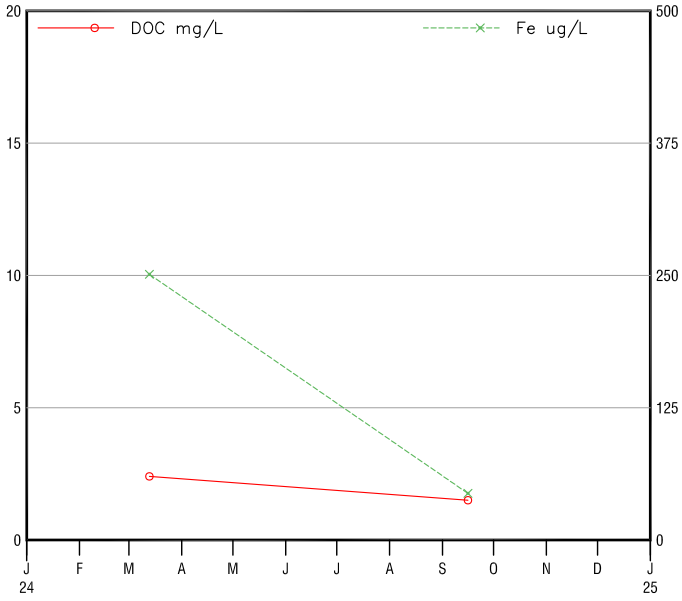
Monitoring Well
Screen 190.2 - 188.7 masl

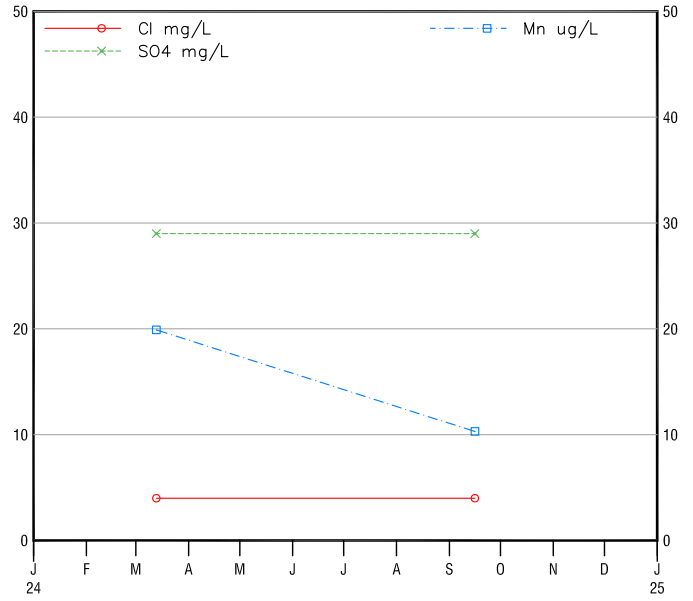


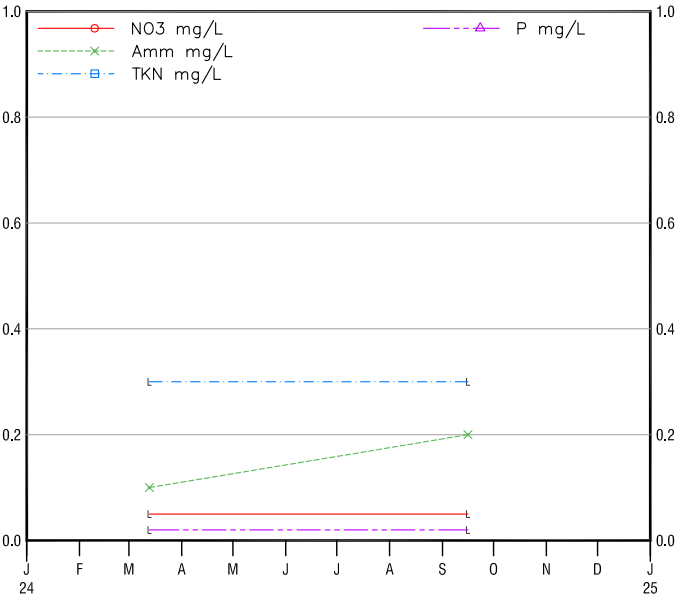
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Mar-24	179162	139	291	110	8.2	3	21	26	11.3	20	2.2	2.2	<0.05	<0.05	0.1	200	1
16-Sep-24	184500	141	306	117	7.9	2	17	20	16.1	23	1.4	1.1	<0.05	<0.05	0.2	180	4.1
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		140	299	114	8.1	3	19	23	13.7	22	1.8	1.7	<0.05	<0.05	0.2	190	

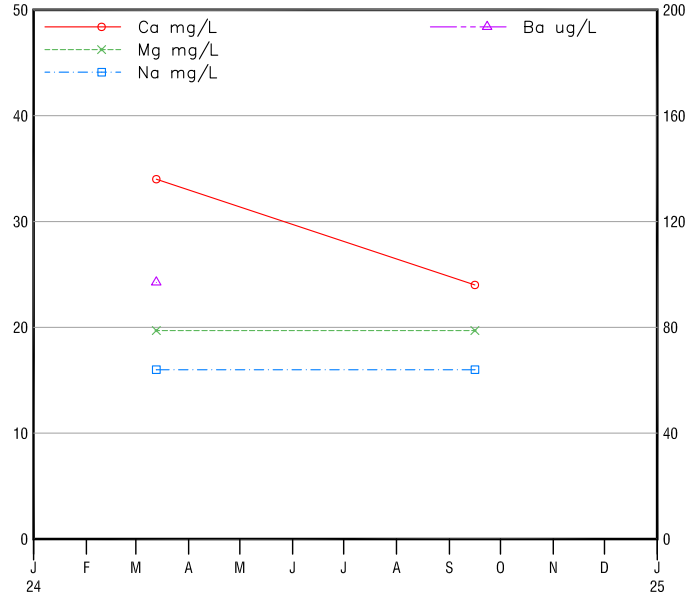
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



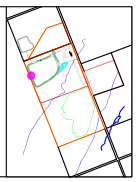








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-115-II

Overburden Formation

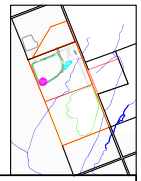
Screen 195.8 - 194.3 masl

CA008825 24 Mar 25	wsp	F124047

BH-115-II

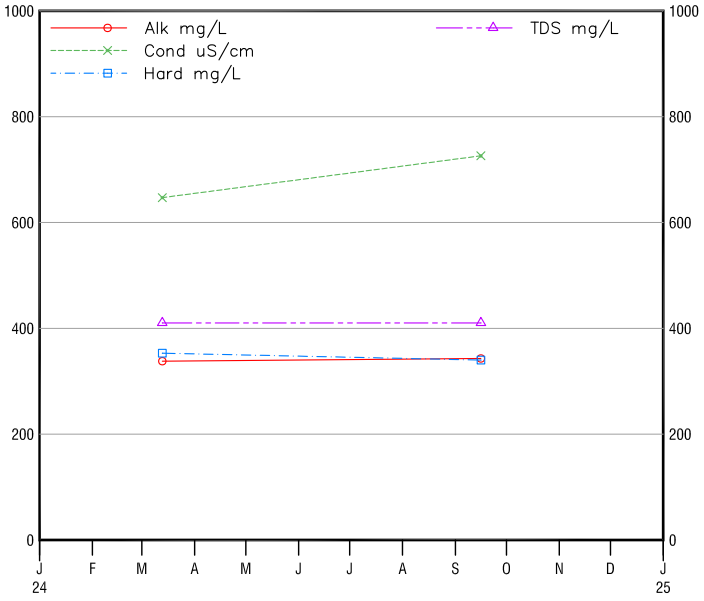
Overburden Formation

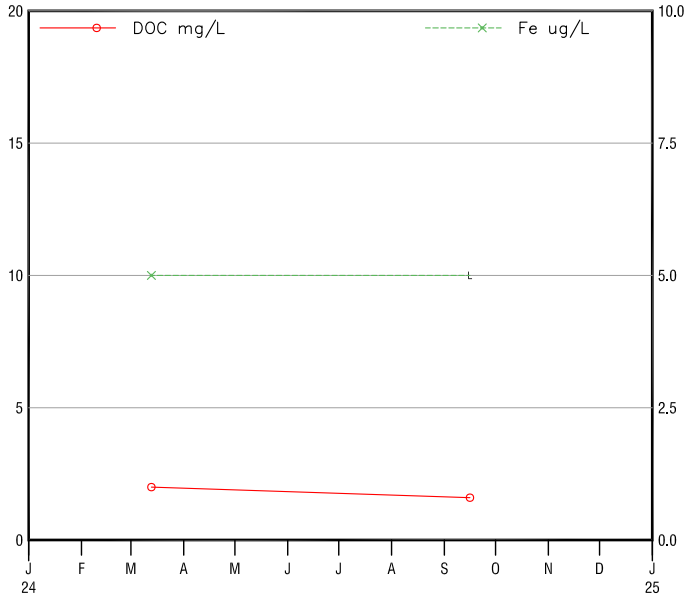
Monitoring Well
Screen 195.8 - 194.3 masl

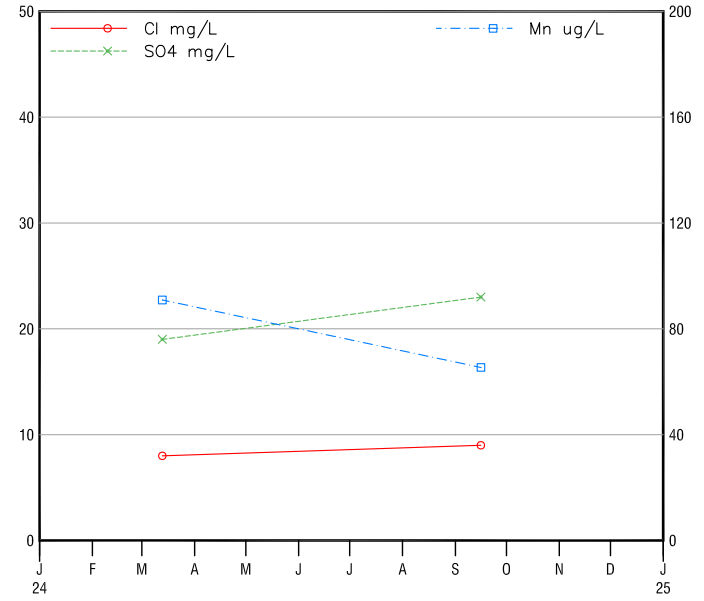


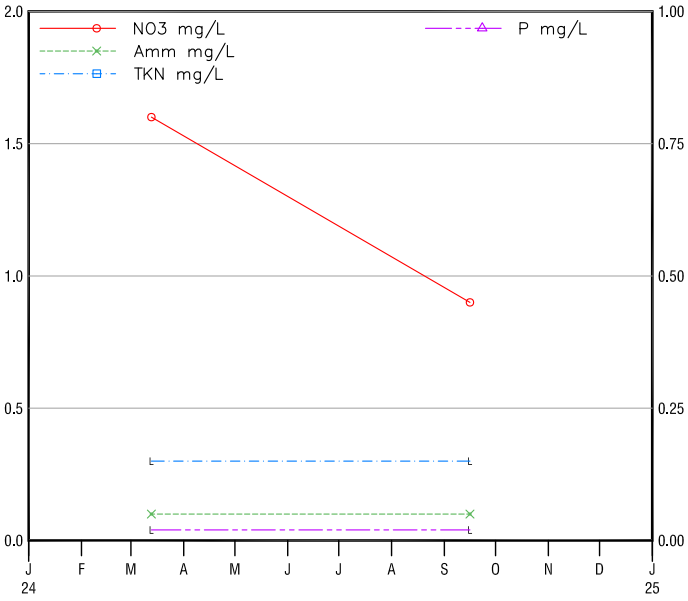
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Mar-24	179163	168	357	167	8.2	4	29	34	19.7	16	4	2.4	<0.05	<0.05	0.1	210	2.3
16-Sep-24	184499	161	378	140	7.9	4	29	24	19.7	16	3.2	1.5	<0.05	<0.05	0.2	220	3.0
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		165	368	154	8.1	4	29	29	19.7	16	4	2.0	<0.05	<0.05	0.2	215	

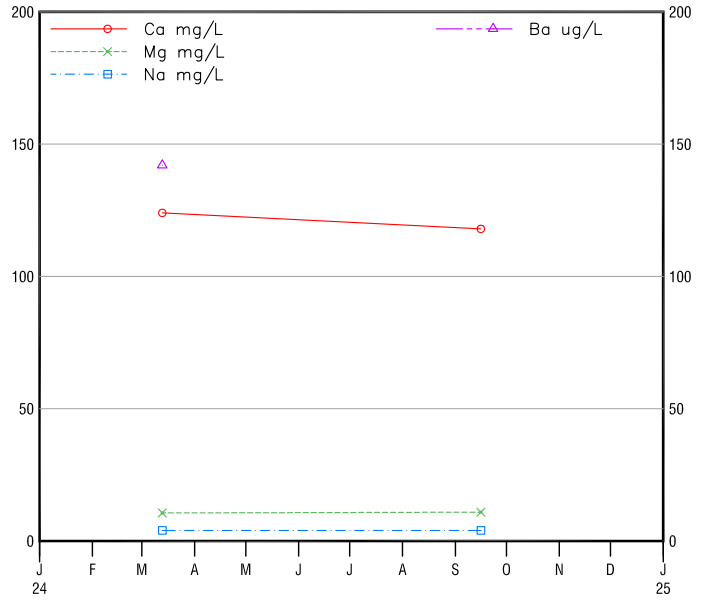
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**









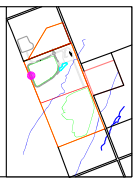


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-115-III

Shallow Overburden

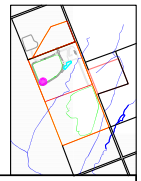
Screen 200.9 - 199.4 masl

CA008825 24 Mar 25	wsp	F124048

BH-115-III

Shallow Overburden

Monitoring Well
Screen 200.9 - 199.4 masl



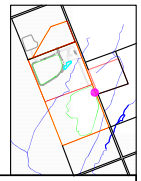
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
13-Mar-24	179164	338	647	353	7.4	8	19	124	10.6	4.0	1.2	2	1.6	<0.05	0.1	410	0.1
16-Sep-24	184498	343	726	340	7.2	9	23	118	10.9	4.0	1.3	1.6	0.9	<0.05	0.1	410	2.9
TOTAL SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
AVERAGE 2024		341	687	347	7.3	9	21	121	10.8	4.0	1.3	2	1.3	<0.05	0.1	410	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-74-II

Overburden Formation

Stand Pipe Piezometer
Screen 182.1 - 181.4 masl



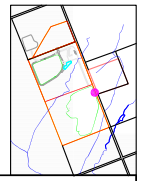
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW3413								<10				<2					
08-Aug-94	HGW3414			<2		<1	<3	<2	<10	<10	<2	<20	<2		<10	<10	<40	8
11-Aug-95	HGW3415			<5		<0.5	<2	<2	15	0.4	2	18	1		<1	<2	<2	5
16-Aug-96	HGW3416			<0.2		0.7	<1	2	5	<2	2	7	<2		<1	<1	<8	2
08-Aug-97	HGW3417								**670**				<2					
23-Jul-98	HGW3418								260				<2					
19-Aug-99	HGW3419								110				3					
15-Aug-00	HGW3420								130				5					
03-Aug-01	HGW3421								<20				<2					
08-Aug-02	HGW3422								<20				2					
25-Jul-06	37307								<50				<1					
09-Jul-07	43778								<50									
28-Aug-07	44786												1					
12-Mar-08	48142								<50		22		2		<2			
09-Mar-09	54302								<50		5		<1					
24-Mar-10	61548								<50		1		<1					
22-Mar-11	67104								<50		9		<1					
17-Apr-12	74043								<50		2		<1					
19-Mar-13	81081								<50		5		<1					
24-Mar-14	88629								<50		12		<1					
26-Mar-15	95966								9		4.1		<1					
29-Mar-16	103226								6		11.5		1					
09-Apr-17	112146								16		6		<1					
26-Mar-18	121015								<50		2		<1					
14-Apr-19	131083								10		20.7		1					
14-May-20	140896								188		12.6		1					
23-Mar-21	148728								<5		0.7		<1					
30-Mar-22	159373								10		3.4		<1					
15-Mar-23	168776								19		8.2		<1					
25-Mar-24	179559								<5		1.1		<1					
TOTAL SAMPLES		0	0	8	0	8	8	8	39	8	25	8	39	0	9	8	8	8
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-74-III

Shallow Overburden

Monitoring Well
Screen 194.7 - 190.1 masl



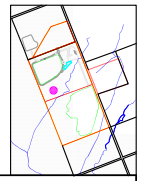
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Nov-93	HGW3433								20				<2					
08-Aug-94	HGW3434			<2		<1	<3	<2	<10	<10	8	<20	<2		<10	<10	<40	4
05-Aug-95	HGW3435			<5		<0.5	13	<2	<10	0.2	4	<2	3		<1	<2	<2	8
16-Aug-96	HGW3436			<1		<2	<4	6	<3	<2	<1	<7	<2		<4	<10	<8	<4
08-Aug-97	HGW3437								170				5					
23-Jul-98	HGW3438								240				7					
19-Aug-99	HGW3439								39				6					
15-Aug-00	HGW3440			<1		<5	<20	<5	59	5	10	<20	6		<10	<10	<2	27
03-Aug-01	HGW3441								<20				2					
08-Aug-02	HGW3442								<20				<2					
25-Jul-06	37312								<50				<1					
09-Jul-07	43779								<50									
28-Aug-07	44787												1					
28-Apr-08	48970								<50		38		<1		<2			
09-Mar-09	54303								<50		37		3					
24-Mar-10	61549								<50		1		<1					
22-Mar-11	67105								<50		<1		<1					
17-Apr-12	74045								<50		9		<1					
19-Mar-13	81054								<50		7		<1					
24-Mar-14	88630								<50		**58**		<1					
26-Mar-15	95967								5		3.6		<1					
29-Mar-16	103227								19		35.4		<1					
09-Apr-17	112147								7		9.9		<1					
26-Mar-18	121016								<50		39		<1					
14-Apr-19	131085								216		**78**		<1					
14-May-20	140897								73		31.9		<1					
23-Mar-21	148729								82		24.2		2					
30-Mar-22	159374								34		**74.5**		<1					
15-Mar-23	168777								**428**		**76.6**		<1					
25-Mar-24	179560								173		31		<1					
TOTAL SAMPLES		0	0	9	0	9	9	9	39	9	26	9	39	0	10	9	9	9
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-84-II

Shallow Overburden

Monitoring Well
Screen 195.0 - 193.0 masl



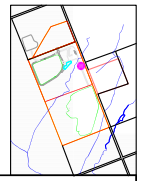
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Apr-09	55282	<20	106	<1	90	<1	<2	<5	<50	<20	9	<5	<1		<2	<5		<30
26-Oct-09	58830								130		13		1					
27-Apr-10	62093	<20	106	<1	90	<1	<2	<5	70	<20	10	<5	<1		<2	<5		<30
21-Sep-10	64270								<50		15		4					
14-Mar-11	66913	<20	117	<1	90	<1	<2	<5	<50	<20	13	<5	<1			<5		<30
26-Sep-11	70474								130		22		20					
02-Apr-12	73789	<20	114	<1	100	<0.3	<2	<5	100	1.8	15	<5	3			<5		<30
24-Sep-12	77496								87.3		14		8					
02-Apr-13	81307	<20	105	<1	80	<1	<2	<5	60	<10	10	<5	<1		<2	<5		<10
23-Sep-13	85305								120		11		5					
18-Mar-14	88523	<20	118	<1	90	<1	<2	<5	90	<10	7	<5	<1		<2	<5		<30
17-Sep-14	92470								100		25		37					
16-Mar-15	95697	<25	118	<0.1	82.9	<0.1	<0.5	<0.5	276	<0.5	12	2.5	<1		<0.1	<2		4.5
23-Sep-15	99778								170		14		<1					
21-Mar-16	103104	<25	188	<0.1	59.4	<0.1	<0.5	<0.5	158	<0.5	15.2	1.6	<1		<0.1	<2		1.1
04-Oct-16	107874								211		15.8		<1					
20-Mar-17	111708	<25	215	<0.1	49.8	<0.1	<0.5	0.5	46	<0.5	15.2	1.1	<1		0.1	<2		0.6
25-Sep-17	116641								120		16		<1					
19-Mar-18	120815	<25	213	<0.1	35.3	<0.1	<0.5	<0.5	225	<0.5	17.9	0.9	<1		<0.1	<2		0.6
19-Sep-18	126252								280		17		<1					
11-Mar-19	130206	<25	185	<0.5	47.3	<0.1	<0.5	1.1	241	<0.5	19.5	1.1	<1		<0.5	<2		2
19-Sep-19	135284								**310**		17		<1					
16-Mar-20	139458	<25	189	<0.5	52.2	<0.1	<0.5	0.8	76	<0.5	13.4	1	<1		<0.5	<2		0.6
03-Sep-20	143906								**301**		18.5		<1					
03-Mar-21	148219	<25	191	<0.5	51.4	<0.1	<0.5	1.8	253	<0.5	17.4	1.1	<1		<0.5	<2		1.1
05-Oct-21	154355								300		17		<1					
14-Mar-22	158787	50	194	<0.5	50.8	<0.1	<0.5	<0.5	240	<0.5	15.1	1.1	<1		<0.5	<2		<0.5
07-Sep-22	164089								11		10.5		<1					
13-Mar-24	179161	<25	147	<0.5	33	<0.1	<0.5	<0.5	103	<0.5	27.9	0.8	<1		<0.5	<2		<5
16-Sep-24	184495								17		25.9		<1					
TOTAL SAMPLES		18	18	18	18	18	18	18	34	18	34	18	32	2	16	18	2	18
AVERAGE 2024									60		26.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-85-I

Lower Screened Overburden

Stand Pipe Piezometer
Screen 186.3 - 184.3 masl



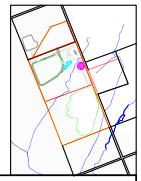
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
05-Oct-09	58294								70		5		<1					
02-Mar-10	60955	<20	80	<1	<30	<1	<2	<5	<50	<20	3	<5	<1		<2	<5		<30
04-Oct-10	64472								60		5		<1					
01-Mar-11	66691	**250**	79	<1	<30	<1	<2	<5	**320**	<20	20	<5	<1			<5		<30
22-Sep-11	70446								<50		<1		<1					
17-Apr-12	74046	<20	85	<1	<30	<0.3	<2	<5	<50	<1.5	1	<5	<1			<5		<30
12-Sep-12	77193								<50		3		3					
12-Mar-13	80842	<20	88	<1	<20	<1	<2	<5	<50	<10	4	<5	<1		<2	<5		<10
24-Sep-13	85336								<50		<1		<1					
18-Mar-14	88525	<20	86	<1	<30	<1	<2	<5	70	<10	7	<5	<1		<2	<5		<30
15-Sep-14	92417								<50		3		<1					
11-Mar-15	95595	<25	85	<0.1	12.2	<0.1	<0.5	<0.5	3	<0.5	12.3	<0.5	<1		0.1	<2		1.7
01-Oct-15	99923								2		2.1		2					
18-Mar-16	103030	<25	141	<0.1	13	<0.1	<0.5	<0.5	1	<0.5	6.8	<0.5	<1		<0.1	<2		0.6
12-Sep-16	107309								3		3.7		<1					
08-Mar-17	111348	<25	143	<0.1	13.6	<0.1	<0.5	0.7	<1	<0.5	11.5	<0.5	<1		0.1	<2		<0.5
12-Sep-17	116273								<50		10		<1					
12-Mar-18	120571	<25	187	<0.1	12.6	<0.1	<0.5	<0.5	2	<0.5	13.1	<0.5	<1		<0.1	<2		0.5
19-Sep-18	126249								<50		7		<1					
20-Mar-19	130486	<25	180	<0.5	13.7	<0.1	<0.5	1.3	1	<0.5	10.8	0.7	<1		<0.5	<2		1.1
09-Sep-19	135000								<50		8		<1					
26-Mar-20	139771	<25	225	<0.5	13.5	<0.1	<0.5	0.8	9	<0.5	3.3	<0.5	<1		<0.5	<2		0.7
01-Sep-20	143838								5		6.3		<1					
08-Mar-21	148383	51	226	<0.5	13.2	<0.1	<0.5	0.7	59	<0.5	14.9	<0.5	<1		<0.5	<2		<0.5
20-Sep-21	153826								13		10.3		<1					
14-Mar-22	158788	<25	258	<0.5	17.2	<0.1	<0.5	0.5	<5	<0.5	11.5	<0.5	<1		<0.5	<2		<0.5
06-Sep-22	164052								<5		8		<1					
13-Mar-23	168684	<25	291	<0.5	12	<0.1	<0.5	0.7	<5	<0.5	12.3	<0.5	<1		<0.5	<2		<5
11-Mar-24	179070	<25	286	<0.5	12	<0.1	<0.5	0.6	18	<0.5	14.6	<0.5	<1		<0.5	<2		<5
03-Sep-24	184146								11		9.6		<1					
TOTAL SAMPLES		19	19	19	20	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									15		12.1		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-85-II

Shallow Overburden

Monitoring Well
Screen 195.4 - 193.0 masl



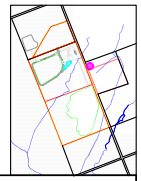
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
05-Oct-09	58295								**680**		**1050**		<1					
02-Mar-10	60956	<20	86	<1	140	<1	<2	5	<50	<20	**182**	<5	<1		<2	<5		<30
04-Oct-10	64473								**600**		**354**		<1					
01-Mar-11	66692	<20	82	<1	110	<1	<2	<5	<50	<20	**174**	<5	<1			<5		<30
22-Sep-11	70447								**3530**		**518**		14					
17-Apr-12	74047	<20	93	<1	150	<0.3	<2	<5	**1780**	2.3	**371**	<5	3			<5		<30
12-Sep-12	77194								**3030**		**538**		<1					
12-Mar-13	80843	<20	89	<1	220	<1	<2	<5	110	<10	**116**	<5	<1		<2	<5		<10
24-Sep-13	85337								**2260**		**440**		<1					
18-Mar-14	88526	<20	86	<1	200	<1	<2	<5	170	<10	**102**	<5	<1		<2	<5		<30
15-Sep-14	92418								**3590**		**476**		1					
11-Mar-15	95596	<25	50	<0.1	132	<0.1	<0.5	<0.5	**685**	<0.5	**195**	1.1	<1		0.4	3		6.9
01-Oct-15	99924								**2880**		**373**		2					
18-Mar-16	103031	<25	66	<0.1	203	<0.1	<0.5	<0.5	**937**	<0.5	**190**	0.9	1		0.6	<2		0.9
12-Sep-16	107310								**787**		**111**		<1					
08-Mar-17	111349	<25	62	<0.1	182	<0.1	<0.5	0.6	**555**	<0.5	**188**	0.8	1		0.5	<2		1.6
12-Sep-17	116274								**2000**		**285**		<1					
12-Mar-18	120573	<25	154	<0.1	244	<0.1	<0.5	<0.5	**1270**	<0.5	**455**	0.6	<1		0.7	<2		2.6
19-Sep-18	126250								**990**		**230**		<1					
20-Mar-19	130487	<25	84	<0.5	316	<0.1	<0.5	3.4	**389**	<0.5	**269**	0.7	2		0.8	2		5.3
09-Sep-19	135001								**720**		**205**		<1					
26-Mar-20	139772	<25	88	<0.5	358	<0.1	<0.5	1.5	**1640**	<0.5	**335**	0.7	<1		0.8	3		1.2
01-Sep-20	143840								**1380**		**378**		<1					
08-Mar-21	148384	<25	71	<0.5	240	<0.1	<0.5	0.9	**2110**	<0.5	**338**	0.9	<1		0.6	<2		1.9
20-Sep-21	153827								**1860**		**291**		<1					
14-Mar-22	158789	<25	78	<0.5	205	<0.1	<0.5	0.6	**509**	<0.5	**243**	0.9	<1		0.7	<2		1.6
06-Sep-22	164053								**674**		**273**		<1					
13-Mar-23	168686	<25	89	<0.5	228	<0.1	<0.5	<0.5	**1600**	<0.5	**318**	1	<1		0.7	3		<5
11-Mar-24	179071	<25	94	<0.5	263	<0.1	<0.5	1.4	158	<0.5	**269**	1	<1		2	2		7
03-Sep-24	184145								**446**		**239**		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									302		254		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-86-II

Lower Screened Overburden

Stand Pipe Piezometer
Screen 187.7 - 185.9 masl



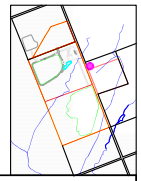
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Mar-10	61540	<20	182	<1	180	<1	<2	<5	<50	<20	2	<5	<1		<2	<5		<30
13-Sep-10	64129								**410**		23		<1					
15-Mar-11	66986	<20	155	<1	170	<1	<2	<5	<50	<20	4	<5	<1		<2	<5		<30
04-Oct-11	70625								<50		6		4					
12-Mar-12	73368	<20	117	<1	110	<0.3	<2	<5	<50	<1.5	<1	7	1			<5		<30
12-Sep-12	77190								<0.4		14		<1					
08-Apr-13	81439	<20	165	<1	80	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
03-Oct-13	85516								<50		30		2					
16-Apr-14	89109	<20	231	<1	70	<1	<2	<5	<50	<10	42	<5	1		<2	<5		<30
08-Sep-14	92263								**350**		23		<1					
07-Apr-15	96139	<25	234	<0.1	63.9	<0.1	<0.5	<0.5	3	<0.5	<0.5	1.3	<1		<0.1	<2		2.3
05-Oct-15	99999								292		17.4		2					
18-Mar-16	103033	<25	207	<0.1	63.5	<0.1	<0.5	<0.5	149	<0.5	22.2	0.7	1		<0.1	<2		1.6
12-Sep-16	107313								115		14.3		3					
03-Apr-17	112033	**249**	214	<0.1	70.9	<0.1	<0.5	<0.5	**406**	<0.5	18.8	1.2	<1		<0.1	<2		0.9
12-Sep-17	116267								140		13		<1					
25-Apr-18	121894	<25	275	<0.1	59.1	<0.1	<0.5	<0.5	192	<0.5	14	1.6	<1		0.2	<2		0.7
25-Sep-18	126472								**450**		13		<1					
07-Apr-19	130904	**132**	221	<0.5	64.7	<0.1	<0.5	<0.5	57	<0.5	11.5	1.3	<1		<0.5	<2		2.8
24-Sep-19	135334								110		15		<1					
16-Mar-20	139460	<25	232	<0.5	61.6	<0.1	<0.5	0.6	8	<0.5	0.8	1.2	<1		<0.5	<2		5.2
08-Sep-20	144008								**358**		15.4		3					
30-Mar-21	148864	<25	252	<0.5	65.4	<0.1	<0.5	0.5	13	<0.5	0.7	1.4	2		<0.5	<2		2.5
29-Sep-21	154167								53		15.8		1					
05-Apr-22	159586	<25	242	<0.5	50.6	<0.1	<0.5	<0.5	50	<0.5	<0.5	1.2	<1		<0.5	<2		1.3
06-Sep-22	164046								**313**		13.1		<1					
28-Mar-23	169180	<25	234	<0.5	63	<0.1	<0.5	0.5	71	<0.5	1.2	1.2	<1		<0.5	<2		<5
05-Sep-23	173896								78		0.7							
04-Mar-24	178888	<25	241	<0.5	61	<0.1	<0.5	1.2	14	<0.5	<0.5	2.2	<1		<0.5	<2		<5
03-Sep-24	184139								140		2.7		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024									77		1.4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-86-III

Shallow Overburden

Monitoring Well
Screen 193.3 - 190.3 masl



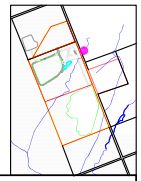
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Mar-10	61541	<20	296	<1	60	<1	<2	<5	140	<20	**84**	<5	<1		<2	<5		<30
13-Sep-10	64130								**710**		**56**		<1					
15-Mar-11	66987	<20	289	<1	70	<1	<2	<5	90	<20	**69**	<5	<1		<2	<5		<30
04-Oct-11	70626								**580**		**63**		1					
12-Mar-12	73369	<20	280	<1	70	<0.3	<2	<5	**550**	2	**63**	<5	<1			<5		<30
12-Sep-12	77191								**880**		**62**		<1					
08-Apr-13	81440	<20	278	<1	80	<1	<2	<5	240	<10	**77**	<5	<1		<2	<5		<10
03-Oct-13	85517								110		20		1					
16-Apr-14	89110	<20	272	<1	80	<1	<2	<5	<50	<10	13	<5	<1		<2	<5		<30
08-Sep-14	92264								140		50		<1					
07-Apr-15	96140	<25	284	<0.1	105	<0.1	<0.5	<0.5	11	<0.5	10.2	0.8	<1		<0.1	<2		0.8
05-Oct-15	100000								58		14.6		2					
18-Mar-16	103034	<25	305	<0.1	105	<0.1	<0.5	<0.5	7	<0.5	4	0.8	<1		<0.1	<2		1.6
12-Sep-16	107314								4		6.3		<1					
03-Apr-17	112034	<25	579	<0.1	77	<0.1	<0.5	<0.5	19	<0.5	7.1	<0.5	<1		<0.1	<2		0.9
12-Sep-17	116268								60		40		<1					
03-Apr-18	121265	<25	303	<0.1	120	<0.1	<0.5	<0.5	18	<0.5	11	0.7	<1		<0.1	<2		1.3
25-Sep-18	126473								110		**52**		<1					
07-Apr-19	130905	<25	388	<0.5	147	<0.1	<0.5	<0.5	15	<0.5	36.6	0.7	<1		<0.5	<2		<0.5
24-Sep-19	135335								<50		38		<1					
16-Mar-20	139461	<25	329	<0.5	199	<0.1	<0.5	<0.5	22	<0.5	21.4	0.6	<1		<0.5	<2		<0.5
08-Sep-20	144009								**359**		44.1		1					
30-Mar-21	148865	<25	436	<0.5	163	<0.1	<0.5	1.7	12	<0.5	14.3	0.6	<1		<0.5	<2		2
29-Sep-21	154168								30		26.6		<1					
05-Apr-22	159587	<25	352	<0.5	240	<0.1	<0.5	<0.5	33	<0.5	17.5	0.7	<1		<0.5	<2		<0.5
06-Sep-22	164047								51		25.4		<1					
13-Mar-23	168687	<25	662	<0.5	157	<0.1	<0.5	<0.5	21	<0.5	7.2	<0.5	<1		<0.5	<2		<5
05-Sep-23	173897								15		8.6							
04-Mar-24	178889	<25	340	<0.5	266	<0.1	<0.5	<0.5	<5	<0.5	2.5	0.6	<1		<0.5	<2		<5
03-Sep-24	184140								**542**		45.5		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024									271		24.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-87-II

Overburden Formation

Stand Pipe Piezometer
Screen 191.9 - 190.3 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
09-Mar-10	61123	<20	129	<1	60	<1	<2	<5	70	<20	9	<5	<1		<2	<5		<30
13-Sep-10	64125								140		7		<1					
14-Mar-11	66906	<20	122	<1	60	<1	<2	<5	60	<20	10	<5	<1			<5		<30
04-Oct-11	70628								140		8		1					
06-Mar-12	73263	<20	129	<1	70	0.5	<2	<5	50	1.6	8	<5	<1		<2	<5		<30
10-Sep-12	77140								<50		9		<1					
11-Mar-13	80786	<20	117	<1	60	<1	<2	<5	70	<10	9	<5	<1		<2	<5		<10
16-Sep-13	85198								140		10		2					
10-Mar-14	88314	<20	128	<1	60	<1	<2	<5	70	<10	10	<5	<1		52	<5		<30
02-Sep-14	92069								130		11		<1					
09-Mar-15	95545	<25	98	<0.1	48.6	<0.1	<0.5	<0.5	26	<0.5	7.6	0.8	<1		<0.1	<2		<0.5
01-Oct-15	99921								95		11.3		2					
07-Mar-16	102777	<25	95	<0.1	39.3	<0.1	<0.5	<0.5	54	<0.5	7.5	0.9	<1		0.1	<2		0.8
12-Sep-16	107316								106		10.5		2					
08-Mar-17	111336	<25	110	<0.1	43.2	<0.1	<0.5	<0.5	86	<0.5	11.8	0.7	2		0.1	<2		7.2
12-Sep-17	116264								200		14		<1					
12-Mar-18	120566	<25	138	<0.1	42.1	<0.1	<0.5	<0.5	124	<0.5	17.1	0.7	<1		0.2	<2		4.5
17-Sep-18	126159								**330**		21		<1					
14-Mar-19	130280	<25	133	<0.5	32.2	<0.1	<0.5	1.3	290	<0.5	20.7	0.8	2		<0.5	<2		1.6
04-Sep-19	134873								**400**		18		<1					
03-Mar-20	139192	<25	132	<0.5	42.8	<0.1	<0.5	<0.5	230	<0.5	17.7	0.8	<1		<0.5	<2		1.8
01-Sep-20	143833								**348**		17.9		<1					
03-Mar-21	148205	<25	131	<0.5	31.8	<0.1	<0.5	<0.5	182	<0.5	25.2	0.8	<1		0.7	<2		<0.5
20-Sep-21	153824								**350**		22.3		<1					
08-Mar-22	158620	<25	112	<0.5	27.9	<0.1	<0.5	<0.5	218	<0.5	18.9	0.6	<1		<0.5	<2		0.7
06-Sep-22	164043								**407**		19.2		<1					
02-Mar-23	168422	<25	124	<0.5	29.1	<0.1	<0.5	<0.5	**441**	<0.5	16.4	0.6	<1		<0.5	<2		<0.5
05-Sep-23	173893								**494**		17.6							
04-Mar-24	178885	<25	117	<0.5	28	<0.1	<0.5	<0.5	**380**	<0.5	17.5	1.9	<1		0.5	<2		<5
03-Sep-24	184136								**578**		18		<1					

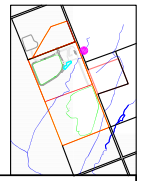
TOTAL SAMPLES	19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024								479		18		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-87-III

Shallow Overburden

Monitoring Well
Screen 197.8 - 194.9 masl



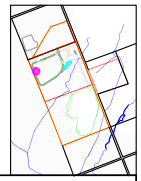
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
09-Mar-10	61124	<20	49	<1	<30	<1	<2	<5	<50	<20	3	<5	<1		<2	<5		<30
13-Sep-10	64126								<50		5		<1					
14-Mar-11	66907	80	41	<1	<30	<1	<2	<5	80	<20	5	<5	<1			<5		<30
04-Oct-11	70629								<50		<1		1					
06-Mar-12	73264	<20	67	<1	<30	<0.3	<2	<5	<50	<1.5	2	<5	<1		<2	<5		<30
10-Sep-12	77141								<50		6		<1					
11-Mar-13	80787	<20	72	<1	<20	<1	<2	<5	<50	<10	11	<5	<1		<2	<5		<10
16-Sep-13	85199								<50		14		2					
10-Mar-14	88315	<20	81	<1	<30	<1	<2	<5	<50	<10	3	<5	<1		<2	<5		<30
02-Sep-14	92070								<50		4		<1					
09-Mar-15	95547	<25	77	<0.1	7.5	<0.1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<1		<0.1	<2		2.2
01-Oct-15	99922								9		2.1		2					
07-Mar-16	102778	<25	70	<0.1	7.1	<0.1	<0.5	<0.5	12	<0.5	<0.5	<0.5	<1		<0.1	<2		<0.5
12-Sep-16	107317								1		17		<1					
08-Mar-17	111337	<25	47	<0.1	8.5	<0.1	<0.5	0.8	2	<0.5	<0.5	<0.5	1		<0.1	<2		<0.5
12-Sep-17	116265								80		6		<1					
12-Mar-18	120567	<25	111	<0.1	8.7	<0.1	<0.5	0.7	3	<0.5	4.3	0.8	<1		<0.1	<2		1.9
17-Sep-18	126160								<50		16		<1					
14-Mar-19	130281	<25	92	<0.5	7.6	<0.1	<0.5	2.4	**3160**	<0.5	**126**	<0.5	2		0.8	<2		3.7
04-Sep-19	134874								70		**73**		<1					
03-Mar-20	139193	<25	66	<0.5	6.9	<0.1	<0.5	1.2	5	<0.5	4.8	<0.5	<1		<0.5	<2		1.2
01-Sep-20	143834								<5		5.4		<1					
03-Mar-21	148206	<25	84	<0.5	7.6	<0.1	<0.5	<0.5	142	<0.5	22.1	<0.5	<1		<0.5	<2		0.9
20-Sep-21	153825								**856**		**63.2**		<1					
08-Mar-22	158621	<25	70	<0.5	6.1	<0.1	<0.5	<0.5	65	<0.5	24	<0.5	2		<0.5	<2		0.6
06-Sep-22	164044								30		1.9		<1					
02-Mar-23	168423	<25	71	<0.5	7.3	<0.1	<0.5	1.3	22	<0.5	9.1	<0.5	<1		<0.5	<2		1
05-Sep-23	173894								**836**		**72.1**							
04-Mar-24	178886	<25	88	<0.5	10	<0.1	<0.5	<0.5	183	<0.5	**53.3**	<0.5	<1		<0.5	<2		<5
03-Sep-24	184137								51		35.5		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024									117		44.40		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-88-II

Lower Screened Overburden

Stand Pipe Piezometer
Screen 198.2 - 196.6 masl



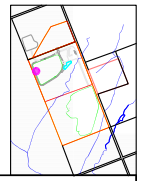
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
26-Oct-09	58826								**1030**		16		<1					
07-Apr-10	61790	<20	64	<1	720	<1	<2	<5	**780**	<20	18	<5	<1		<2	<5		<30
20-Sep-10	64262								**1530**		16		<1					
23-Mar-11	67145	<20	66	<1	910	<1	<2	<5	**420**	<20	17	7	<1			<5		<30
22-Sep-11	70444								**810**		22		<1					
03-Apr-12	73822	<20	62	<1	820	<0.3	<2	<5	170	<1.5	17	<5	<1			<5		<30
17-Oct-12	78008								**650**		24		3					
12-Mar-13	80845	<20	80	<1	680	<1	<2	<5	**990**	<10	23	<5	5		<2	<5		<10
01-Oct-13	85458								**1030**		29		<1					
07-Apr-14	88900	<20	68	<1	940	<1	<2	<5	**1450**	<10	27	<5	<1		<2	<5		<30
15-Sep-14	92420								**1470**		21		1					
24-Mar-15	95924	<25	64	<0.1	710	<0.1	<0.5	<0.5	**688**	<0.5	25.5	1.2	<1		<0.1	<2		2.1
23-Sep-15	99775								**1070**		22		<1					
29-Mar-16	103215	<25	62	<0.1	366	<0.1	<0.5	<0.5	**539**	<0.5	21.4	1	<1		<0.1	<2		0.8
22-Sep-16	107589								**776**		16		<1					
03-Apr-17	112036	<25	68	<0.1	230	<0.1	<0.5	<0.5	**587**	<0.5	17.9	1	<1		<0.1	<2		0.6
27-Sep-17	116688								**860**		24		<1					
15-Mar-18	120690	<25	70	<0.1	289	<0.1	<0.5	<0.5	**671**	<0.5	18.7	1.2	<1		<0.1	<2		1
30-Sep-18	126578								**1150**		19		<1					
18-Mar-19	130361	<25	71	<0.5	230	<0.1	<0.5	2.4	**324**	<0.5	15.2	1.1	1		<0.5	<2		2.8
09-Sep-19	134993								**1080**		26		<1					
26-Mar-20	139774	**110**	78	<0.5	198	<0.1	<0.5	<0.5	**577**	<0.5	23.6	1	<1		<0.5	<2		1.4
01-Sep-20	143842								**750**		21.5		<1					
22-Mar-21	148684	<25	83	<0.5	208	<0.1	<0.5	<0.5	135	<0.5	12.8	1	<1		<0.5	<2		<0.5
27-Sep-21	154084								**1680**		23.9		<1					
29-Mar-22	159333	<25	82	<0.5	200	<0.1	<0.5	2.1	**854**	<0.5	23.7	1	<1		<0.5	<2		1.6
12-Sep-22	164194								**1800**		23.1		<1					
02-Mar-23	168429	<25	70	<0.5	182	<0.1	<0.5	<0.5	**1620**	<0.5	26.4	0.6	<1		<0.5	<2		<0.5
18-Mar-24	179267	<25	52	<0.5	266	<0.1	<0.5	<0.5	**1140**	<0.5	23.4	1	<1		<0.5	<2		<5
10-Sep-24	184342								**1100**		33.6		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									1120		28.5		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-88-III

Shallow Overburden

Monitoring Well
Screen 204.0 - 201.0 masl



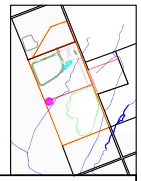
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Oct-09	58707								**640**		14		<1					
07-Apr-10	61791	<20	58	<1	420	<1	<2	<5	**650**	<20	13	<5	<1		<2	<5		<30
20-Sep-10	64263								**740**		14		<1					
23-Mar-11	67146	<20	61	<1	170	<1	<2	<5	**730**	<20	15	<5	<1			<5		<30
22-Sep-11	70445								**690**		15		1					
03-Apr-12	73823	<20	55	<1	220	<0.3	<2	<5	**630**	2.9	15	<5	<1			<5		<30
17-Oct-12	78009								**340**		14		<1					
12-Mar-13	80846	<20	55	<1	80	<1	<2	<5	90	<10	19	5	<1		<2	<5		<10
01-Oct-13	85459								**540**		11		<1					
07-Apr-14	88901	<20	54	<1	60	<1	<2	<5	**750**	<10	17	<5	<1		<2	<5		<30
15-Sep-14	92421								**690**		13		<1					
24-Mar-15	95925	<25	63	<0.1	62.3	<0.1	<0.5	<0.5	93	<0.5	19.3	0.6	<1		<0.1	<2		1.4
23-Sep-15	99776								**520**		13		1					
29-Mar-16	103216	<25	54	<0.1	43.8	<0.1	<0.5	<0.5	**682**	<0.5	17.6	0.5	1		<0.1	<2		1.2
22-Sep-16	107590								**551**		13.9		<1					
03-Apr-17	112037	<25	69	<0.1	69	<0.1	<0.5	1.8	34	<0.5	23	0.9	<1		<0.1	<2		1.4
27-Sep-17	116689								120		9		<1					
15-Mar-18	120691	<25	70	<0.1	31.3	<0.1	<0.5	<0.5	34	<0.5	10.1	0.7	<1		0.2	<2		1.7
30-Sep-18	126579								<50		13		<1					
18-Mar-19	130362	<25	75	<0.5	57.9	<0.1	<0.5	2.6	8	<0.5	1.1	0.9	2		<0.5	<2		3
09-Sep-19	134994								<50		9		<1					
26-Mar-20	139775	<25	52	<0.5	35.7	<0.1	<0.5	0.7	8	<0.5	10.5	0.6	<1		<0.5	<2		<0.5
01-Sep-20	143843								27		11.4		<1					
22-Mar-21	148685	<25	58	<0.5	22.1	<0.1	<0.5	0.5	9	<0.5	18.1	0.6	<1		<0.5	<2		<0.5
27-Sep-21	154085								18		1.3		<1					
29-Mar-22	159334	<25	45	<0.5	29.1	<0.1	<0.5	1	20	<0.5	19.8	0.5	<1		<0.5	<2		<0.5
12-Sep-22	164195								86		18.2		<1					
02-Mar-23	168430	<25	54	<0.5	47.4	<0.1	<0.5	0.9	11	<0.5	<0.5	0.6	<1		<0.5	<2		0.7
18-Mar-24	179268	<25	32	<0.5	30	<0.1	<0.5	1.2	12	<0.5	0.6	0.6	<1		<0.5	<2		<5
10-Sep-24	184343								91		2.9		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									52		1.8		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-89-II

Lower Screened Overburden

Stand Pipe Piezometer
Screen 190.4 - 188.7 masl



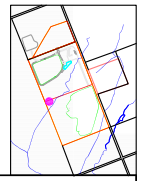
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
19-Oct-09	58614								<50		5		<1					
07-Apr-10	61793	<20	44	<1	120	<1	<2	<5	<50	<20	1	<5	<1		<2	<5		<30
20-Sep-10	64265								<50		4		<1					
23-Mar-11	67149	<20	47	<1	120	<1	<2	<5	<50	<20	5	<5	<1			<5		<30
26-Sep-11	70469								<50		6		<1					
02-Apr-12	73791	80	13	<1	110	0.6	<2	<5	<50	<1.5	6	<5	<1			<5		<30
19-Sep-12	77345								<0.4		1		<1					
05-Mar-13	80689	<20	14	<1	90	<1	<2	<5	<50	<10	<1	6	<1		<2	<5		<10
23-Sep-13	85307								60		3		<1					
01-Apr-14	88816	<20	26	<1	90	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
17-Sep-14	92472								170		7		<1					
16-Mar-15	95694	<25	34	<0.1	95.6	<0.1	<0.5	<0.5	3	<0.5	<0.5	3.5	1		<0.1	<2		3.5
13-Oct-15	100144								34		2.7		2					
21-Mar-16	103106	<25	36	<0.1	93.8	<0.1	<0.5	<0.5	5	<0.5	1.6	3.2	<1		<0.1	<2		1.4
04-Oct-16	107876								35		2		<1					
23-Mar-17	111761	<25	40	<0.1	116	<0.1	<0.5	0.6	9	<0.5	0.6	3.7	<1		<0.1	<2		1.2
25-Sep-17	116644								50		3		<1					
03-Apr-18	121257	<25	38	<0.1	100	<0.1	<0.5	<0.5	7	<0.5	<0.5	3.5	<1		<0.1	<2		1.6
30-Sep-18	126593								50		2		<1					
11-Mar-19	130203	<25	39	<0.5	106	<0.1	<0.5	<0.5	5	<0.5	<0.5	3.3	<1		<0.5	<2		1.7
24-Sep-19	135341								70		3		2					
23-Mar-20	139729	<25	43	<0.5	86.6	<0.1	<0.5	0.6	19	<0.5	8	3.9	<1		<0.5	<2		2.8
10-Sep-20	144078								103		3		2					
09-Mar-21	148434	<25	42	<0.5	104	<0.1	<0.5	<0.5	<5	<0.5	<0.5	3.5	<1		<0.5	<2		0.6
05-Oct-21	154352								65		2.7		<1					
15-Mar-22	158875	27	41	<0.5	106	<0.1	<0.5	<0.5	24	<0.5	<0.5	3.2	<1		<0.5	<2		1.6
13-Sep-22	164238								38		1.8		<1					
15-Mar-23	168773	<25	38	<0.5	105	<0.1	<0.5	<0.5	35	<0.5	2.8	3.6	<1		<0.5	<2		<5
18-Mar-24	179270	<25	38	<0.5	107	<0.1	<0.5	1	9	<0.5	<0.5	3.1	<1		<0.5	<2		<5
09-Sep-24	184297								46		2.4		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									28		1.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-89-III

Shallow Overburden

Monitoring Well
Screen 198.9 - 195.7 masl



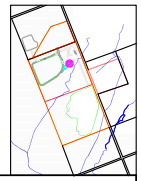
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
19-Oct-09	58615								<50		<1		<1					
07-Apr-10	61794	<20	44	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
20-Sep-10	64266								<50		<1		<1					
23-Mar-11	67150	20	44	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
26-Sep-11	70470								<50		<1		<1					
02-Apr-12	73792	<20	38	<1	<30	<0.3	<2	<5	<50	2.1	<1	<5	<1			<5		<30
19-Sep-12	77346								<0.4		<1		<1					
05-Mar-13	80690	<20	40	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
23-Sep-13	85308								<50		<1		<1					
01-Apr-14	88817	<20	33	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
17-Sep-14	92473								<50		<1		<1					
16-Mar-15	95695	<25	49	<0.1	7.2	<0.1	<0.5	0.9	4	<0.5	<0.5	<0.5	<1		<0.1	2		6.2
13-Oct-15	100145								<1		<0.5		1					
21-Mar-16	103107	<25	36	<0.1	11.9	<0.1	<0.5	0.5	3	<0.5	<0.5	<0.5	<1		<0.1	<2		4.8
04-Oct-16	107877								<1		<0.5		<1					
23-Mar-17	111762	<25	40	<0.1	16.7	<0.1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<1		<0.1	<2		<0.5
25-Sep-17	116645								<50		<1		<1					
03-Apr-18	121258	<25	31	<0.1	10.7	<0.1	<0.5	0.6	5	<0.5	<0.5	<0.5	<1		<0.1	<2		1.8
30-Sep-18	126594								<50		<1		<1					
11-Mar-19	130204	<25	43	<0.5	14.6	<0.1	0.5	3.4	4	<0.5	<0.5	<0.5	<1		<0.5	<2		4.4
24-Sep-19	135342								<50		<1		<1					
23-Mar-20	139730	<25	25	<0.5	6.1	<0.1	<0.5	1.6	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<0.5
10-Sep-20	144079								<5		<0.5		<1					
09-Mar-21	148435	<25	38	<0.5	10.5	<0.1	<0.5	1.9	8	<0.5	<0.5	<0.5	<1		<0.5	<2		0.8
05-Oct-21	154353								<5		<0.5		<1					
15-Mar-22	158876	<25	32	<0.5	8.2	<0.1	<0.5	0.7	5	<0.5	<0.5	<0.5	<1		<0.5	<2		<0.5
13-Sep-22	164239								8		<0.5		<1					
15-Mar-23	168774	<25	37	<0.5	6	<0.1	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
18-Mar-24	179271	<25	37	<0.5	5	<0.1	<0.5	0.6	<5	<0.5	<0.5	1	<1		<0.5	<2		<5
09-Sep-24	184298								62		3.8		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									31		1.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-91-II

Overburden Formation

Stand Pipe Piezometer
Screen 198.1 - 196.5 masl



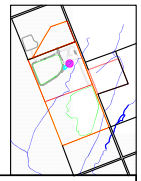
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
09-Apr-08	48627	<20	57	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
16-Sep-08	51294								<50		3		<1					
22-Apr-09	55180	<20	62	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
06-Oct-09	58349								<50		9		<1					
02-Mar-10	60950	<20	58	<1	<30	<1	<2	<5	<50	<20	8	<5	<1		<2	<5		<30
27-Sep-10	64383								<50		5		<1					
14-Mar-11	66910	<20	46	<1	<30	<1	<2	<5	<50	<20	4	<5	<1			<5		<30
02-Apr-12	73794	<20	44	<1	<30	<0.3	<2	<5	<50	2.2	<1	<5	<1			<5		<30
17-Sep-12	77334								<0.4		13		<1					
05-Mar-13	80695	<20	46	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
09-Sep-13	85030								<50		<1		<1					
10-Mar-14	88317	<20	52	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
08-Sep-14	92266								<50		1		<1					
04-Mar-15	95473	**224**	60	<0.1	7.6	<0.1	0.8	1.4	**357**	<0.5	16.4	<0.5	2		0.4	<2		9.5
05-Oct-15	100011								19		0.8		<1					
18-Mar-16	103036	<25	56	<0.1	23.7	<0.1	<0.5	0.6	11	<0.5	0.8	0.5	<1		<0.1	<2		1.6
08-Mar-17	111343	<25	52	<0.1	82.7	<0.1	<0.5	1.4	30	<0.5	1.8	<0.5	<1		0.3	<2		4.2
20-Sep-17	116503								<50		<1		<1					
19-Mar-18	120796	<25	60	<0.1	8.8	<0.1	<0.5	2.3	7	<0.5	<0.5	<0.5	<1		<0.1	<2		1.1
25-Sep-18	126475								<50		3		<1					
12-Mar-19	130226	<25	79	<0.5	22.4	<0.1	<0.5	1	33	<0.5	2.2	<0.5	<1		<0.5	<2		2.5
18-Sep-19	135232								100		8		2					
26-Mar-20	139777	<25	104	<0.5	17.6	<0.1	<0.5	1.1	7	<0.5	**75.8**	<0.5	<1		0.6	<2		2.8
16-Sep-20	144238								65		46.3		<1					
16-Mar-21	148555	<25	131	<0.5	31.8	<0.1	<0.5	1	13	<0.5	**120**	<0.5	<1		1.2	<2		1.6
29-Sep-21	154170								19		**188**		<1					
21-Mar-22	159043	<25	120	<0.5	51.7	<0.1	<0.5	1.2	<5	<0.5	**145**	<0.5	<1		1.1	<2		3
14-Mar-23	168720	<25	119	<0.5	66	<0.1	<0.5	1.4	159	<0.5	**458**	0.6	<1		5.9	2		<5
05-Mar-24	178934	<25	111	<0.5	40	<0.1	<0.5	0.5	100	<0.5	**476**	<0.5	<1		3.9	<2		<5
16-Sep-24	184502								126		**437**		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	32	19	32	19	30	2	17	19	2	19
AVERAGE 2024									113		457		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-91-III

Shallow Overburden

Monitoring Well
Screen 203.5 - 200.1 masl



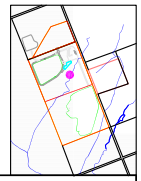
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
15-May-07	42839	<20	30	<1	<30	<1	<2	<5	<50	<20	<1	<5		<10	<2	<5	<2	<30
09-Apr-08	48628	<20	16	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
16-Sep-08	51295								<50		<1		<1					
22-Apr-09	55181	<20	21	<1	<30	<1	<2	<5	<50	<20	<1	<5	1		<2	<5		<30
06-Oct-09	58350												<1					
14-Mar-11	66911	<20	23	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
02-Apr-12	73795	<20	21	<1	<30	<0.3	<2	<5	<50	3.4	<1	<5	2			<5		<30
18-Mar-16	103037	<25	29	<0.1	4.8	<0.1	<0.5	0.6	6	<0.5	<0.5	<0.5	<1		<0.1	<2		1.8
08-Mar-17	111344	<25	20	<0.1	4.1	<0.1	<0.5	1.2	5	<0.5	<0.5	<0.5	<1		0.1	<2		1.2
26-Mar-20	139778	<25	26	<0.5	4	<0.1	0.5	1.1	9	<0.5	<0.5	<0.5	<1		<0.5	2		3.9
13-Apr-21	149229	60	36	<0.5	9.2	<0.1	0.5	1.5	57	<0.5	1.4	<0.5	<1		<0.5	<2		1.9
29-Sep-21	154171								<5		<0.5		<1					
21-Mar-22	159044	37	23	<0.5	6.3	<0.1	<0.5	<0.5	44	<0.5	0.8	0.8	<1		<0.5	<2		<0.5
15-Mar-23	168771	<25	27	<0.5	<5	<0.1	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
05-Mar-24	178935	<25	32	<0.5	<5	<0.1	<0.5	<0.5	13	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
TOTAL SAMPLES		12	12	12	12	12	12	12	14	12	14	12	14	1	10	12	1	12
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-92-II

Overburden Formation

Stand Pipe Piezometer
Screen 192.3 - 190.6 masl



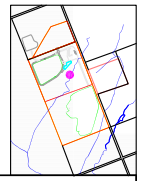
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Sep-09	58095								110		12		<1					
28-Apr-10	62145	<20	138	<1	260	<1	<2	<5	190	<20	14	<5	<1		<2	<5		<30
14-Sep-10	64170								150		9		<1					
07-Mar-11	66793	<20	105	<1	120	<1	<2	<5	<50	<20	6	<5	<1			<5		<30
27-Sep-11	70496								150		11		1					
10-Apr-12	73893	<20	91	<1	290	<0.3	<2	<5	<50	<1.5	17	<5	<1			<5		<30
17-Sep-12	77330								<0.4		11		<1					
07-Mar-13	80736	<20	103	<1	290	<1	<2	<5	<50	<10	7	<5	<1		<2	<5		<10
24-Sep-13	85339								100		12		<1					
17-Mar-14	88487	<20	110	<1	310	<1	<2	<5	120	<10	9	<5	1		<2	<5		<30
10-Sep-14	92323								140		11		1					
04-Mar-15	95476	<25	94	<0.1	270	<0.1	<0.5	<0.5	38	<0.5	1.5	1.8	1		<0.1	<2		10.5
13-Oct-15	100141								199		10.4		1					
29-Mar-16	103218	<25	117	<0.1	529	<0.1	<0.5	<0.5	213	<0.5	**61.7**	2.8	<1		0.2	<2		3
04-Oct-16	107882								195		7.8		<1					
16-Mar-17	111468	<25	111	<0.1	482	<0.1	<0.5	<0.5	11	<0.5	1.5	2.6	1		<0.1	<2		1.1
27-Sep-17	116685								**340**		13		<1					
19-Mar-18	120808	<25	121	<0.1	433	<0.1	<0.5	<0.5	79	<0.5	1.6	2.4	<1		<0.1	<2		1.1
30-Sep-18	126584								90		13		<1					
12-Mar-19	130235	<25	124	<0.5	436	<0.1	<0.5	<0.5	66	<0.5	3.5	2.5	1		<0.5	<2		1.5
19-Sep-19	135286								<50		39		<1					
11-Mar-20	139386	<25	117	<0.5	667	<0.1	<0.5	<0.5	19	<0.5	4.5	2.4	<1		<0.5	<2		1.3
08-Sep-20	144011								171		**86.3**		1					
09-Mar-21	148430	<25	128	<0.5	629	<0.1	<0.5	<0.5	57	<0.5	0.9	2.6	<1		<0.5	<2		<0.5
06-Oct-21	154473								160		30.4		2					
14-Mar-22	158784	<25	138	<0.5	851	<0.1	<0.5	<0.5	121	<0.5	1.4	2.6	<1		<0.5	<2		<0.5
13-Sep-22	164244								152		29.7		<1					
08-Mar-23	168580	<25	125	<0.5	810	<0.1	<0.5	0.7	11	<0.5	0.9	2.5	<1		<0.5	<2		<0.5
12-Mar-24	179127	<25	125	<0.5	780	<0.1	<0.5	0.6	107	<0.5	3.2	2.7	<1		<0.5	<2		<5
09-Sep-24	184304								186		18.8		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									147		11.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-92-III

Shallow Overburden

Monitoring Well
Screen 197.1 - 193.8 masl



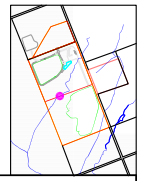
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Sep-09	58096								<50		<1		1					
28-Apr-10	62146	<20	44	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
14-Sep-10	64171								<50		23		<1					
15-Mar-11	66988	20	60	<1	200	<1	<2	7	<50	<20	<1	<5	<1		<2	<5		<30
27-Sep-11	70497								<50		3		1					
10-Apr-12	73894	<20	49	<1	180	<0.3	<2	<5	<50	4.8	9	<5	<1			<5		<30
17-Sep-12	77331								<0.4		10		<1					
07-Mar-13	80737	<20	28	<1	100	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
24-Sep-13	85340								<50		1		<1					
17-Mar-14	88488	20	66	<1	160	<1	<2	<5	<50	<10	**125**	<5	<1		<2	<5		<30
10-Sep-14	92324								90		46		<1					
04-Mar-15	95477	28	51	<0.1	73.1	<0.1	<0.5	0.6	48	<0.5	31.4	<0.5	1		0.4	3		1.2
13-Oct-15	100142								**24400**		**679**		171					
29-Mar-16	103219	<25	141	<0.1	607	<0.1	0.6	<0.5	**30700**	<0.5	**1490**	<0.5	1		3	7		1.1
04-Oct-16	107883								**10000**		**711**		1					
16-Mar-17	111469	<25	134	<0.1	552	<0.1	0.7	<0.5	**30100**	<0.5	**2380**	0.8	1		2.3	8		1
27-Sep-17	116686								**13900**		**1310**		<1					
19-Mar-18	120809	<25	211	<0.1	274	<0.1	<0.5	1.1	**10700**	<0.5	**2030**	<0.5	<1		1.7	5		1.1
30-Sep-18	126585								**12100**		**1720**		<1					
12-Mar-19	130236	<25	106	<0.5	230	<0.1	<0.5	<0.5	**8370**	<0.5	**1062**	<0.5	2		<0.5	3		2
19-Sep-19	135287								**8160**		**962**		<1					
11-Mar-20	139387	<25	88	<0.5	292	<0.1	<0.5	<0.5	**5420**	<0.5	**675**	<0.5	<1		<0.5	2		0.6
08-Sep-20	144012								**8490**		**1150**		1					
09-Mar-21	148431	<25	99	<0.5	239	<0.1	<0.5	<0.5	**1940**	<0.5	**569**	0.9	<1		1	6		0.5
06-Oct-21	154474								**6500**		**804**		<1					
14-Mar-22	158785	<25	96	<0.5	254	<0.1	<0.5	0.7	**871**	<0.5	**368**	1.5	1		2.9	5		1.1
13-Sep-22	164245								**4550**		**454**		<1					
08-Mar-23	168581	<25	84	<0.5	339	<0.1	0.7	<0.5	**2730**	<0.5	**844**	0.9	<1		3.7	6		<0.5
12-Mar-24	179128	<25	100	<0.5	337	<0.1	0.7	5.5	**303**	0.5	**321**	1	<1		3.7	12		<5
09-Sep-24	184305								**2290**		**604**		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	18	19	2	19
AVERAGE 2024									1297		463		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-93-I

Overburden Formation

Stand Pipe Piezometer
Screen 189.5 - 187.9 masl



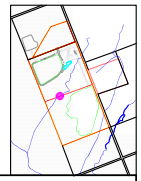
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
14-Oct-09	58546								**600**		12		<1					
27-Apr-10	62094	<20	245	<1	<30	<1	<2	<5	**530**	<20	10	<5	<1		<2	<5		<30
21-Sep-10	64271								**600**		11		<1					
14-Mar-11	66914	<20	235	<1	<30	<1	<2	<5	**570**	<20	11	<5	<1			<5		<30
26-Sep-11	70471								**540**		12		<1					
03-Apr-12	73824	<20	243	<1	30	<0.3	<2	<5	**560**	<1.5	11	<5	<1			<5		<30
19-Sep-12	77347								**574**		11		<1					
02-Apr-13	81308	<20	205	<1	20	<1	<2	<5	**430**	<10	12	<5	<1		<2	<5		<10
30-Sep-13	85427								**570**		11		<1					
07-Apr-14	88902	<20	230	<1	<30	<1	<2	<5	**460**	<10	10	<5	<1		<2	<5		<30
29-Sep-14	92708								**590**		11		<1					
11-Mar-15	95599	<25	222	<0.1	28	<0.1	<0.5	<0.5	**443**	<0.5	9.8	<0.5	<1		<0.1	<2		1.8
24-Sep-15	99799								**640**		10.4		<1					
09-Mar-16	102827	<25	233	<0.1	26.7	<0.1	<0.5	<0.5	**307**	<0.5	11.5	<0.5	<1		<0.1	<2		2.7
19-Sep-16	107514								**482**		9.1		<1					
20-Mar-17	111709	<25	209	<0.1	26.5	<0.1	<0.5	<0.5	**317**	<0.5	12.9	<0.5	<1		<0.1	<2		0.9
25-Sep-17	116646								**600**		11		<1					
15-Mar-18	120692	<25	247	<0.1	26.5	<0.1	<0.5	<0.5	**491**	<0.5	12.2	<0.5	<1		<0.1	<2		0.9
17-Sep-18	126165								**560**		12		<1					
25-Mar-19	130603	<25	225	<0.5	26.5	<0.1	<0.5	<0.5	**407**	<0.5	12.2	<0.5	1		<0.5	<2		<0.5
09-Sep-19	134995								**630**		12		<1					
23-Mar-20	139731	<25	227	<0.5	24.3	<0.1	<0.5	0.5	**503**	<0.5	11.7	<0.5	<1		<0.5	<2		<0.5
16-Sep-20	144240								**628**		12		1					
15-Mar-21	148528	<25	244	<0.5	25.2	<0.1	<0.5	0.6	289	<0.5	11.9	<0.5	<1		<0.5	<2		<0.5
28-Sep-21	154117								**634**		11.9		<1					
23-Mar-22	159182	<25	230	<0.5	22.1	<0.1	<0.5	<0.5	**534**	<0.5	12.4	<0.5	<1		<0.5	<2		<0.5
22-Sep-22	164536								**629**		11.6		<1					
06-Mar-23	168499	<25	238	<0.5	26.4	<0.1	<0.5	<0.5	**365**	<0.5	12.8	<0.5	<1		<0.5	<2		<0.5
11-Mar-24	179080	<25	220	<0.5	27	<0.1	<0.5	<0.5	**423**	<0.5	15.9	0.6	<1		<0.5	<2		<5
16-Sep-24	184496								**676**		12.6		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									550		14.3		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-93-II

Shallow Overburden

Monitoring Well
Screen 195.7 - 193.9 masl



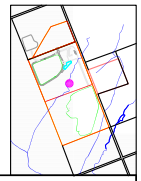
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
14-Oct-09	58548								<50		<1		<1					
27-Apr-10	62095	<20	76	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
21-Sep-10	64272								<50		<1		<1					
14-Mar-11	66915	<20	79	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
26-Sep-11	70472								<50		<1		2					
03-Apr-12	73825	<20	77	<1	<30	0.3	<2	<5	<50	<1.5	<1	<5	<1			<5		<30
19-Sep-12	77348								<0.4		<1		<1					
02-Apr-13	81309	<20	68	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
30-Sep-13	85428								<50		<1		<1					
07-Apr-14	88903	<20	61	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
29-Sep-14	92709								<50		2		<1					
11-Mar-15	95600	<25	81	<0.1	6.7	<0.1	0.6	<0.5	11	<0.5	0.6	0.6	<1		<0.1	<2		2.8
24-Sep-15	99801								<50		<0.5		<1					
09-Mar-16	102828	<25	100	<0.1	8.3	<0.1	<0.5	<0.5	1	<0.5	<0.5	0.5	<1		<0.1	<2		0.7
19-Sep-16	107515								23		1.3		<1					
20-Mar-17	111711	<25	44	<0.1	7.3	<0.1	<0.5	0.7	1	<0.5	<0.5	0.6	<1		<0.1	<2		0.6
25-Sep-17	116647								<50		1		<1					
15-Mar-18	120694	<25	53	<0.1	5.7	<0.1	<0.5	0.8	2	<0.5	<0.5	<0.5	<1		<0.1	<2		1.9
17-Sep-18	126166								<50		<1		<1					
25-Mar-19	130604	<25	63	<0.5	5.6	<0.1	<0.5	0.6	5	<0.5	<0.5	<0.5	1		<0.5	<2		2.3
09-Sep-19	134996								<50		9		1					
23-Mar-20	139732	61	73	<0.5	6.4	<0.1	<0.5	1	42	<0.5	2.8	0.7	<1		<0.5	<2		0.7
16-Sep-20	144241								10		9.6		<1					
15-Mar-21	148529	<25	55	<0.5	2.7	<0.1	<0.5	0.9	6	<0.5	1.2	<0.5	<1		<0.5	<2		1.4
28-Sep-21	154118								60		3.1		<1					
23-Mar-22	159183	<25	75	<0.5	5.7	<0.1	<0.5	0.8	<5	<0.5	<0.5	<0.5	<1		<0.5	<2		<0.5
22-Sep-22	164537								14		0.9		<1					
06-Mar-23	168500	36	64	<0.5	4.6	<0.1	<0.5	1.3	19	<0.5	2	<0.5	<1		<0.5	<2		2.4
11-Mar-24	179081	<25	63	<0.5	<5	<0.1	<0.5	0.8	<5	<0.5	<0.5	0.6	<1		<0.5	<2		<5
16-Sep-24	184497								14		1		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									7		1		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-94-II

Shallow Overburden

Monitoring Well
Screen 194.9 - 193.5 masl



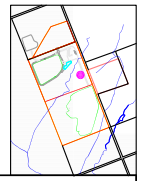
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
14-Oct-09	58550								**1750**		**52**		4					
22-Apr-10	62016	<20	73	<1	<30	<1	<2	<5	60	<20	13	<5	<1		<2	<5		<30
27-Sep-10	64381								**1170**		46		<1					
22-Mar-11	67103	**460**	151	<1	<30	<1	<2	<5	**510**	<20	17	<5	<1			<5		<30
04-Oct-11	70631								<50		6		1					
03-Apr-12	73827	<20	135	<1	<30	<0.3	<2	<5	<50	<1.5	3	<5	<1			<5		<30
12-Sep-12	77196								**1850**		**56**		<1					
03-Apr-13	81356	<20	118	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
01-Oct-13	85461								<50		22		<1					
07-Apr-14	88905	<20	120	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
15-Sep-14	92424								<50		25		<1					
11-Mar-15	95598	<25	156	<0.1	11.9	<0.1	<0.5	<0.5	3	<0.5	2.4	<0.5	<1		<0.1	<2		2
24-Sep-15	99803								130		38.5		<1					
09-Mar-16	102830	<25	134	<0.1	10.7	<0.1	<0.5	0.5	34	<0.5	15.6	<0.5	<1		0.1	<2		3.3
15-Sep-16	107398								17		33.7		<1					
20-Mar-17	111713	41	131	<0.1	12.5	<0.1	<0.5	0.6	**318**	<0.5	23.7	<0.5	<1		0.3	<2		0.6
20-Sep-17	116510								240		20		<1					
12-Mar-18	120578	<25	140	<0.1	9.4	<0.1	<0.5	1.1	53	<0.5	3.4	<0.5	<1		<0.1	<2		1.7
17-Sep-18	126168								**580**		13		<1					
25-Mar-19	130606	<25	152	<0.5	13.1	<0.1	<0.5	<0.5	61	<0.5	4.4	<0.5	1		<0.5	<2		0.8
09-Sep-19	134999								**370**		38		<1					
16-Mar-20	139464	**105**	122	<0.5	10.4	<0.1	<0.5	<0.5	87	<0.5	2.6	<0.5	<1		<0.5	<2		1.1
16-Sep-20	144243								139		12.2		2					
15-Mar-21	148530	<25	121	<0.5	9.9	<0.1	<0.5	1.1	40	<0.5	2.9	<0.5	<1		<0.5	<2		1.1
28-Sep-21	154120								234		15.3		<1					
23-Mar-22	159181	<25	142	<0.5	12.5	<0.1	<0.5	0.7	54	<0.5	7.8	<0.5	<1		<0.5	<2		0.9
21-Sep-22	164489								**306**		18.6		<1					
08-Mar-23	168583	<25	142	<0.5	22.8	<0.1	<0.5	0.9	<5	<0.5	0.6	<0.5	<1		<0.5	<2		0.9
11-Mar-24	179079	<25	141	<0.5	14	<0.1	<0.5	<0.5	<5	<0.5	2	0.6	<1		<0.5	<2		<5
09-Sep-24	184307								34		4.8		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									17		3.4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-95-II

Shallow Overburden

Monitoring Well
Screen 194.3 - 192.7 masl



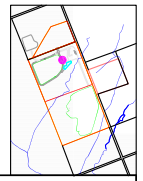
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
23-Apr-09	55217	90	207	<1	<30	<1	<2	<5	**4730**	<20	**1030**	<5	<1		<2	<5		<30
26-Oct-09	58833								240		**479**		<1					
22-Apr-10	62018	<20	130	<1	<30	<1	<2	<5	**3220**	<20	**515**	<5	<1		<2	<5		<30
07-Sep-10	64032								**2910**		**371**		<1					
26-Apr-11	67653	<20	135	<1	<30	<1	<2	<5	**2300**	<20	**341**	<5	<1			<5		<30
19-Sep-11	70360								**1900**		**362**		<1					
03-Apr-12	73829	<20	107	<1	<30	<0.3	<2	<5	**1390**	<1.5	**395**	<5	<1			<5		<30
12-Sep-12	77198								**680**		**135**		<1					
03-Apr-13	81358	<20	89	<1	<20	<1	<2	<5	**310**	<10	**332**	<5	<1		<2	<5		<10
01-Oct-13	85463								**1000**		**198**		<1					
09-Apr-14	88952	<20	100	<1	<30	<1	<2	<5	**1300**	<10	**301**	<5	<1		<2	<5		<30
29-Sep-14	92711								**1130**		**207**		<1					
26-Mar-15	95963	<25	113	<0.1	7.5	<0.1	<0.5	<0.5	**2170**	<0.5	**418**	0.7	2		0.4	<2		5.8
07-Oct-15	100060								**883**		**195**		<1					
09-Mar-16	102832	<25	84	<0.1	7.7	<0.1	<0.5	<0.5	**372**	<0.5	**182**	1	<1		0.2	<2		0.7
12-Sep-16	107319								244		**89.3**		<1					
23-Mar-17	111767	<25	89	<0.1	9.1	<0.1	<0.5	1.1	11	<0.5	**79.3**	0.9	<1		0.1	<2		0.9
13-Sep-17	116306								220		**172**		<1					
03-Apr-18	121263	<25	92	<0.1	11.1	<0.1	<0.5	<0.5	234	<0.5	**193**	0.7	<1		0.2	<2		1.3
18-Sep-18	126212								**360**		**116**		<1					
09-Sep-19	135003								**860**		**155**		<1					
31-Mar-20	139934	<25	121	<0.5	23.3	<0.1	<0.5	0.6	**637**	<0.5	**496**	0.6	<1		<0.5	<2		1.5
13-Sep-20	144104								77		**73.4**		1					
23-Mar-21	148725	<25	111	<0.5	13.1	<0.1	<0.5	0.6	186	<0.5	**216**	0.6	<1		<0.5	<2		1.1
28-Sep-21	154122								**452**		**187**		<1					
05-Apr-22	159589	<25	131	<0.5	5	<0.1	<0.5	1.1	**2110**	<0.5	**287**	<0.5	<1		<0.5	<2		0.7
06-Sep-22	164058								**339**		**117**		<1					
13-Mar-23	168681	<25	107	<0.5	8	<0.1	<0.5	<0.5	46	<0.5	**196**	0.7	<1		<0.5	8		<5
11-Mar-24	179076	<25	118	<0.5	11	<0.1	<0.5	<0.5	74	<0.5	**239**	1	<1		<0.5	<2		<5
03-Sep-24	184149								49		**84.1**		<1					
TOTAL SAMPLES		18	18	18	18	18	18	18	34	18	34	18	32	2	16	18	2	18
AVERAGE 2024									62		162		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**

BH-104-II

Overburden Formation

Stand Pipe Piezometer
Screen 198.2 - 197.1 masl



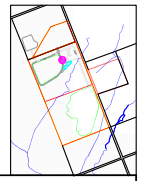
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Sep-10	64259								<50		1		<1					
28-Mar-11	67210	<20	58	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
01-Feb-12	72754	<20	26	<1	<30	<0.3	<2	<5	<50	<1.5	2	<5	<1		<2	<5		<30
06-Feb-12	72821	30	49	<1	<30	1	<2	<5	<50	1.8	3	5	<1		<2	<5		<30
14-Mar-12	73437	<20	27	<1	<30	<0.3	<2	<5	<50	<1.5	3	<5	<1			<5		<30
19-Sep-12	77342								<0.4		25		<1					
05-Mar-13	80683	<20	35	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
12-Sep-13	85142								<50		25		<1					
10-Mar-14	88320	<20	42	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
10-Sep-14	92326								<50		17		2					
04-Mar-15	95479	<25	36	<0.1	11.7	<0.1	<0.5	0.6	6	<0.5	<0.5	1.7	<1		<0.1	2		5
05-Oct-15	100005								2		15.2		<1					
07-Mar-16	102767	<25	30	<0.1	11.7	<0.1	<0.5	<0.5	1	<0.5	<0.5	1.4	<1		<0.1	<2		1.9
04-Oct-16	107870								20		36.9		1					
08-Mar-17	111346	<25	37	<0.1	14.5	<0.1	<0.5	<0.5	3	<0.5	<0.5	1.6	1		0.1	2		3.8
18-Sep-17	116454								<50		14		1					
19-Mar-18	120799	<25	48	<0.1	10.6	<0.1	<0.5	<0.5	2	<0.5	<0.5	1.8	<1		<0.1	<2		2.1
25-Sep-18	126478								<50		3		<1					
11-Mar-19	130208	<25	50	<0.5	10.4	<0.1	<0.5	1.3	31	<0.5	<0.5	2	<1		<0.5	3		5.2
18-Sep-19	135229								<50		11		<1					
04-Mar-20	139238	<25	52	<0.5	10.9	<0.1	<0.5	1.1	51	<0.5	1.8	1.8	<1		<0.5	4		6.6
10-Sep-20	144081								<5		3.7		1					
03-Mar-21	148211	<25	52	<0.5	11.4	<0.1	<0.5	0.9	7	<0.5	0.6	1.8	<1		<0.5	<2		1.6
27-Sep-21	154090								7		1.8		<1					
14-Mar-22	158780	**644**	56	<0.5	10.6	<0.1	1	1.3	**470**	<0.5	11.5	1.7	2		<0.5	2		9.6
12-Sep-22	164191								38		1.4		<1					
07-Mar-23	168533	34	58	<0.5	12.2	<0.1	<0.5	1.2	19	<0.5	1.1	1.6	<1		<0.5	<2		2.7
05-Sep-23	173900								19		1.1							
05-Mar-24	178930	<25	65	<0.5	8	<0.1	<0.5	0.9	25	<0.5	1.3	1.5	<1		<0.5	<2		<5
11-Sep-24	184378								<5		<0.5		<1					
TOTAL SAMPLES		21	21	21	21	21	21	21	37	21	37	21	34	2	19	21	2	21
AVERAGE 2024									13		0.7		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-104-III

Shallow Overburden

Monitoring Well
Screen 203.2 - 201.0 masl



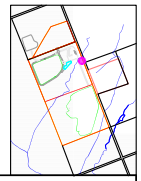
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Sep-10	64260								<50		**94**		<1					
28-Mar-11	67211	<20	44	<1	<30	<1	<2	<5	**740**	<20	**449**	<5	<1			<5		<30
30-Jan-12	72709	<20	53	<1	<30	<0.3	<2	<5	270	<1.5	**1120**	<5	<1		<2	<5		<30
31-Jan-12	72734	<20	56	<1	<30	<0.3	<2	<5	**730**	1.9	**862**	<5	<1		<2	<5		<30
14-Mar-12	73438	<20	55	<1	<30	<0.3	<2	<5	**1790**	2.2	**761**	<5	<1			<5		<30
19-Sep-12	77343								**2780**		**775**		<1					
05-Mar-13	80684	<20	152	<1	30	<1	<2	<5	100	<10	**2060**	<5	<1		<2	<5		<10
12-Sep-13	85143								**770**		**963**		<1					
10-Mar-14	88321	<20	114	<1	70	<1	<2	<5	**1750**	<10	**1100**	<5	<1		3	<5		<30
10-Sep-14	92327								220		**883**		2					
04-Mar-15	95480	<25	78	<0.1	21.9	<0.1	<0.5	0.8	9	<0.5	**86.3**	<0.5	<1		0.2	<2		<0.5
05-Oct-15	100006								44		**652**		<1					
07-Mar-16	102768	<25	82	<0.1	83.4	<0.1	<0.5	1.9	51	<0.5	**96**	<0.5	<1		0.4	<2		0.8
04-Oct-16	107871								**627**		**598**		<1					
08-Mar-17	111347	<25	80	<0.1	90.7	<0.1	<0.5	2.7	9	<0.5	15.5	<0.5	<1		0.1	<2		<0.5
18-Sep-17	116455								**760**		**1280**		<1					
19-Mar-18	120800	<25	84	<0.1	58.4	<0.1	<0.5	1.8	162	<0.5	**288**	<0.5	<1		0.4	<2		0.7
25-Sep-18	126479								<50		**641**		<1					
11-Mar-19	130209	<25	75	<0.5	43.3	<0.1	<0.5	1.4	43	<0.5	**97.9**	<0.5	<1		<0.5	3		0.7
18-Sep-19	135230								**820**		**894**		<1					
04-Mar-20	139239	<25	76	<0.5	81.6	<0.1	<0.5	2.1	10	<0.5	16.9	<0.5	<1		<0.5	<2		0.5
10-Sep-20	144082								171		**194**		<1					
03-Mar-21	148212	<25	85	<0.5	47.8	<0.1	<0.5	2.1	125	<0.5	**52.6**	<0.5	<1		<0.5	<2		<0.5
27-Sep-21	154091								69		**67.8**		<1					
14-Mar-22	158781	<25	101	<0.5	48	<0.1	<0.5	1.3	26	<0.5	48.2	<0.5	2		<0.5	<2		<0.5
12-Sep-22	164192								49		**126**		<1					
07-Mar-23	168534	<25	111	<0.5	46.6	<0.1	<0.5	1.7	16	<0.5	7.6	<0.5	<1		<0.5	<2		<0.5
05-Sep-23	173901								**604**		**444**							
05-Mar-24	178931	<25	107	<0.5	27	<0.1	<0.5	1.6	137	<0.5	19.6	<0.5	<1		<0.5	<2		<5
11-Sep-24	184379								**1370**		**950**		<1					
TOTAL SAMPLES		21	21	21	21	21	21	21	37	21	37	21	34	2	19	21	2	21
AVERAGE 2024									754		485		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-106-II

Overburden Formation

Stand Pipe Piezometer
Screen 192.4 - 191.3 masl



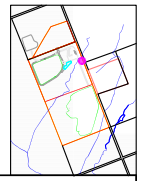
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
02-Mar-10	60953	<20	45	<1	<30	<1	<2	<5	**340**	<20	16	<5	<1		<2	<5		<30
07-Sep-10	64028								**570**		13		<1					
01-Mar-11	66689	<20	38	<1	50	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
06-Sep-11	70157								190		13		<1					
12-Mar-12	73371	<20	51	<1	60	<0.3	<2	<5	**530**	<1.5	16	<5	<1			<5		<30
10-Sep-12	77143								90		13		<1					
11-Mar-13	80780	<20	48	<1	60	<1	<2	<5	**350**	<10	21	<5	<1		<2	<5		<10
16-Sep-13	85201								80		16		<1					
10-Mar-14	88323	<20	50	<1	50	<1	<2	<5	140	<10	17	<5	<1		2	<5		<30
02-Sep-14	92072								**400**		21		<1					
09-Mar-15	95549	<25	46	<0.1	37.5	<0.1	<0.5	0.6	**305**	<0.5	15.4	<0.5	3		0.2	<2		5.8
05-Oct-15	100002								46		19.7		<1					
07-Mar-16	102770	<25	52	<0.1	33.7	<0.1	<0.5	<0.5	**550**	<0.5	19.2	<0.5	<1		0.1	<2		0.9
12-Sep-16	107307								**325**		13.6		<1					
08-Mar-17	111339	<25	99	<0.1	31.3	<0.1	<0.5	<0.5	**382**	<0.5	28.6	<0.5	<1		0.4	<2		1.3
12-Sep-17	116271								**760**		34		<1					
12-Mar-18	120569	<25	138	<0.1	32.6	<0.1	<0.5	<0.5	**439**	<0.5	40.1	<0.5	<1		0.2	<2		2.4
17-Sep-18	126162								**420**		17		<1					
14-Mar-19	130276	<25	122	<0.5	29	<0.1	<0.5	2.4	235	<0.5	19.6	<0.5	1		<0.5	<2		2.7
04-Sep-19	134869								**350**		15		1					
04-Mar-20	139242	<25	118	<0.5	29.2	<0.1	<0.5	0.5	**1090**	<0.5	30.7	<0.5	<1		<0.5	<2		1.2
01-Sep-20	143836								295		33.7		<1					
03-Mar-21	148208	<25	119	<0.5	25.3	<0.1	<0.5	1.6	**540**	<0.5	26.4	<0.5	<1		<0.5	<2		1.1
20-Sep-21	153830								**1090**		30.4		<1					
08-Mar-22	158623	<25	104	<0.5	24.3	<0.1	<0.5	0.8	258	<0.5	21.8	<0.5	1		<0.5	<2		1.2
06-Sep-22	164049								**783**		26.1		<1					
02-Mar-23	168426	<25	123	<0.5	25.7	<0.1	<0.5	0.9	**547**	<0.5	22.8	<0.5	<1		<0.5	<2		1.5
06-Sep-23	173958								243		12.1							
04-Mar-24	178891	<25	110	<0.5	24	<0.1	<0.5	<0.5	**496**	<0.5	25.1	<0.5	<1		<0.5	<2		<5
03-Sep-24	184143								**990**		26.4		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	17	19	2	19
AVERAGE 2024									743		25.8		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-106-III

Shallow Overburden

Monitoring Well
Screen 198.1 - 195.3 masl



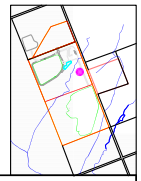
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
02-Mar-10	60954	<20	91	<1	<30	<1	<2	<5	<50	<20	3	<5	<1		<2	<5		<30
07-Sep-10	64029								<50		11		<1					
01-Mar-11	66690	<20	145	<1	<30	<1	<2	<5	<50	<20	3	<5	<1			<5		<30
06-Sep-11	70158								<50		24		<1					
12-Mar-12	73372	<20	143	<1	50	<0.3	<2	<5	<50	<1.5	2	<5	<1			<5		<30
10-Sep-12	77144								<50		2		<1					
11-Mar-13	80781	<20	220	<1	40	<1	<2	<5	<50	<10	6	<5	<1		<2	<5		<10
16-Sep-13	85202								<50		3		<1					
10-Mar-14	88324	<20	209	<1	60	<1	<2	<5	<50	<10	3	<5	<1		<2	<5		<30
02-Sep-14	92073								<50		**115**		<1					
09-Mar-15	95550	<25	183	<0.1	38	<0.1	<0.5	0.7	35	<0.5	10.8	<0.5	3		<0.1	<2		15.5
05-Oct-15	100003								4		6		2					
07-Mar-16	102771	<25	197	<0.1	29.1	<0.1	<0.5	0.9	6	<0.5	8.7	<0.5	<1		0.1	<2		2.6
12-Sep-16	107308								3		1.4		<1					
08-Mar-17	111340	<25	280	<0.1	22.6	<0.1	<0.5	0.7	3	<0.5	0.7	<0.5	<1		0.2	<2		1.4
12-Sep-17	116272								140		**63**		<1					
12-Mar-18	120570	<25	318	<0.1	19.3	<0.1	<0.5	0.9	4	<0.5	1.3	<0.5	<1		<0.1	<2		2.2
17-Sep-18	126163								**960**		**141**		<1					
14-Mar-19	130277	<25	207	<0.5	20.1	<0.1	<0.5	0.9	**412**	<0.5	22.9	<0.5	<1		0.5	<2		1.7
04-Sep-19	134870								**850**		44		<1					
04-Mar-20	139243	<25	329	<0.5	20.8	<0.1	<0.5	1.2	16	<0.5	0.9	<0.5	<1		<0.5	<2		1.7
01-Sep-20	143837								29		2.5		<1					
03-Mar-21	148209	<25	363	<0.5	21.2	<0.1	<0.5	1.4	12	<0.5	9.7	<0.5	<1		<0.5	<2		1.3
20-Sep-21	153831								141		11.1		<1					
08-Mar-22	158624	<25	237	<0.5	18.2	<0.1	<0.5	0.9	8	<0.5	0.7	<0.5	2		<0.5	<2		0.9
06-Sep-22	164050								12		20.3		<1					
02-Mar-23	168427	<25	449	<0.5	14	<0.1	<0.5	1.5	10	<0.5	0.7	<0.5	<1		<0.5	<2		2
06-Sep-23	173959								**944**		**76**							
04-Mar-24	178892	29	246	<0.5	20	<0.1	<0.5	1.1	57	<0.5	10.7	<0.5	<1		<0.5	<2		<5
03-Sep-24	184144								31		31.6		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	17	19	2	19
AVERAGE 2024									44		21.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-107-II

Overburden Formation

Stand Pipe Piezometer
Screen 188.9 - 186.9 masl



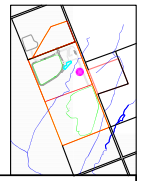
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
05-Oct-09	58297								<50		<1		<1					
09-Mar-10	61125	<20	57	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1		<2	<5		<30
04-Oct-10	64475								<50		4		<1					
22-Mar-11	67100	40	66	<1	<30	<1	<2	<5	<50	<20	5	<5	<1			<5		<30
19-Sep-11	70357								<50		2		<1					
12-Mar-12	73374	<20	64	<1	<30	<0.3	<2	<5	<50	<1.5	2	<5	<1			<5		<30
17-Oct-12	78004								<50		<1		<1					
08-Apr-13	81442	<20	63	<1	20	<1	<2	<5	<50	<10	2	<5	<1		<2	<5		<10
09-Sep-13	85033								<50		<1		<1					
09-Apr-14	88949	<20	66	<1	<30	<1	<2	<5	<50	<10	2	<5	1		<2	<5		<30
08-Sep-14	92269								<50		1		1					
16-Mar-15	95691	<25	66	<0.1	21.7	<0.1	<0.5	1	15	<0.5	1.5	<0.5	<1		0.1	<2		17.8
13-Oct-15	100138								7		<0.5		<1					
18-Mar-16	103025	<25	60	<0.1	14.9	<0.1	<0.5	0.6	2	<0.5	3.1	0.7	<1		<0.1	<2		2.4
19-Sep-16	107505								3		1		<1					
23-Mar-17	111763	<25	69	<0.1	13.8	<0.1	<0.5	0.7	1	<0.5	<0.5	0.5	<1		<0.1	<2		1
13-Sep-17	116303								<50		<1		<1					
03-Apr-18	121260	<25	77	<0.1	22	<0.1	<0.5	0.6	3	<0.5	<0.5	<0.5	<1		<0.1	<2		1.7
18-Sep-18	126214								<50		<1		<1					
28-Mar-19	130673	<25	72	<0.5	16.4	<0.1	<0.5	0.5	2	<0.5	0.6	<0.5	<1		<0.5	<2		0.9
09-Sep-19	135004								<50		<1		<1					
31-Mar-20	139936	**426**	78	<0.5	16.8	<0.1	<0.5	1.1	**333**	<0.5	11.4	<0.5	<1		<0.5	<2		1.4
08-Sep-20	144014								<5		1.2		<1					
15-Mar-21	148532	58	78	<0.5	14.4	<0.1	<0.5	1.4	48	<0.5	2.3	<0.5	<1		<0.5	<2		1
05-Oct-21	154357								**391**		14.3		<1					
05-Apr-22	159591	<25	77	<0.5	10.5	<0.1	<0.5	<0.5	7	<0.5	0.9	<0.5	<1		<0.5	<2		<0.5
06-Sep-22	164055								163		6.3		<1					
13-Mar-23	168682	<25	82	<0.5	16	<0.1	<0.5	<0.5	<5	<0.5	1.7	<0.5	<1		<0.5	<2		<5
11-Mar-24	179073	<25	93	<0.5	18	<0.1	<0.5	0.5	<5	<0.5	2.8	<0.5	<1		<0.5	<2		<5
16-Sep-24	184491								<5		2.3		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									<5		2.6		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-107-III

Shallow Overburden

Monitoring Well
Screen 193.8 - 192.3 masl



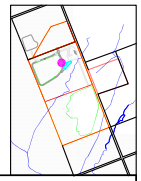
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
05-Oct-09	58298								<50		9		<1					
09-Mar-10	61126	<20	96	<1	<30	<1	<2	<5	<50	<20	2	<5	<1		<2	<5		<30
04-Oct-10	64476								60		22		<1					
22-Mar-11	67101	<20	74	<1	<30	<1	<2	<5	<50	<20	3	<5	<1			<5		<30
19-Sep-11	70358								90		23		1					
12-Mar-12	73375	<20	72	<1	30	<0.3	<2	<5	<50	2.4	15	<5	<1			<5		<30
17-Oct-12	78006								**510**		**118**		<1					
08-Apr-13	81443	<20	59	<1	<20	<1	<2	<5	<50	<10	7	<5	<1		<2	<5		<10
09-Sep-13	85034								160		28		<1					
09-Apr-14	88950	<20	68	<1	<30	<1	<2	<5	**320**	<10	**67**	<5	1		<2	<5		<30
08-Sep-14	92270								**310**		16		<1					
16-Mar-15	95692	<25	88	<0.1	18.2	<0.1	<0.5	0.6	**312**	<0.5	**62.9**	<0.5	<1		0.1	<2		14.4
13-Oct-15	100139								118		19.9		<1					
18-Mar-16	103026	<25	66	<0.1	13.3	<0.1	<0.5	0.8	7	<0.5	3.2	<0.5	<1		<0.1	<2		1
19-Sep-16	107506								32		4.8		<1					
23-Mar-17	111765	<25	61	<0.1	9	<0.1	<0.5	0.6	7	<0.5	1.7	<0.5	<1		<0.1	<2		2.3
13-Sep-17	116304								**580**		32		<1					
03-Apr-18	121261	<25	78	<0.1	18.4	<0.1	<0.5	<0.5	19	<0.5	10.3	<0.5	<1		<0.1	<2		<0.5
18-Sep-18	126215								90		18		<1					
28-Mar-19	130674	<25	89	<0.5	13.4	<0.1	<0.5	1.6	9	<0.5	5	<0.5	<1		<0.5	<2		1.7
09-Sep-19	135005								250		11		<1					
31-Mar-20	139937	<25	79	<0.5	16.1	<0.1	<0.5	0.9	24	<0.5	19.4	<0.5	<1		<0.5	<2		1
08-Sep-20	144015								32		5.9		<1					
15-Mar-21	148533	<25	86	<0.5	12.9	0.1	<0.5	2.3	**377**	<0.5	**230**	<0.5	<1		<0.5	<2		4.2
05-Oct-21	154358								25		9		<1					
05-Apr-22	159592	<25	62	<0.5	8.6	<0.1	<0.5	0.7	28	<0.5	39.1	<0.5	<1		<0.5	<2		<0.5
06-Sep-22	164056								31		8.4		<1					
13-Mar-23	168683	<25	61	<0.5	9	<0.1	<0.5	0.7	40	<0.5	22	<0.5	<1		<0.5	<2		<5
11-Mar-24	179074	<25	78	<0.5	16	<0.1	<0.5	1	42	<0.5	1.4	<0.5	<1		<0.5	<2		<5
16-Sep-24	184493								**572**		13.3		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									307		7.4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-108-I

Overburden Formation

Stand Pipe Piezometer



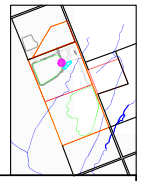
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Dec-10	65622								**310**		12		<1					
07-Mar-11	66785	**380**	116	<1	90	<1	<2	7	240	<20	9	<5	<1			<5		<30
12-Sep-11	70246								<50		4		<1					
14-Mar-12	73432	<20	106	<1	100	<0.3	<2	<5	<50	2.4	2	<5	<1			<5		<30
24-Sep-12	77500								40.4		4		<1					
05-Mar-13	80685	<20	107	<1	70	<1	<2	<5	60	<10	4	<5	<1		<2	<5		<10
12-Sep-13	85145								90		4		<1					
10-Mar-14	88325	50	121	<1	80	<1	<2	<5	140	<10	9	<5	<1		<2	<5		<30
29-Sep-14	92705								70		4		<1					
09-Mar-15	95551	<25	99	<0.1	71.3	<0.1	<0.5	<0.5	33	<0.5	3.8	1.5	<1		<0.1	<2		15
05-Oct-15	100007								78		4.3		<1					
07-Mar-16	102773	<25	94	<0.1	59	<0.1	<0.5	<0.5	48	<0.5	3.4	1.4	<1		<0.1	<2		<0.5
19-Sep-16	107507								61		3.6		<1					
16-Mar-17	111461	<25	95	<0.1	81.7	<0.1	<0.5	0.9	48	<0.5	4.1	2.1	<1		<0.1	<2		1.5
18-Sep-17	116459								60		4		<1					
19-Mar-18	120801	<25	124	<0.1	62.8	<0.1	<0.5	<0.5	68	<0.5	4.1	1.6	<1		<0.1	<2		<0.5
25-Sep-18	126481								80		5		<1					
12-Mar-19	130228	<25	113	<0.5	76.3	<0.1	<0.5	0.9	83	<0.5	4.5	1.6	<1		<0.5	<2		1
24-Sep-19	135336								60		4		<1					
10-Mar-20	139360	**783**	120	<0.5	75.6	<0.1	1	0.9	**540**	<0.5	22.1	1.6	<1		<0.5	<2		3.9
08-Sep-20	144016								64		5.5		<1					
03-Mar-21	148214	<25	141	<0.5	77.4	<0.1	<0.5	2.4	92	<0.5	6.9	2	<1		<0.5	<2		1.5
27-Sep-21	154086								56		4.8		<1					
09-Mar-22	158655	60	112	<0.5	68.4	0.1	<0.5	<0.5	145	<0.5	9.2	1.5	2		<0.5	<2		0.7
21-Sep-22	164481								113		6.5		<1					
07-Mar-23	168535	53	119	<0.5	95.8	<0.1	<0.5	1	143	<0.5	8.5	1.5	<1		<0.5	<2		0.6
06-Sep-23	173960								109		5.9							
05-Mar-24	178936	<25	112	<0.5	74	<0.1	<0.5	<0.5	91	<0.5	5.1	2.2	<1		<0.5	<2		<5
09-Sep-24	184299								111		5.4		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	29	14	29	14	28	0	12	14	0	14
AVERAGE 2024									101		5.3		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-108-II

Overburden Formation

Stand Pipe Piezometer



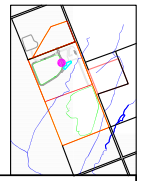
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Dec-10	65623								<50		5		<1					
02-Mar-11	66734	50	69	<1	190	<1	<2	<5	60	<20	5	29	<1		<2	<5		<30
12-Sep-11	70247								<50		25		<1					
14-Mar-12	73433	<20	48	<1	150	<0.3	<2	<5	<50	<1.5	<1	5	<1			<5		<30
24-Sep-12	77501								<0.4		36		<1					
05-Mar-13	80686	<20	53	<1	120	<1	<2	<5	<50	<10	<1	7	<1		<2	<5		<10
12-Sep-13	85146								<50		11		<1					
10-Mar-14	88326	<20	62	<1	120	<1	<2	<5	<50	<10	<1	5	<1		<2	<5		<30
29-Sep-14	92706								290		**71**		<1					
09-Mar-15	95552	<25	49	<0.1	110	<0.1	<0.5	<0.5	5	<0.5	<0.5	4.6	4		<0.1	<2		3.1
05-Oct-15	100008								49		38.8		<1					
07-Mar-16	102774	<25	52	<0.1	97.2	<0.1	<0.5	<0.5	21	<0.5	1.5	4.3	<1		<0.1	<2		1.8
19-Sep-16	107508								98		44.1		<1					
16-Mar-17	111462	26	60	<0.1	118	<0.1	<0.5	<0.5	37	<0.5	2.7	4.5	4		<0.1	<2		1.7
18-Sep-17	116460								80		31		<1					
19-Mar-18	120802	<25	70	<0.1	99	<0.1	<0.5	<0.5	4	<0.5	<0.5	4.4	<1		<0.1	<2		1.5
25-Sep-18	126482								80		**127**		<1					
12-Mar-19	130229	<25	69	<0.5	126	<0.1	<0.5	0.9	14	<0.5	0.6	4.3	<1		<0.5	<2		1.5
24-Sep-19	135337								<50		**140**		<1					
10-Mar-20	139361	68	72	<0.5	113	<0.1	<0.5	1	92	<0.5	4.6	3.7	<1		<0.5	<2		3.6
08-Sep-20	144017								66		**92.7**		<1					
03-Mar-21	148216	38	80	<0.5	128	<0.1	<0.5	0.7	74	<0.5	4.6	3.9	<1		<0.5	<2		<0.5
27-Sep-21	154087								67		**126**		<1					
09-Mar-22	158656	46	75	<0.5	106	<0.1	<0.5	1.6	70	<0.5	4.9	3.5	2		<0.5	<2		4.3
21-Sep-22	164482								74		**89.3**		<1					
07-Mar-23	168536	85	81	<0.5	150	<0.1	<0.5	1.1	89	<0.5	7.1	3.4	<1		<0.5	<2		1.2
06-Sep-23	173961								44		2.4							
05-Mar-24	178937	<25	82	<0.5	119	<0.1	<0.5	0.9	7	<0.5	0.6	3.9	<1		<0.5	<2		<5
09-Sep-24	184300								**309**		31.1		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	29	14	29	14	28	0	13	14	0	14
AVERAGE 2024									158		15.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-108-III

Shallow Overburden

Monitoring Well



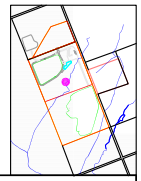
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Dec-10	65624								<50		32		<1					
02-Mar-11	66735	<20	84	<1	<30	<1	<2	<5	<50	<20	10	<5	<1		<2	<5		<30
12-Sep-11	70248								<50		10		<1					
14-Mar-12	73434	<20	79	<1	<30	<0.3	<2	<5	<50	<1.5	<1	<5	<1			<5		<30
24-Sep-12	77503								<0.4		14		<1					
05-Mar-13	80687	<20	84	<1	<20	<1	<2	<5	<50	<10	3	<5	<1		<2	<5		<10
12-Sep-13	85147								<50		10		<1					
10-Mar-14	88327	<20	93	<1	<30	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<30
29-Sep-14	92707								<50		9		<1					
09-Mar-15	95553	<25	78	<0.1	6.1	<0.1	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		<0.1	<2		2.2
05-Oct-15	100009								1		13.7		<1					
07-Mar-16	102775	<25	92	<0.1	8	<0.1	<0.5	<0.5	2	<0.5	2.4	<0.5	<1		<0.1	<2		1.8
19-Sep-16	107509								3		22.7		<1					
16-Mar-17	111463	<25	101	<0.1	13	<0.1	<0.5	0.8	4	<0.5	2.3	0.8	<1		<0.1	<2		1.4
18-Sep-17	116461								<50		9		<1					
19-Mar-18	120803	<25	129	<0.1	7.8	<0.1	<0.5	0.6	2	<0.5	8.9	<0.5	<1		<0.1	<2		1.3
25-Sep-18	126483								<50		14		<1					
12-Mar-19	130230	<25	117	<0.5	12	<0.1	<0.5	2.1	4	<0.5	2.5	<0.5	<1		<0.5	<2		2.6
24-Sep-19	135338								<50		12		1					
10-Mar-20	139362	<25	139	<0.5	12.1	<0.1	<0.5	1.6	9	<0.5	10.9	<0.5	<1		<0.5	<2		0.9
08-Sep-20	144018								12		19.4		<1					
03-Mar-21	148217	<25	132	<0.5	12.9	<0.1	<0.5	20.2	28	<0.5	8.6	<0.5	<1		<0.5	14		5.8
27-Sep-21	154088								<5		30.7		<1					
09-Mar-22	158657	<25	121	<0.5	12.1	<0.1	<0.5	<0.5	20	<0.5	9.6	<0.5	<1		<0.5	<2		<0.5
21-Sep-22	164483								13		28.4		<1					
07-Mar-23	168537	<25	131	<0.5	19.2	<0.1	<0.5	<0.5	<5	<0.5	10.2	<0.5	<1		<0.5	<2		<0.5
06-Sep-23	173962								<5		24.1							
05-Mar-24	178938	<25	130	<0.5	14	<0.1	<0.5	0.5	<5	<0.5	11.4	<0.5	<1		<0.5	<2		<5
09-Sep-24	184301								<5		31.9		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	29	14	29	14	28	0	13	14	0	14
AVERAGE 2024									<5		21.7		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-109-I

Overburden Formation

Stand Pipe Piezometer



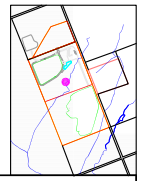
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Dec-10	65708								<50		5		<1					
07-Mar-11	66789	<20	80	<1	70	<1	<2	<5	50	<20	5	<5	<1			<5		<30
12-Sep-11	70249								70		10		<1					
07-Mar-12	73302	<20	84	<1	70	<0.3	<2	<5	<50	<1.5	4	6	<1		<2	<5		<30
10-Sep-12	77145								<50		4		<1					
11-Mar-13	80782	<20	81	<1	70	<1	<2	<5	<50	<10	5	<5	<1		2	<5		10
16-Sep-13	85203								<50		3		<1					
18-Mar-14	88519	**460**	83	<1	60	<1	<2	<5	**340**	<10	20	<5	<1		<2	<5		<30
03-Sep-14	92155								<50		5		<1					
11-Mar-15	95592	<25	82	<0.1	64.5	<0.1	<0.5	<0.5	4	<0.5	3.6	1.9	<1		<0.1	<2		3.1
07-Oct-15	100055								14		3.5		<1					
21-Mar-16	103099	<25	76	<0.1	60.2	<0.1	<0.5	<0.5	13	<0.5	3.1	2	<1		<0.1	<2		<0.5
15-Sep-16	107394								8		2.9		<1					
20-Mar-17	111701	<25	82	<0.1	67.5	<0.1	<0.5	<0.5	15	<0.5	3.5	2.3	<1		<0.1	<2		<0.5
25-Sep-17	116633								<50		4		<1					
12-Mar-18	120574	<25	97	<0.1	53.7	<0.1	<0.5	1.5	11	<0.5	3.6	2	<1		<0.1	<2		2.3
30-Sep-18	126586								<50		3		<1					
19-Mar-19	130442	<25	91	<0.5	73.7	<0.1	<0.5	1.7	6	<0.5	3.9	2.1	1		<0.5	<2		2.1
11-Sep-19	135033								<50		3		<1					
23-Mar-20	139733	<25	99	<0.5	66.8	<0.1	<0.5	<0.5	6	<0.5	3.5	2.5	<1		<0.5	<2		<0.5
03-Sep-20	143899								90		6.6		1					
17-Mar-21	148593	<25	93	<0.5	70.4	<0.1	<0.5	4.3	8	<0.5	3.6	2.2	<1		<0.5	<2		0.6
05-Oct-21	154359								8		3.6		<1					
15-Mar-22	158871	<25	95	<0.5	81.6	<0.1	<0.5	0.5	28	<0.5	4.8	2.2	<1		<0.5	<2		<0.5
21-Sep-22	164484								8		2.7		<1					
14-Mar-23	168724	<25	84	<0.5	76	<0.1	<0.5	<0.5	9	<0.5	4.3	2.3	<1		<0.5	<2		<5
12-Mar-24	179129	<25	87	<0.5	82	<0.1	<0.5	<0.5	20	<0.5	4	2.1	<1		<0.5	<2		<5
10-Sep-24	184344								11		3		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	28	14	28	14	28	0	13	14	0	14
AVERAGE 2024									16		4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-109-II

Overburden Formation

Stand Pipe Piezometer
Screen 190.1 - 188.6 masl



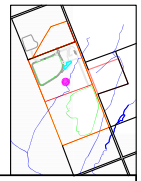
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Dec-10	65709								<50		30		<1					
07-Mar-11	66790	<20	88	<1	40	<1	<2	<5	<50	<20	8	<5	<1			<5		<30
12-Sep-11	70250								<50		4		<1					
07-Mar-12	73303	<20	101	<1	30	<0.3	<2	<5	<50	<1.5	6	<5	<1		<2	<5		<30
10-Sep-12	77146								<50		5		<1					
11-Mar-13	80783	<20	102	<1	30	<1	<2	<5	<50	<10	6	<5	<1		<2	<5		<10
16-Sep-13	85204								<50		4		<1					
18-Mar-14	88520	<20	104	<1	<30	<1	<2	<5	<50	<10	3	<5	<1		<2	<5		<30
03-Sep-14	92156								<50		7		<1					
11-Mar-15	95593	<25	105	<0.1	18.3	<0.1	<0.5	<0.5	1	<0.5	4.5	0.9	<1		<0.1	<2		1.9
07-Oct-15	100056								3		5.7		<1					
21-Mar-16	103100	<25	105	<0.1	12.6	<0.1	<0.5	0.5	2	<0.5	0.6	0.8	<1		<0.1	<2		1.8
15-Sep-16	107395								<1		4.5		<1					
20-Mar-17	111702	<25	102	<0.1	15	<0.1	<0.5	<0.5	1	<0.5	0.5	1	<1		<0.1	<2		<0.5
25-Sep-17	116634								<50		2		<1					
12-Mar-18	120575	<25	117	<0.1	12.4	<0.1	<0.5	0.6	5	<0.5	1.4	0.7	<1		<0.1	<2		1.2
30-Sep-18	126587								<50		2		<1					
19-Mar-19	130443	<25	108	<0.5	18.9	<0.1	<0.5	<0.5	2	<0.5	4.3	0.8	<1		<0.5	<2		0.7
11-Sep-19	135034								<50		10		<1					
23-Mar-20	139734	**131**	94	<0.5	26.4	<0.1	<0.5	1.3	112	<0.5	33.6	<0.5	<1		<0.5	3	<0.5	2.5
21-Sep-22	164485								82		18.5		<1					
14-Mar-23	168725	<25	72	<0.5	35	<0.1	<0.5	0.5	34	<0.5	10.1	12.5	<1		<0.5	<2		<5
12-Mar-24	179130	<25	80	<0.5	25	<0.1	<0.5	<0.5	99	<0.5	11	3.4	<1		<0.5	<2		<5
10-Sep-24	184345								201		12.2		<1					
TOTAL SAMPLES		12	12	12	12	12	12	12	24	12	24	12	24	0	11	12	1	12
AVERAGE 2024									150		11.6		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-109-III

Shallow Overburden

Monitoring Well



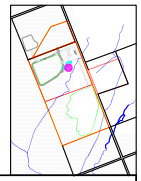
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
15-Dec-10	65672								<50		1		<1					
07-Mar-11	66791	<20	53	<1	<30	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
12-Sep-11	70251								230		11		<1					
07-Mar-12	73304	<20	75	<1	<30	<0.3	<2	<5	<50	<1.5	<1	<5	<1		<2	<5		<30
10-Sep-12	77147								<50		<1		<1					
11-Mar-13	80784	<20	82	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
16-Sep-13	85205								<50		<1		<1					
18-Mar-14	88521	<20	75	<1	<30	<1	<2	<5	<50	<10	<1	<5	1		<2	<5		<30
03-Sep-14	92157								<50		<1		<1					
11-Mar-15	95594	<25	80	<0.1	16.9	<0.1	<0.5	<0.5	1	<0.5	<0.5	<0.5	<1		<0.1	<2		0.9
07-Oct-15	100058								2		<0.5		<1					
21-Mar-16	103102	<25	83	<0.1	19	<0.1	<0.5	0.6	3	<0.5	<0.5	<0.5	<1		0.1	<2		0.9
15-Sep-16	107396								2		<0.5		<1					
20-Mar-17	111703	<25	98	<0.1	29.1	<0.1	<0.5	<0.5	1	<0.5	<0.5	<0.5	<1		0.1	<2		<0.5
25-Sep-17	116635								<50		<1		<1					
12-Mar-18	120576	<25	115	<0.1	30	<0.1	<0.5	0.9	8	<0.5	0.9	<0.5	<1		<0.1	2		1.1
30-Sep-18	126588								<50		<1		<1					
19-Mar-19	130445	<25	120	<0.5	50.8	<0.1	<0.5	2	**425**	<0.5	**668**	<0.5	3		3.9	5		3.6
11-Sep-19	135036	<25	129	<0.5	91.8	<0.1	<0.5	2.8	<50	<0.5	18	<0.5	<1	<0.5	1.1	5	<0.5	2.4
23-Mar-20	139735	<25	133	<0.5	61	<0.1	<0.5	1.2	24	<0.5	**396**	<0.5	<1		1.9	8	<0.5	<0.5
03-Sep-20	143901								157		**468**		<1					
17-Mar-21	148594	<25	171	<0.5	99.3	<0.1	<0.5	1.8	**334**	<0.5	**678**	<0.5	<1		3.4	5		0.6
05-Oct-21	154361								179		**870**		<1					
15-Mar-22	158873	<25	219	<0.5	223	<0.1	<0.5	1.3	197	<0.5	**850**	<0.5	<1		4.8	8		0.7
21-Sep-22	164486								74		**436**		<1					
14-Mar-23	168726	<25	151	<0.5	173	<0.1	<0.5	1.6	12	<0.5	**811**	<0.5	<1		2.6	9		<5
12-Mar-24	179131	<25	139	<0.5	206	<0.1	<0.5	1.8	**522**	<0.5	**981**	<0.5	<1		8	9		<5
10-Sep-24	184346								**889**		**667**		<1					
TOTAL SAMPLES		15	15	15	15	15	15	15	28	15	28	15	28	1	14	15	2	15
AVERAGE 2024									706		824		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-110-I

Overburden Formation

Stand Pipe Piezometer



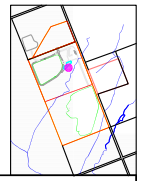
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Dec-10	65711								130		8		<1					
07-Mar-11	66786	<20	78	<1	40	<1	<2	<5	<50	<20	8	11	<1			<5		<30
12-Sep-11	70252								190		9		<1					
14-Mar-12	73429	<20	83	<1	40	<0.3	<2	<5	200	<1.5	6	<5	<1			<5		<30
24-Sep-12	77504								216		9		<1					
07-Mar-13	80738	<20	91	<1	<20	<1	<2	<5	150	<10	8	<5	<1		<2	<5		<10
16-Sep-13	85206								220		9		<1					
17-Mar-14	88489	<20	86	<1	40	<1	<2	<5	210	<10	8	<5	<1		<2	<5		<30
10-Sep-14	92329								230		9		1					
24-Mar-15	95919	<25	82	<0.1	27.3	<0.1	<0.5	<0.5	247	<0.5	9.3	1.2	<1		<0.1	<2		7.4
13-Oct-15	100146								266		9.2		<1					
18-Mar-16	103027	<25	83	<0.1	29.2	<0.1	<0.5	<0.5	292	<0.5	10.9	1.3	<1		<0.1	<2		<0.5
19-Sep-16	107511								**305**		9.2		<1					
16-Mar-17	111464	<25	71	<0.1	27.2	<0.1	<0.5	0.7	**309**	<0.5	9.1	1.3	<1		<0.1	<2		0.9
20-Sep-17	116505								230		8		<1					
19-Mar-18	120804	<25	79	<0.1	22.9	<0.1	<0.5	<0.5	**327**	<0.5	10.6	1.1	<1		<0.1	<2		0.8
30-Sep-18	126580								**420**		12		<1					
12-Mar-19	130231	<25	77	<0.5	32.7	<0.1	<0.5	<0.5	217	<0.5	10.8	1.1	<1		<0.5	<2		1.8
11-Sep-19	135037								280		10		<1					
10-Mar-20	139363	<25	69	<0.5	29.6	<0.1	<0.5	0.8	218	<0.5	11.3	1	<1		<0.5	<2		0.7
13-Sep-20	144100								**336**		10.4		<1					
09-Mar-21	148436	<25	73	<0.5	34	<0.1	<0.5	1.7	58	<0.5	12.8	1.2	<1		<0.5	2		1.2
06-Oct-21	154475								**312**		9.4		<1					
16-Mar-22	158951	<25	71	<0.5	30.9	<0.1	<0.5	<0.5	**385**	<0.5	12.1	1.1	<1		<0.5	<2		<0.5
22-Sep-22	164538								**302**		8.8		<1					
14-Mar-23	168721	<25	66	<0.5	28	<0.1	<0.5	<0.5	**440**	<0.5	12	1.1	<1		<0.5	<2		<5
12-Mar-24	179123	<25	64	<0.5	28	<0.1	<0.5	<0.5	**405**	<0.5	12.9	1.2	<1		<0.5	<2		<5
04-Sep-24	184207								**416**		13.1		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	28	14	28	14	28	0	12	14	0	14
AVERAGE 2024									411		13.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-110-II

Overburden Formation

Stand Pipe Piezometer



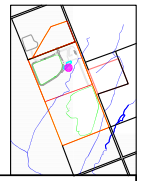
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Dec-10	65625								**330**		13		<1					
07-Mar-11	66787	**290**	49	<1	<30	<1	<2	<5	**480**	<20	25	<5	<1			<5		<30
12-Sep-11	70253								**350**		11		<1					
14-Mar-12	73430	<20	39	<1	<30	<0.3	<2	<5	200	<1.5	8	<5	<1			<5		<30
24-Sep-12	77505								**319**		12		<1					
07-Mar-13	80739	<20	37	<1	<20	<1	<2	<5	<50	<10	10	<5	<1		<2	<5		<10
16-Sep-13	85207								110		13		<1					
17-Mar-14	88490	<20	44	<1	<30	<1	<2	<5	70	<10	16	<5	<1		<2	<5		<30
10-Sep-14	92330								260		14		2					
24-Mar-15	95920	<25	40	<0.1	12.1	<0.1	<0.5	<0.5	32	<0.5	15.2	0.7	<1		0.3	<2		8.1
13-Oct-15	100148								20		13.9		<1					
18-Mar-16	103028	<25	43	<0.1	12.3	<0.1	<0.5	0.6	12	<0.5	15.6	0.9	<1		0.2	<2		3.7
19-Sep-16	107512								99		16.1		<1					
16-Mar-17	111465	<25	37	<0.1	10.9	<0.1	<0.5	<0.5	43	<0.5	11.1	0.7	<1		0.2	<2		5.6
20-Sep-17	116506								110		16		<1					
19-Mar-18	120805	<25	44	<0.1	8	<0.1	<0.5	<0.5	36	<0.5	15.7	0.6	<1		0.2	<2		<0.5
30-Sep-18	126581								140		24		<1					
12-Mar-19	130232	<25	46	<0.5	12.6	<0.1	<0.5	3.7	22	<0.5	14	0.5	1		<0.5	<2		4.6
11-Sep-19	135038								100		**75**		<1					
10-Mar-20	139364	<25	56	<0.5	17.9	<0.1	<0.5	1.2	220	<0.5	25.6	0.8	<1		<0.5	<2		0.9
13-Sep-20	144101								297		26.7		<1					
09-Mar-21	148437	<25	51	<0.5	18.5	<0.1	<0.5	0.6	**320**	<0.5	20	0.6	<1		<0.5	<2		<0.5
06-Oct-21	154476								**429**		22.1		2					
16-Mar-22	158952	<25	56	<0.5	21.8	<0.1	<0.5	<0.5	**361**	<0.5	20.9	<0.5	<1		<0.5	<2		<0.5
22-Sep-22	164539								**574**		15.9		<1					
14-Mar-23	168722	<25	49	<0.5	20	<0.1	<0.5	<0.5	**451**	<0.5	16.9	0.7	<1		<0.5	<2		<5
12-Mar-24	179124	85	50	<0.5	19	<0.1	<0.5	<0.5	**345**	<0.5	**57**	0.6	<1		0.9	<2		<5
04-Sep-24	184208								236		25.6		<1					
TOTAL SAMPLES		14	14	14	14	14	14	14	28	14	28	14	28	0	12	14	0	14
AVERAGE 2024									291		41		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-110-III

Shallow Overburden

Monitoring Well



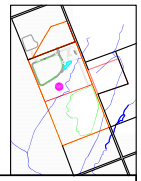
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
12-Sep-11	70254								<50		12		<1					
14-Mar-12	73431	<20	55	<1	30	<0.3	<2	<5	<50	4.1	<1	<5	<1			<5		<30
07-Mar-13	80740	<20	68	<1	<20	<1	<2	<5	<50	<10	<1	<5	<1		<2	<5		<10
17-Mar-14	88491	**180**	78	<1	<30	<1	<2	<5	130	<10	8	<5	<1		<2	<5		<30
24-Mar-15	95922	<25	69	<0.1	10.8	<0.1	0.8	1.2	15	<0.5	0.6	1.2	<1		<0.1	2		13.1
13-Oct-15	100149								8		<0.5		<1					
18-Mar-16	103029	<25	75	<0.1	9.9	<0.1	0.9	0.5	3	<0.5	<0.5	1	<1		<0.1	<2		2.1
16-Mar-17	111466	<25	88	<0.1	10.1	<0.1	<0.5	0.6	2	<0.5	5.5	<0.5	1		0.1	<2		2.8
20-Sep-17	116507								<50		23		<1					
19-Mar-18	120806	<25	98	<0.1	7.2	<0.1	<0.5	<0.5	2	<0.5	3.5	0.7	<1		<0.1	<2		1.2
30-Sep-18	126582								<50		22		<1					
12-Mar-19	130233	<25	104	<0.5	11.2	<0.1	0.7	<0.5	2	<0.5	<0.5	0.7	2		<0.5	<2		1.8
11-Sep-19	135039								<50		1		<1					
10-Mar-20	139365	38	108	<0.5	12.1	<0.1	0.8	2	31	<0.5	1.5	0.5	<1		<0.5	<2		1.8
13-Sep-20	144102								137		10.4		<1					
09-Mar-21	148438	<25	145	<0.5	10.3	<0.1	0.7	2	17	<0.5	0.6	<0.5	<1		<0.5	<2		1.1
06-Oct-21	154478								<5		2.1		2					
16-Mar-22	158953	44	163	<0.5	17.8	<0.1	<0.5	1	37	<0.5	1.4	<0.5	<1		<0.5	<2		1.1
14-Mar-23	168723	<25	121	<0.5	14	<0.1	<0.5	0.6	5	<0.5	<0.5	<0.5	<1		<0.5	<2		<5
12-Mar-24	179125	<25	107	<0.5	13	<0.1	<0.5	1.2	11	<0.5	<0.5	<0.5	<1		<0.5	2		<5
04-Sep-24	184209								11		0.5		<1					
TOTAL SAMPLES		13	13	13	13	13	13	13	21	13	21	13	21	0	12	13	0	13
AVERAGE 2024									11		<0.5		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-111-I

Overburden Formation

Stand Pipe Piezometer
Screen 186.3 - 184.8 masl



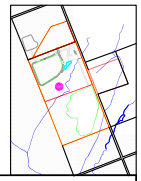
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Mar-17	111704	<25	498	<0.1	325	<0.1	<0.5	<0.5	10	<0.5	2.3	2.3	3		<0.1	<2		0.7
25-Sep-17	116636								<50		3		<1					
19-Mar-18	120810	**239**	**1150**	<0.1	361	<0.1	<0.5	<0.5	178	<0.5	7.6	<0.5	<1		<0.1	<2		1.8
30-Sep-18	126589								<50		4		<1					
19-Mar-19	130439	<25	814	<0.5	405	<0.1	<0.5	1.2	14	<0.5	4.5	<0.5	1		<0.5	<2		4
05-Sep-19	134881								<50		4		<1					
16-Mar-20	139465	<25	615	<0.5	391	<0.1	<0.5	<0.5	16	<0.5	4.6	<0.5	<1		<0.5	<2		0.9
03-Sep-20	143902								**467**		9.6		2					
08-Mar-21	148380	<25	666	<0.5	438	<0.1	<0.5	<0.5	8	<0.5	5.1	<0.5	<1		<0.5	<2		<0.5
21-Sep-21	153894								7		5.5		<1					
09-Mar-22	158661	**151**	666	<0.5	370	<0.1	<0.5	<0.5	100	<0.5	7.9	<0.5	2		<0.5	<2		1.7
13-Sep-22	164240								42		5.4		<1					
06-Mar-23	168495	<25	775	<0.5	440	<0.1	<0.5	<0.5	14	<0.5	4.8	<0.5	<1		<0.5	<2		1
05-Mar-24	178939	<25	839	<0.5	414	<0.1	<0.5	<0.5	11	<0.5	8.8	0.6	<1		<0.5	<2		<5
04-Sep-24	184210								13		3.9		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	15	8	15	8	15	0	8	8	0	8
AVERAGE 2024									12		6.4		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-111-II

Overburden Formation

Stand Pipe Piezometer
Screen 188.2 - 186.7 masl



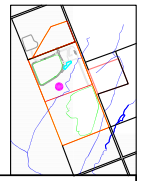
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Mar-17	111705	57	99	<0.1	85.9	<0.1	<0.5	<0.5	47	<0.5	4.2	4.5	1		<0.1	<2		3.2
25-Sep-17	116637								110		7		<1					
19-Mar-18	120811	<25	232	<0.1	60.4	<0.1	<0.5	<0.5	134	<0.5	6.5	2.1	<1		<0.1	<2		0.6
30-Sep-18	126590								100		5		<1					
19-Mar-19	130440	<25	670	<0.5	76.9	<0.1	<0.5	2	149	<0.5	9.4	2.4	1		<0.5	<2		3.4
05-Sep-19	134882								250		9		<1					
16-Mar-20	139466	<25	481	<0.5	72.2	<0.1	<0.5	0.9	98	<0.5	10.7	2.5	<1		<0.5	<2		0.9
03-Sep-20	143903								282		8.4		1					
08-Mar-21	148381	<25	111	<0.5	80.7	<0.1	<0.5	<0.5	25	<0.5	18.3	2.2	<1		<0.5	<2		1.6
21-Sep-21	153895								**448**		17.4		<1					
09-Mar-22	158662	<25	126	<0.5	70.6	<0.1	<0.5	0.7	77	<0.5	9.5	2.2	3		<0.5	<2		0.9
13-Sep-22	164241								226		6.9		<1					
06-Mar-23	168496	<25	108	<0.5	82.2	<0.1	<0.5	<0.5	108	<0.5	5.7	2.2	<1		<0.5	<2		<0.5
05-Mar-24	178940	<25	132	<0.5	82	<0.1	<0.5	<0.5	76	<0.5	6.6	2.8	<1		<0.5	<2		<5
04-Sep-24	184211								118		9.6		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	15	8	15	8	15	0	8	8	0	8
AVERAGE 2024									97		8.1		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-111-III

Shallow Overburden

Monitoring Well
Screen 196.1 - 193.1 masl



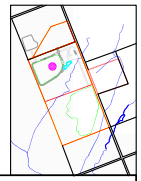
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Mar-17	111706	28	80	<0.1	13	<0.1	<0.5	0.6	35	<0.5	3.8	1.2	1		<0.1	<2		0.8
25-Sep-17	116638								<50		<1		<1					
19-Mar-18	120812	<25	114	<0.1	10.4	<0.1	<0.5	<0.5	2	<0.5	1.9	<0.5	<1		<0.1	<2		0.5
30-Sep-18	126591								<50		3		<1					
19-Mar-19	130441	<25	138	<0.5	15.7	<0.1	<0.5	0.5	1	<0.5	<0.5	<0.5	2		<0.5	<2		1.1
05-Sep-19	134883								<50		5		<1					
16-Mar-20	139467	<25	136	<0.5	23.9	<0.1	<0.5	1	11	<0.5	2.4	<0.5	<1		<0.5	<2		0.6
03-Sep-20	143904								<5		7.7		1					
08-Mar-21	148382	<25	142	<0.5	33.3	<0.1	<0.5	1.4	<5	<0.5	1.7	<0.5	<1		<0.5	<2		1
21-Sep-21	153896								<5		34.4		1					
09-Mar-22	158663	63	122	<0.5	30.9	<0.1	<0.5	1.1	66	<0.5	12.5	<0.5	3		<0.5	<2		1.9
13-Sep-22	164242								**434**		**59.2**		<1					
06-Mar-23	168497	<25	127	<0.5	32.5	<0.1	<0.5	0.6	<5	<0.5	3.3	<0.5	<1		<0.5	<2		<0.5
05-Mar-24	178941	<25	115	<0.5	42	<0.1	<0.5	0.7	<5	<0.5	4.6	<0.5	<1		<0.5	<2		<5
04-Sep-24	184212								<5		13.8		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	15	8	15	8	15	0	8	8	0	8
AVERAGE 2024									<5		9.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-112-I

Overburden Formation

Stand Pipe Piezometer
Screen 190.9 - 189.3 masl



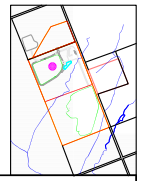
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Mar-17	111803	<25	109	<0.1	75.1	<0.1	<0.5	<0.5	57	<0.5	3.9	11.7	<1		<0.1	<2		3.2
18-Sep-17	116456								110		5		<1					
15-Mar-18	120686	<25	110	<0.1	42.4	<0.1	<0.5	<0.5	172	<0.5	4.2	3.4	<1		<0.1	<2		1.8
25-Sep-18	126484								110		5		<1					
18-Mar-19	130363	<25	143	<0.5	39.3	<0.1	<0.5	4.1	211	<0.5	5	2	1		<0.5	<2		7.1
05-Sep-19	134884								**720**		11		<1					
10-Mar-20	139366	37	155	<0.5	26.4	<0.1	<0.5	<0.5	47	<0.5	7.5	5.1	<1		<0.5	<2		3.1
01-Sep-20	143844								**351**		8.1		<1					
08-Mar-21	148377	<25	132	<0.5	22.8	<0.1	<0.5	1	122	<0.5	6.5	1.2	<1		<0.5	<2		<0.5
21-Sep-21	153897								**472**		10.8		<1					
09-Mar-22	158658	<25	115	<0.5	20.5	<0.1	<0.5	<0.5	**303**	<0.5	7.9	0.9	<1		<0.5	<2		<0.5
12-Sep-22	164197								169		4.9		<1					
07-Mar-23	168538	<25	130	<0.5	28.6	<0.1	<0.5	<0.5	**500**	<0.5	9.9	0.9	<1		<0.5	<2		<0.5
06-Sep-23	173963								228		5.9							
04-Mar-24	178894	<25	162	<0.5	22	<0.1	<0.5	<0.5	**418**	<0.5	10.3	2.1	<1		<0.5	<2		<5
10-Sep-24	184338								219		10.6		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	16	8	16	8	15	0	8	8	0	8
AVERAGE 2024									319		10.5		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**

BH-112-II

Overburden Formation

Stand Pipe Piezometer
Screen 196.5 - 194.9 masl



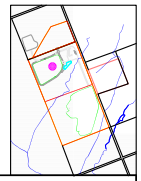
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Mar-17	111804	**342**	123	<0.1	10.5	<0.1	<0.5	1.3	**327**	<0.5	20	0.9	<1		0.5	<2		2
18-Sep-17	116457								<50		1		<1					
15-Mar-18	120687	<25	166	<0.1	10.6	<0.1	<0.5	1.2	2	<0.5	1.9	<0.5	<1		0.1	<2		0.9
25-Sep-18	126485								<50		7		<1					
18-Mar-19	130364	<25	143	<0.5	16.1	<0.1	<0.5	3.3	14	<0.5	3.7	<0.5	1		<0.5	<2		3.2
05-Sep-19	134885								<50		5		<1					
10-Mar-20	139367	<25	103	<0.5	19.8	<0.1	<0.5	2.1	<5	<0.5	7.5	<0.5	<1		<0.5	<2		0.6
01-Sep-20	143845								<5		5.4		<1					
08-Mar-21	148378	<25	158	<0.5	24.1	<0.1	<0.5	1.8	<5	<0.5	2.1	0.6	<1		<0.5	<2		<0.5
21-Sep-21	153898								22		7.8		<1					
09-Mar-22	158659	<25	117	<0.5	25.8	<0.1	<0.5	1.1	12	<0.5	6.3	<0.5	<1		<0.5	<2		0.6
12-Sep-22	164198								8		6		<1					
07-Mar-23	168539	<25	150	<0.5	51.8	<0.1	<0.5	1.2	<5	<0.5	3.6	<0.5	<1		<0.5	<2		0.9
06-Sep-23	173964								18		6.6							
04-Mar-24	178895	<25	136	<0.5	31	<0.1	<0.5	1.1	7	<0.5	5.1	0.6	<1		<0.5	<2		<5
10-Sep-24	184339								<5		3.2		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	16	8	16	8	15	0	8	8	0	8
AVERAGE 2024									<5		4.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-112-III

Shallow Overburden

Monitoring Well
Screen 203.9 - 200.9 masl



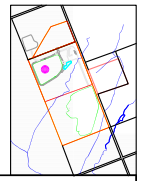
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
27-Mar-17	111805	<25	95	<0.1	82.9	<0.1	<0.5	1.2	2	<0.5	10.3	14.5	<1		<0.1	<2		0.9
18-Sep-17	116458								<50		6		<1					
15-Mar-18	120688	<25	113	<0.1	59.5	<0.1	<0.5	<0.5	1	<0.5	1.1	6.3	<1		<0.1	<2		0.7
25-Sep-18	126486								50		23		<1					
18-Mar-19	130365	<25	112	<0.5	51.9	<0.1	<0.5	1.4	2	<0.5	1.5	5.1	<1		<0.5	<2		1.3
05-Sep-19	134886								<50		4		<1					
10-Mar-20	139368	48	106	<0.5	55.2	<0.1	<0.5	1.2	40	<0.5	3.2	3.3	<1		<0.5	<2		1.1
01-Sep-20	143846								<5		2.3		<1					
08-Mar-21	148379	<25	91	<0.5	54.3	<0.1	<0.5	1.8	<5	<0.5	0.6	3.4	<1		<0.5	<2		1.1
21-Sep-21	153899								<5		1.1		<1					
09-Mar-22	158660	<25	80	<0.5	42.2	<0.1	<0.5	1.4	<5	<0.5	1.8	2.3	2		<0.5	<2		1.3
12-Sep-22	164199								<5		5		<1					
07-Mar-23	168540	69	73	<0.5	77	<0.1	<0.5	1.4	51	<0.5	5.6	2.3	<1		<0.5	<2		1.8
06-Sep-23	173965								5		3							
04-Mar-24	178896	<25	69	<0.5	54	<0.1	<0.5	1.1	<5	<0.5	2	2.5	<1		<0.5	<2		<5
10-Sep-24	184340								<5		3		<1					
TOTAL SAMPLES		8	8	8	8	8	8	8	16	8	16	8	15	0	8	8	0	8
AVERAGE 2024									<5		3		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-114-I

Lower Screened Overburden

Monitoring Well
Screen 191.1 - 189.6 masl



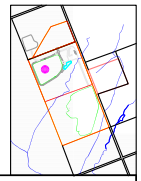
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Mar-24	179262	<25	62	<0.5	146	<0.1	<0.5	<0.5	19	<0.5	4.5	6.6	<1		<0.5	<2		<5
17-Sep-24	184543								6		5.4		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									13		5.0		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-114-II

Overburden Formation

Monitoring Well
Screen 197.8 - 196.3 masl



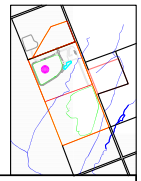
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Mar-24	179263	<25	64	<0.5	69	<0.1	<0.5	<0.5	<5	<0.5	17.6	3.9	<1		<0.5	<2		<5
17-Sep-24	184544								<5		14.7		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									<5		16.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-114-III

Shallow Overburden

Monitoring Well
Screen 204.9 - 201.9 masl



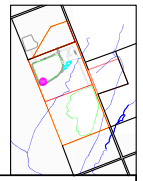
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
18-Mar-24	179264	<25	307	<0.5	70	<0.1	<0.5	<0.5	<5	<0.5	**242**	5.4	2		0.6	2		<5
17-Sep-24	184545								44		**353**		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									22		298		1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**

BH-115-I

Lower Screened Overburden

Monitoring Well
Screen 190.2 - 188.7 masl



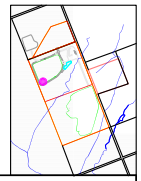
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Mar-24	179162	<25	57	<0.5	112	<0.1	<0.5	<0.5	9	<0.5	14.6	9	<1		<0.5	<2		<5
16-Sep-24	184500								38		17.8		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									24		16.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-115-II

Overburden Formation

Monitoring Well
Screen 195.8 - 194.3 masl



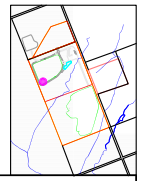
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Mar-24	179163	**293**	97	<0.5	96	<0.1	<0.5	0.8	251	<0.5	19.9	10.1	<1		<0.5	<2		<5
16-Sep-24	184499								44		10.3		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									148		15.1		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-115-III

Shallow Overburden

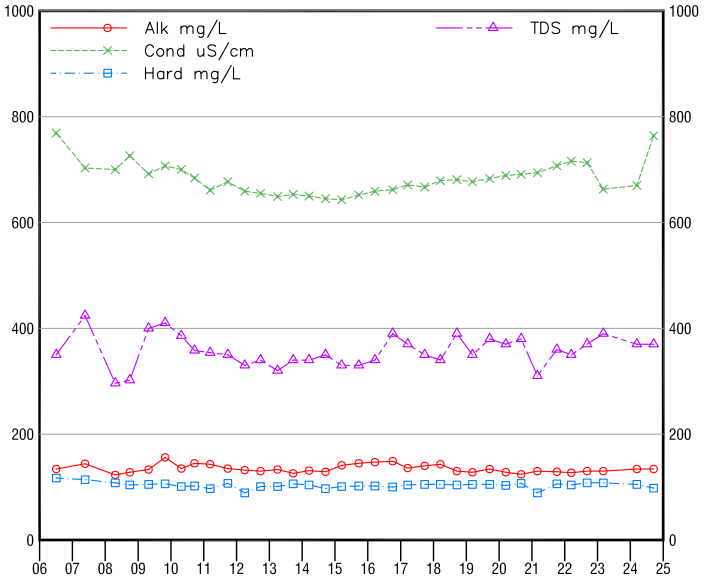
Monitoring Well
Screen 200.9 - 199.4 masl

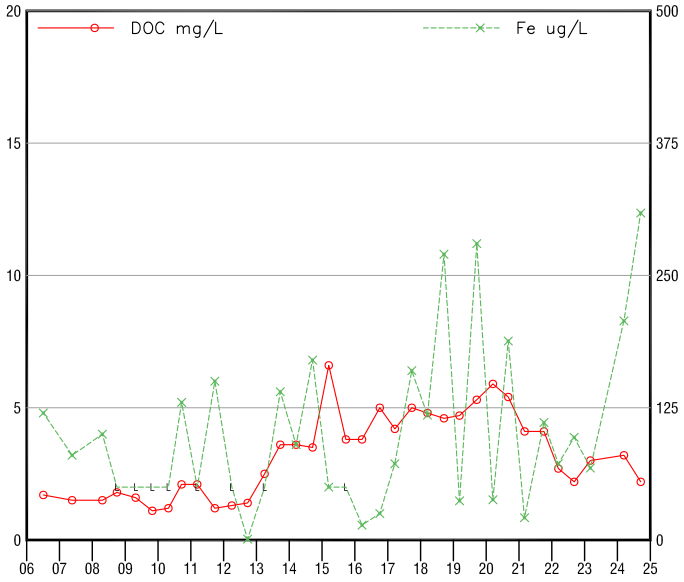


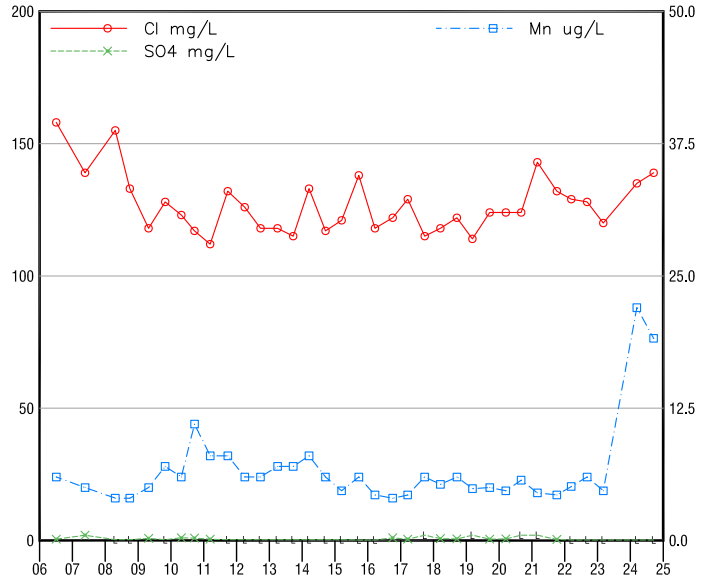
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
13-Mar-24	179164	<25	142	<0.5	13	<0.1	<0.5	<0.5	5	<0.5	**90.9**	0.7	<1		<0.5	<2		<5
16-Sep-24	184498								<5		**65.4**		<1					
TOTAL SAMPLES		1	1	1	1	1	1	1	2	1	2	1	2	0	1	1	0	1
AVERAGE 2024									<5		78.15		<1					

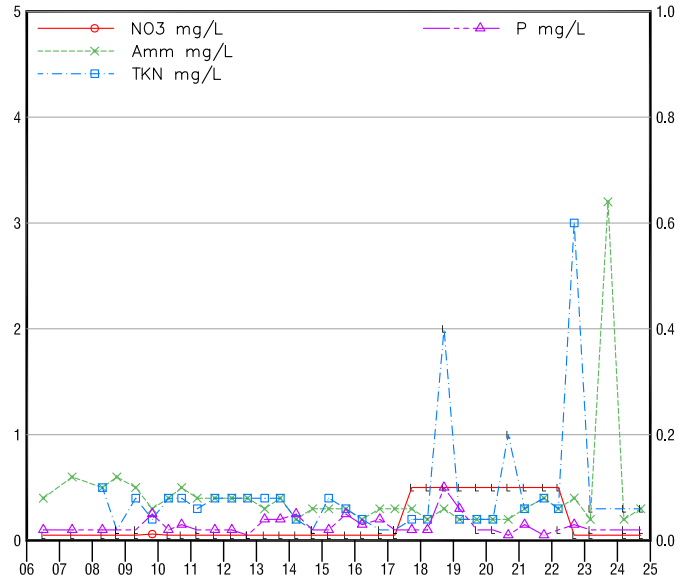
all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

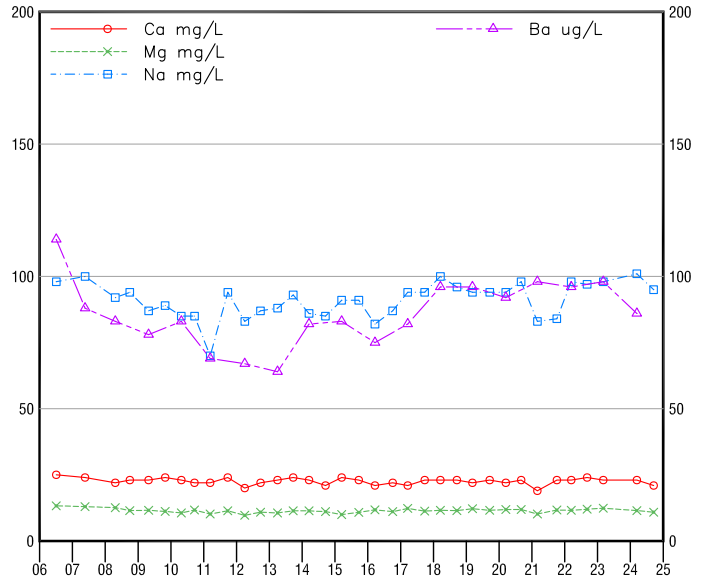
North Fill Area - Bedrock Monitors



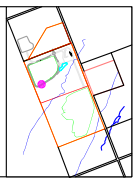








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-84-I

Basal Overburden (Bedrock)

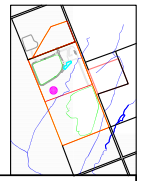
Screen 186.1 - 184.4 masl

CA008825 24 Mar 25	wsp	F224001

BH-84-I

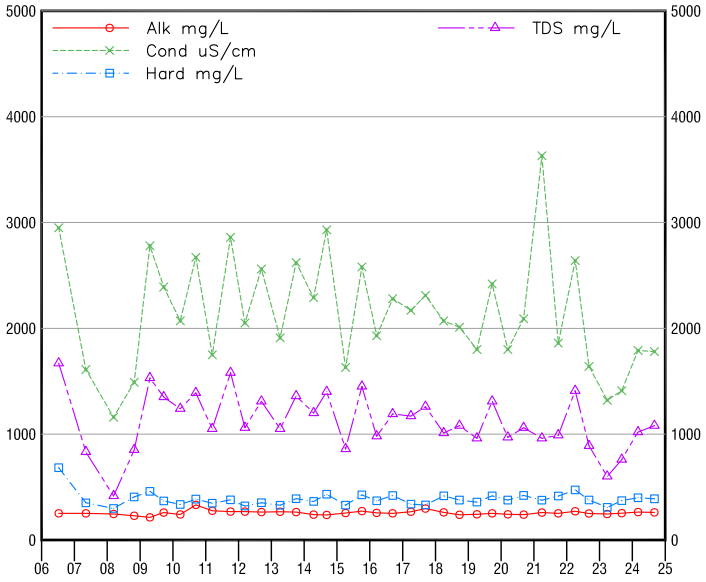
Basal Overburden (Bedrock)

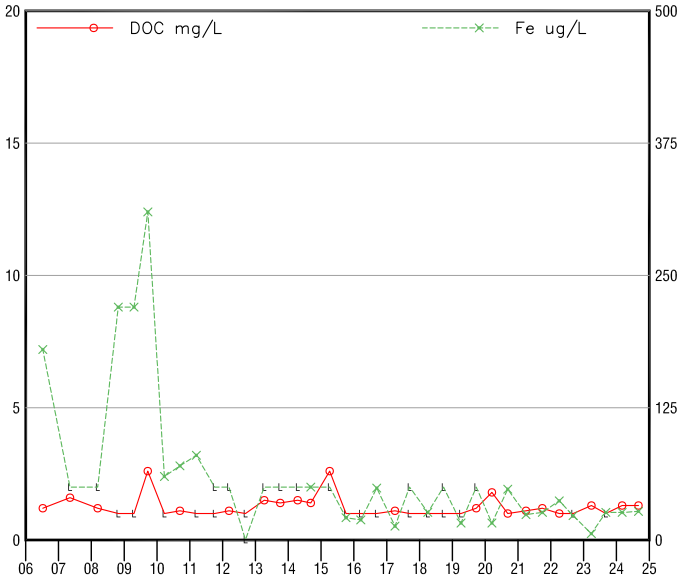
Stand Pipe Piezometer
Screen 186.1 - 184.4 masl

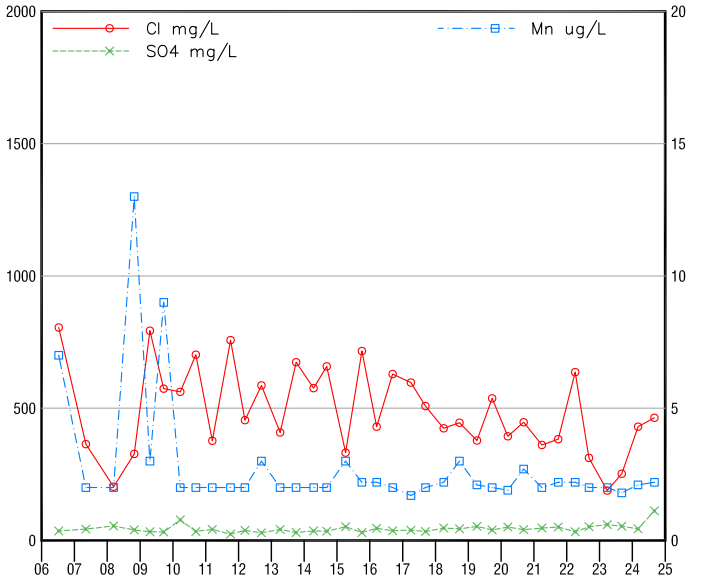


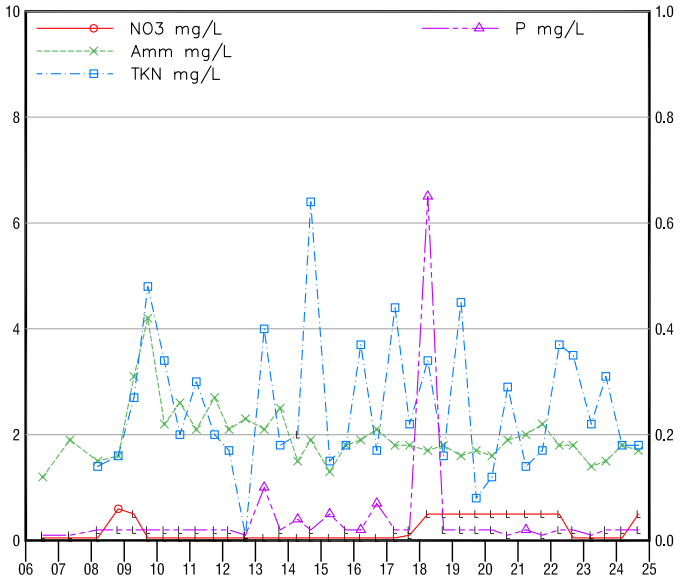
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
27-Apr-10	62092	135	700	101	8.1	123	1	23	10.6	85	2.44	1.2	<0.05	<0.05	0.4	386	-3.4
21-Sep-10	64269	145	684	102	8.2	117	0.9	22	11.7	85	2.5	2.1	<0.05	<0.05	0.5	358	-3.0
14-Mar-11	66912	143	661	97	8.1	112	0.5	22	10.2	70	2.45	2.1	<0.05	<0.05	0.4	354	-8.9
26-Sep-11	70473	135	677	107	8.2	132	<0.3	24	11.4	94	2.48	1.2	<0.05	<0.05	0.4	350	-0.6
02-Apr-12	73788	132	659	89	7.9	126	<0.3	20	9.7	83	2.13	1.3	<0.05	<0.05	0.4	330	-6.0
24-Sep-12	77495	130	655	101	7.9	118	<0.3	22	10.9	87	2.24	1.4	<0.05	<0.05	0.4	340	-0.4
02-Apr-13	81306	133	649	101	7.8	118	<0.3	23	10.6	88	2.59	2.5	<0.05	<0.05	0.3	320	-0.5
23-Sep-13	85304	126	653	106	8.1	115	<0.3	24	11.4	93	2.2	3.6	<0.05	<0.05	0.4	340	4.3
18-Mar-14	88522	131	650	104	8.0	133	<0.3	23	11.4	86	2.2	3.6	<0.05	<0.05	0.2	340	-3.9
17-Sep-14	92469	129	645	97	7.9	117	<0.3	21	11.1	85	2.2	3.5	<0.05	<0.05	0.3	350	-1.5
16-Mar-15	95696	141	643	101	7.8	121	<0.3	24	10.0	91	2	**6.6**	<0.05	<0.05	0.3	330	-1.5
23-Sep-15	99777	145	652	102	7.9	138	<0.2	23	10.8	91	2.2	3.8	<0.05	<0.05	0.3	330	-5.7
21-Mar-16	103103	147	659	102	8.0	118	<0.2	21	11.8	82	2.1	3.8	<0.05	<0.05	0.2	340	-4.8
04-Oct-16	107873	149	662	100	7.9	122	1	22	11.1	87	2.2	5	<0.05	<0.05	0.3	390	-4.9
20-Mar-17	111707	136	671	104	7.8	129	0.5	21	12.3	94	2.1	4.2	<0.05	<0.05	0.3	370	-1.0
25-Sep-17	116640	140	667	105	7.9	115	<2	23	11.3	94	1.9	5	<0.5	<0.5	0.3	350	1.7
19-Mar-18	120814	143	679	105	7.8	118	0.7	23	11.6	100	2.2	4.8	<0.5	<0.5	0.2	340	2.5
19-Sep-18	126251	130	681	104	8.1	122	0.6	23	11.5	96	2	4.6	<0.5	<0.5	0.3	390	2.3
11-Mar-19	130205	128	677	105	7.9	114	<2	22	12.2	94	2.2	4.7	<0.5	<0.5	0.2	350	4.1
19-Sep-19	135283	134	683	105	8.0	124	0.5	23	11.6	94	2.1	**5.3**	<0.5	<0.5	0.2	380	0.6
16-Mar-20	139457	128	689	103	7.8	124	0.6	22	11.9	94	2.1	**5.9**	<0.5	<0.5	0.2	370	1.1
03-Sep-20	143905	124	691	107	7.9	124	<2	23	11.9	98	2.3	**5.4**	<0.5	<0.5	0.2	380	3.9
03-Mar-21	148218	130	694	89	7.8	143	<2	19	10.2	83	1.8	4.1	<0.5	<0.5	0.3	310	-9.6
05-Oct-21	154354	129	707	106	8.0	132	0.4	23	11.7	84	2	4.1	<0.5	<0.5	0.4	360	-3.9
14-Mar-22	158786	127	716	104	7.8	129	<0.2	23	11.6	98	2.3	2.7	<0.5	<0.5	0.3	350	2.0
07-Sep-22	164088	130	713	108	8.1	128	<0.2	24	12.0	97	2.2	2.2	<0.05	<0.05	0.4	370	2.2
06-Mar-23	168501	130	663	108	8.0	120	<0.2	23	12.4	98	2.2	3	<0.05	<0.05	0.2	390	4.2
18-Sep-23	174296				7.9										3.2		
13-Mar-24	179160	134	670	105	8.0	135	<0.2	23	11.5	101	2.7	3.2	<0.05	<0.05	0.2	370	1.5
16-Sep-24	184494	134	764	98	7.7	139	<0.2	21	10.9	95	2.4	2.2	<0.05	<0.05	0.3	370	2.7
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		134	717	102	7.9	137	<0.2	22	11.2	98	2.6	2.7	<0.05	<0.05	0.3	370	

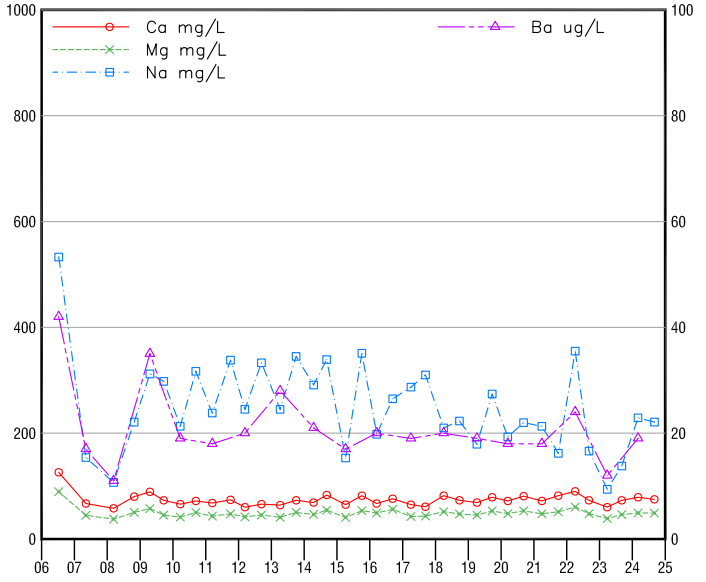
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



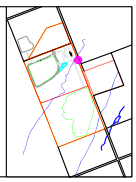








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-86-I

Shallow Bedrock Unit

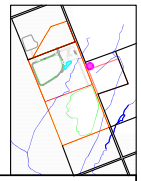
Screen 178.1 - 176.1 masl

CA008825 24 Mar 25	wsp	F224002

BH-86-I

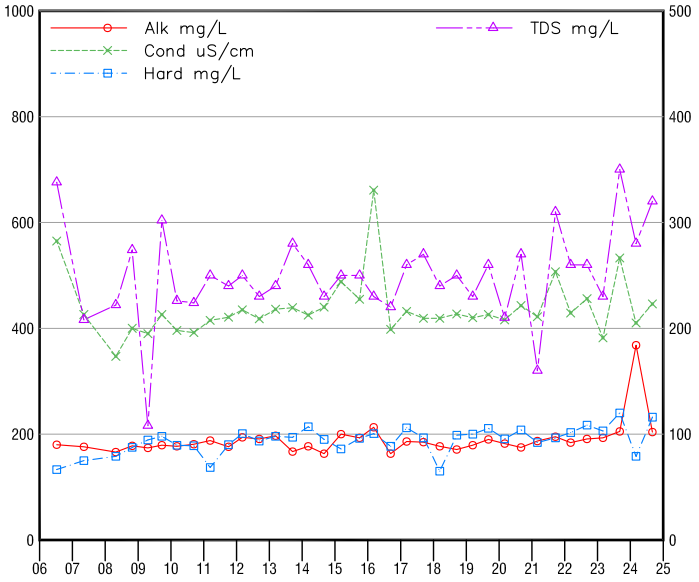
Shallow Bedrock Unit

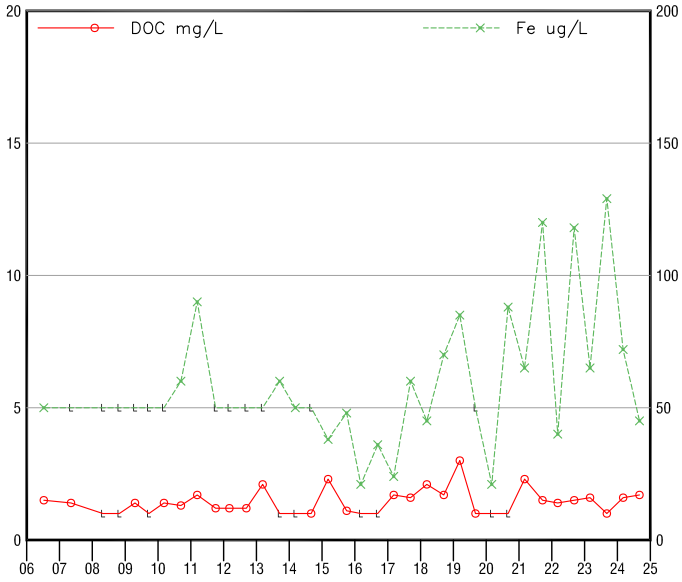
Stand Pipe Piezometer
Screen 178.1 - 176.1 masl

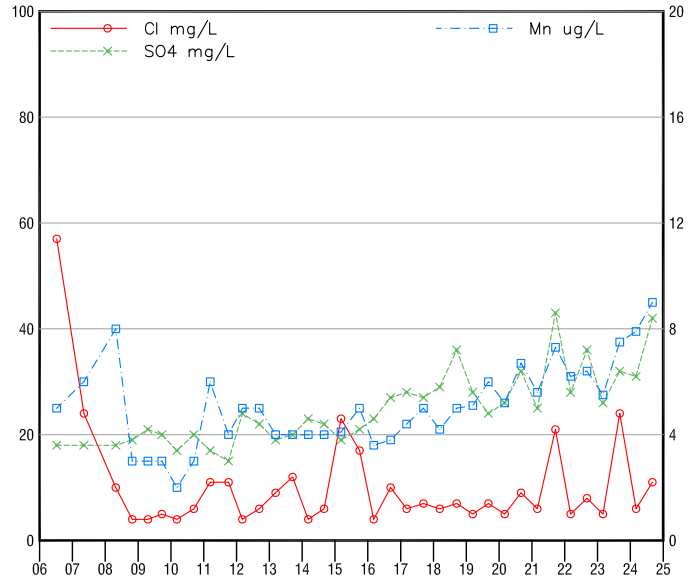


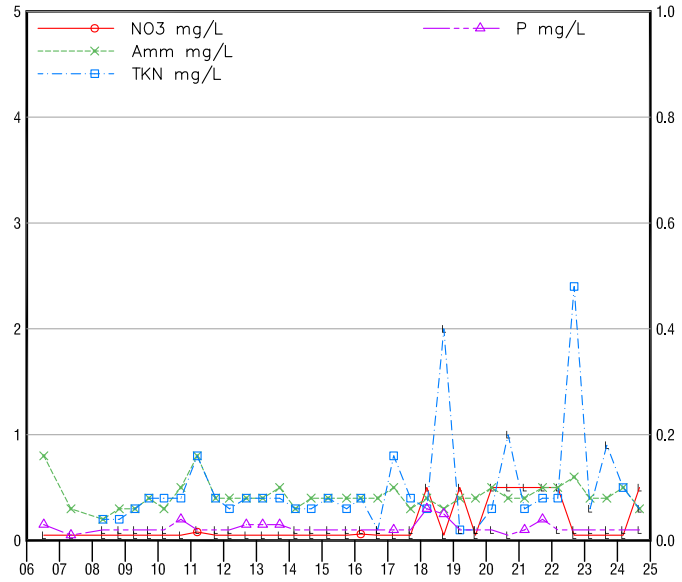
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61539	241	2070	335	7.8	**562**	78	66	41.4	**213**	9.78	<1	<0.05	<0.05	2.2	1240	-15.4
13-Sep-10	64127	332	2670	386	7.8	**702**	34	72	50.1	**317**	13.8	1.1	<0.05	<0.05	2.6	1390	-10.4
15-Mar-11	66985	275	1750	347	7.7	**377**	42	68	43.3	**238**	10.6	<1	<0.05	<0.05	2.1	1050	2.1
04-Oct-11	70624	268	2860	379	7.8	**757**	24	74	47.4	**338**	12.3	<1	<0.05	<0.05	2.7	1580	-8.8
12-Mar-12	73367	268	2050	321	7.7	**455**	38	60	41.8	**245**	10.1	1.1	<0.05	<0.05	2.1	1060	-4.1
12-Sep-12	77189	263	2560	352	7.7	**586**	29	66	45.3	**333**	12.1	<1	<0.05	<0.05	2.3	1310	-0.9
08-Apr-13	81438	267	1910	328	8.0	**408**	42	64	41.1	**245**	10.8	1.5	<0.05	<0.05	2.1	1050	-0.2
03-Oct-13	85515	263	2620	390	7.6	**674**	30	73	50.3	**345**	13.1	1.4	<0.05	<0.05	2.5	1360	-3.3
16-Apr-14	89108	240	2290	364	7.7	**576**	36	69	46.4	**291**	12.1	1.5	<0.05	<0.05	1.5	1200	-3.4
08-Sep-14	92262	236	2930	432	7.7	**658**	35	83	54.5	**339**	13.1	1.4	<0.05	<0.05	1.9	1400	-0.4
07-Apr-15	96138	255	1630	329	7.8	**332**	52	65	40.9	153	8.9	2.6	<0.05	<0.05	1.3	860	-6.8
05-Oct-15	99998	273	2580	426	7.7	**716**	30	82	53.5	**351**	12.3	<1	<0.05	<0.05	1.8	1450	-4.1
18-Mar-16	103032	256	1930	370	7.6	**430**	46	67	49.2	198	9.6	<1	<0.05	<0.05	1.9	980	-5.3
12-Sep-16	107312	252	2280	420	7.7	**629**	37	76	56.0	**265**	12.5	<1	<0.05	<0.05	2.1	1190	-7.2
03-Apr-17	112032	266	2170	338	7.9	**597**	39	65	42.6	**287**	11.7	1.1	<0.05	<0.05	1.8	1170	-7.7
12-Sep-17	116266	297	2310	331	7.8	**508**	34	61	43.4	**310**	11.8	<1	<0.1	<0.1	1.8	1260	-1.1
03-Apr-18	121264	260	2070	417	7.6	**424**	47	82	51.6	**210**	9.9	<1	<0.5	<0.5	1.7	1010	-0.8
25-Sep-18	126471	238	2010	377	7.7	**445**	44	73	47.2	**223**	10.7	<1	<0.5	<0.5	1.8	1080	-1.6
07-Apr-19	130903	243	1800	358	7.7	**378**	53	69	45.3	179	9.7	<1	<0.5	<0.5	1.6	960	-4.1
24-Sep-19	135333	252	2420	417	7.6	**537**	40	79	53.0	**274**	11.3	1.2	<0.5	<0.5	1.7	1310	-0.9
16-Mar-20	139459	242	1800	377	7.8	**394**	51	72	48.1	193	9.5	1.8	<0.5	<0.5	1.6	970	-2.2
08-Sep-20	144007	239	2090	421	7.7	**447**	41	81	53.2	**220**	10.7	1	<0.5	<0.5	1.9	1060	0.4
30-Mar-21	148863	259	3630	376	7.6	**361**	47	72	47.6	**213**	10.1	1.1	<0.5	<0.5	2	960	2.5
29-Sep-21	154166	252	1860	415	7.8	**383**	51	82	51.4	162	9.5	1.2	<0.5	<0.5	2.2	990	-3.5
05-Apr-22	159585	271	2640	473	7.6	**636**	33	90	60.5	**355**	14.9	1	<0.5	<0.5	1.8	1410	2.8
06-Sep-22	164045	250	1640	378	7.7	**312**	52	73	47.6	166	9.1	<1	<0.05	<0.05	1.8	890	0.8
28-Mar-23	169179	245	1320	308	7.7	189	60	60	38.7	94	7.1	1.3	<0.05	<0.05	1.4	600	-4.3
05-Sep-23	173895	253	1410	372	7.6	**252**	54	73	46.2	138	8.2	<1	<0.05	<0.05	1.5	760	1.7
04-Mar-24	178887	263	1790	399	7.5	**430**	44	79	49.2	**229**	9.6	1.3	<0.05	<0.05	1.8	1020	0.7
03-Sep-24	184138	261	1780	389	7.6	**464**	112	75	49.0	**221**	10.4	1.3	<0.5	<0.5	1.7	1080	6.9
TOTAL SAMPLES		36	36	36	33	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		262	1785	394	7.6	447	78	77	49.1	225	10.0	1.3	<0.5	<0.5	1.8	1050	

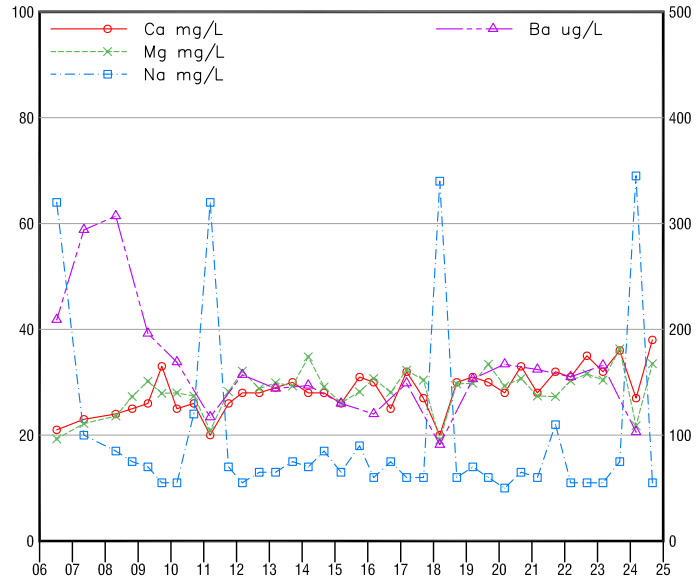
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



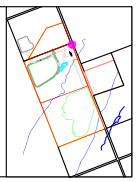








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-87-I

Shallow Bedrock Unit

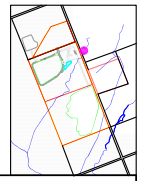
Screen 184.1 - 182.3 masl

CA008825 24 Mar 25	wsp	F224003

BH-87-I

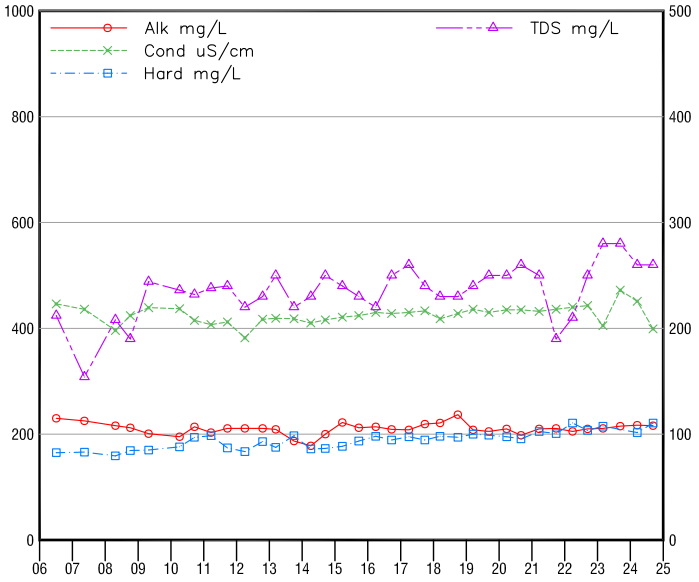
Shallow Bedrock Unit

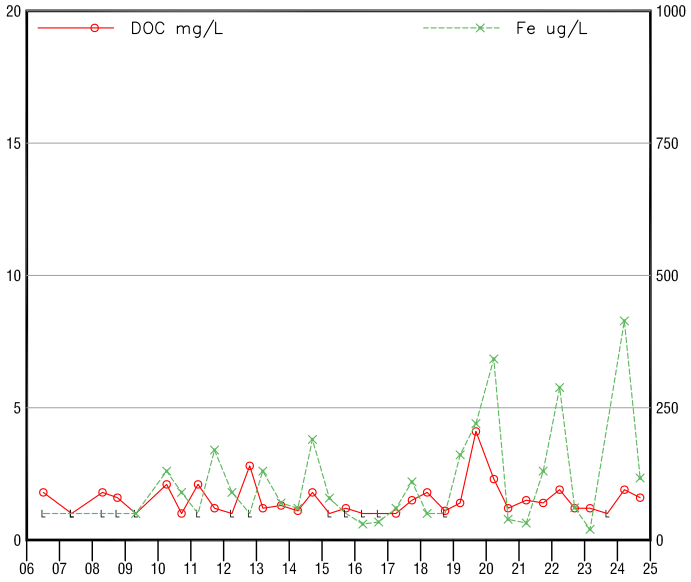
Stand Pipe Piezometer
Screen 184.1 - 182.3 masl

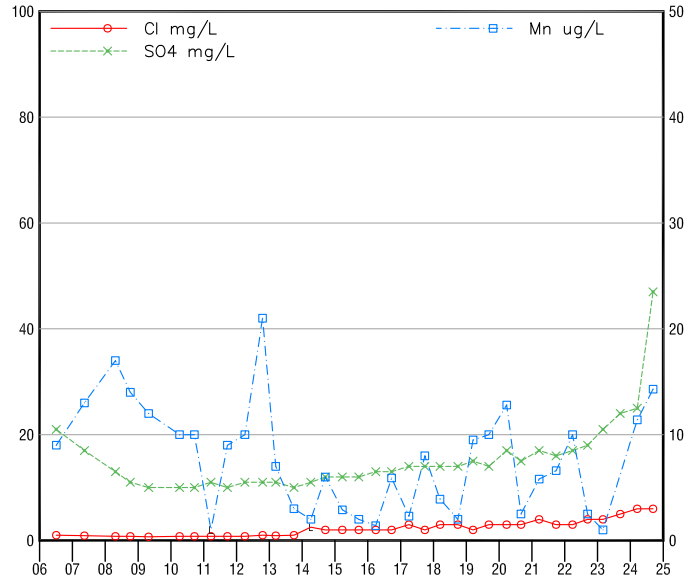


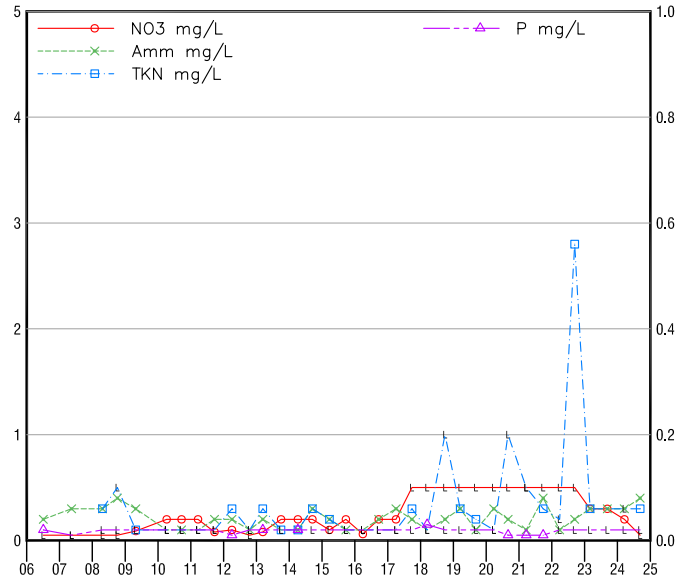
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
09-Mar-10	61122	177	396	179	8.0	4	17	25	28.0	11	2.1	1.4	<0.05	<0.05	0.3	226	1.7
13-Sep-10	64124	181	392	178	7.9	6	20	26	27.4	24	2.52	1.3	<0.05	<0.05	0.5	224	5.7
14-Mar-11	66905	188	415	137	8.0	11	17	20	20.9	64	4.25	1.7	0.08	<0.05	0.8	250	12.3
04-Oct-11	70627	176	421	180	7.9	11	15	26	28.2	14	2.05	1.2	<0.05	<0.05	0.4	240	1.9
06-Mar-12	73262	194	435	201	7.8	4	24	28	32.1	11	1.98	1.2	<0.05	<0.05	0.4	250	1.1
10-Sep-12	77139	191	418	187	7.9	6	22	28	28.8	13	1.99	1.2	<0.05	<0.05	0.4	230	-0.5
11-Mar-13	80785	197	436	196	7.9	9	19	29	29.9	13	1.99	2.1	<0.05	<0.05	0.4	240	-0.3
16-Sep-13	85197	167	439	194	8.0	12	20	30	29.3	15	2	<1	<0.05	<0.05	0.5	280	6.5
10-Mar-14	88313	177	425	214	8.0	4	23	28	34.8	14	2	<1	<0.05	<0.05	0.3	260	9.0
02-Sep-14	92068	163	440	190	8.0	6	22	28	29.1	17	1.8	1	<0.05	<0.05	0.4	230	8.4
09-Mar-15	95544	200	488	172	7.9	23	19	26	26.1	13	1.89	2.3	<0.05	<0.05	0.4	250	-10.2
01-Oct-15	99920	193	455	192	8.1	17	21	31	28.2	18	2	1.1	<0.05	<0.05	0.4	250	-1.0
07-Mar-16	102776	213	661	201	8.2	4	23	30	30.7	12	2.1	<1	0.06	<0.05	0.4	230	-2.4
12-Sep-16	107315	163	398	177	8.1	10	27	25	28.1	15	1.7	<1	<0.05	<0.05	0.4	220	1.7
08-Mar-17	111335	186	432	212	8.3	6	28	32	32.3	12	1.9	1.7	<0.05	<0.05	0.5	260	3.9
12-Sep-17	116263	185	419	193	8.1	7	27	27	30.4	12	1.6	1.6	<0.05	<0.05	0.3	270	-0.1
12-Mar-18	120565	177	419	130	8.0	6	29	20	19.1	68	3.8	2.1	<0.5	<0.5	0.4	240	13.6
17-Sep-18	126158	171	427	198	8.1	7	36	30	29.7	12	1.2	1.7	<0.05	<0.05	0.3	250	2.0
14-Mar-19	130278	179	420	200	8.1	5	28	31	29.8	14	1.8	3	<0.5	<0.5	0.4	230	3.9
04-Sep-19	134871	190	426	211	8.1	7	24	30	33.4	12	1.9	1	<0.05	<0.05	0.4	260	3.6
03-Mar-20	139191	182	416	191	8.1	5	26	28	29.3	10	1.9	<1	<0.5	<0.5	0.5	210	0.4
01-Sep-20	143832	175	443	208	8.1	9	32	33	30.7	13	1.7	<1	<0.5	<0.5	0.4	270	4.1
03-Mar-21	148204	187	422	184	8.0	6	25	28	27.4	12	1.8	2.3	<0.5	<0.5	0.4	160	-1.7
20-Sep-21	153823	195	507	193	8.0	21	43	32	27.3	22	1.8	1.5	<0.5	<0.5	0.5	310	-4.7
08-Mar-22	158619	184	429	203	8.0	5	28	31	30.3	11	1.9	1.4	<0.5	<0.5	0.5	260	2.3
06-Sep-22	164042	191	456	217	8.0	8	36	35	31.6	11	1.6	1.5	<0.05	<0.05	0.6	260	1.4
02-Mar-23	168421	193	382	206	8.0	5	26	32	30.4	11	2	1.6	<0.05	<0.05	0.4	230	1.4
05-Sep-23	173892	205	533	240	7.8	24	32	36	36.3	15	1.9	1	<0.05	<0.05	0.4	350	1.0
04-Mar-24	178884	368	410	158	7.8	6	31	27	21.8	69	4.4	1.6	<0.05	<0.05	0.5	280	11.3
03-Sep-24	184135	204	446	232	7.7	11	42	38	33.5	11	1.6	1.7	<0.5	<0.5	0.3	320	0.9
TOTAL SAMPLES		36	36	36	34	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		286	428	195	7.8	9	37	33	27.7	40	3.0	1.7	<0.5	<0.5	0.4	300	

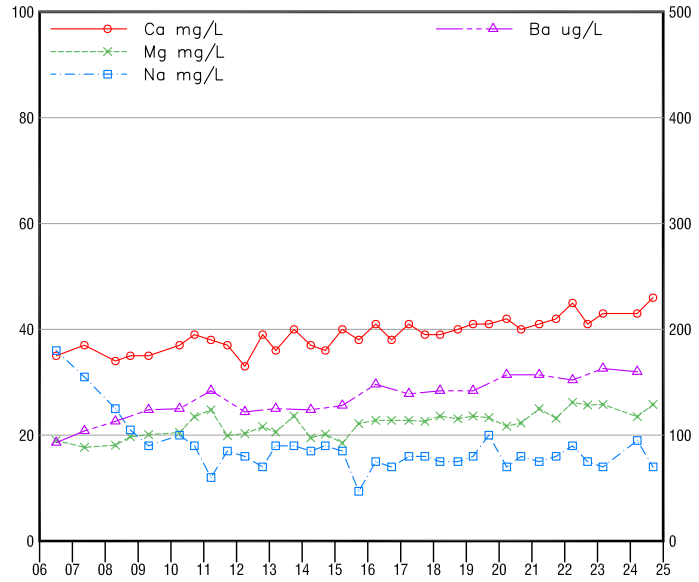
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



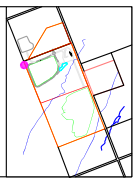








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-88-I

Shallow Bedrock Unit

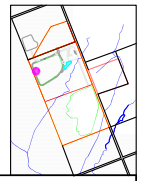
Screen 187.8 - 186.3 masl

CA008825 24 Mar 25	wsp	F224004

BH-88-I

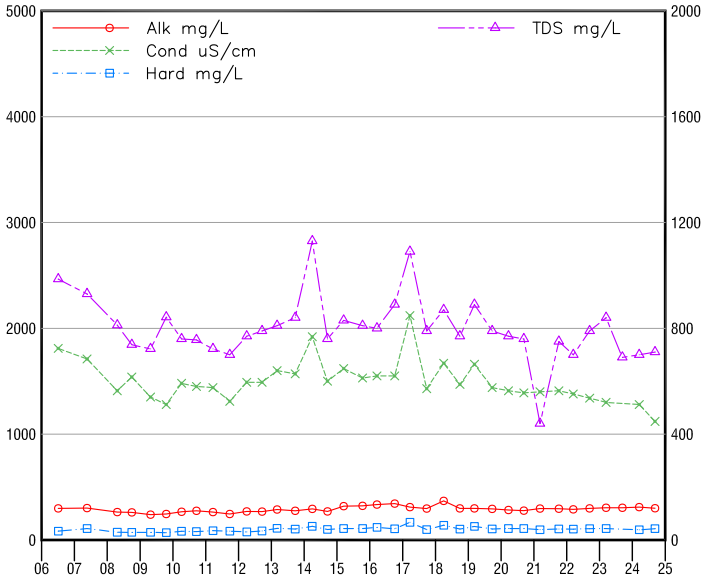
Shallow Bedrock Unit

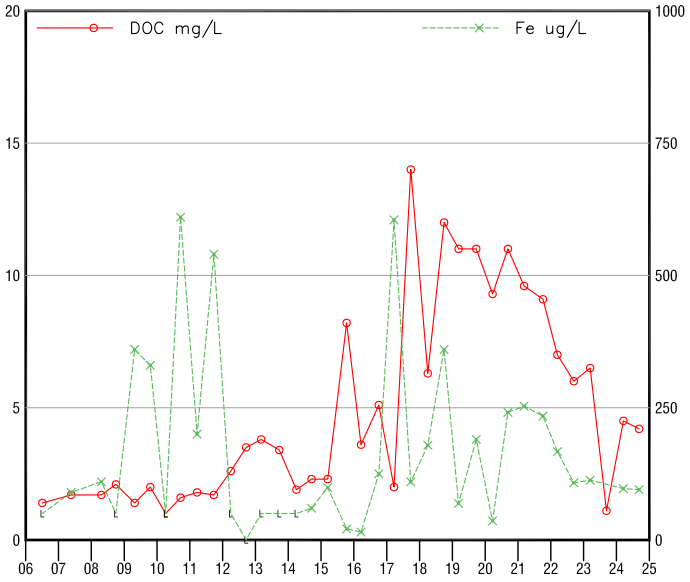
Stand Pipe Piezometer
Screen 187.8 - 186.3 masl

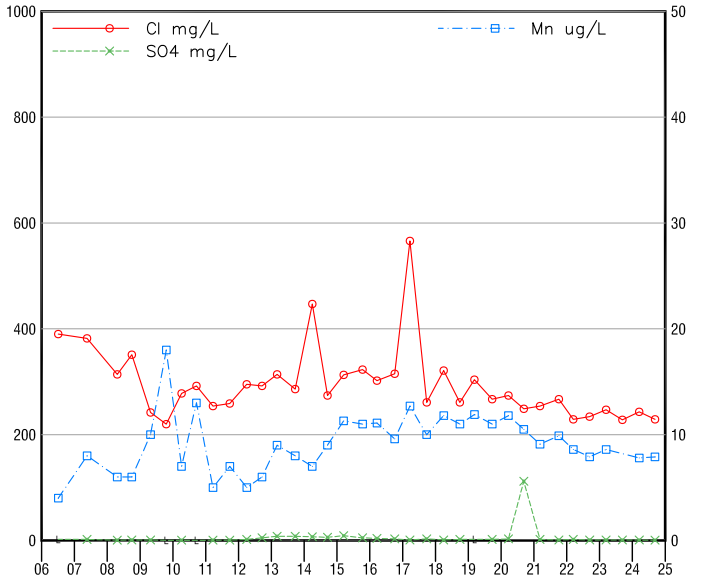


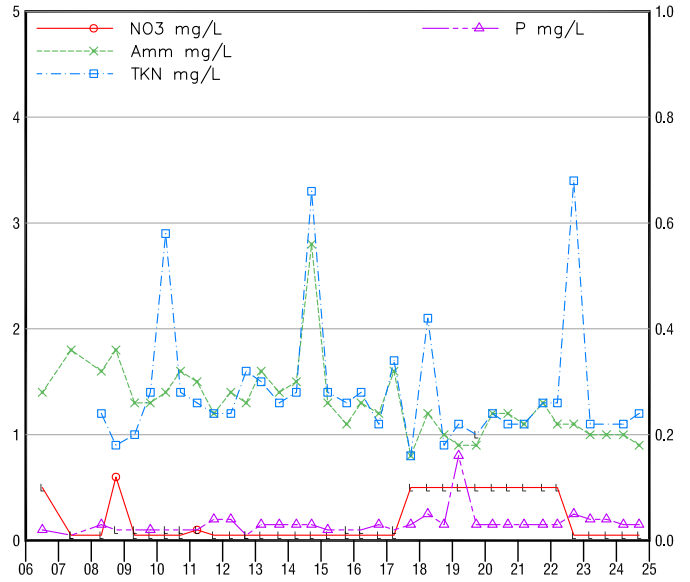
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61789	195	437	176	7.7	0.8	10	37	20.5	20	3.01	2.1	0.2	<0.05	<0.1	236	3.8
20-Sep-10	64261	214	415	194	7.8	0.8	10	39	23.5	18	2.84	1	0.2	<0.05	0.1	232	2.3
23-Mar-11	67144	203	407	197	8.1	0.8	11	38	24.8	12	2.74	2.1	0.2	<0.05	<0.1	238	2.3
22-Sep-11	70443	211	412	174	7.9	0.8	10	37	19.9	17	2.87	1.2	0.08	<0.05	0.2	240	-1.8
03-Apr-12	73821	211	382	167	7.8	0.8	11	33	20.3	16	2.51	<1	0.1	<0.05	0.2	220	-4.4
17-Oct-12	78007	211	417	186	7.8	1	11	39	21.6	14	2.78	2.8	<0.05	<0.05	0.1	230	-0.8
12-Mar-13	80844	209	419	175	7.9	0.9	11	36	20.6	18	2.71	1.2	0.08	<0.05	0.2	250	-0.8
01-Oct-13	85457	187	418	197	7.8	1	10	40	23.6	18	2.9	1.3	0.2	<0.05	<0.1	220	8.9
07-Apr-14	88899	178	410	172	8.0	<2.5	11	37	19.5	17	2.7	1.1	0.2	<0.05	0.1	230	5.8
15-Sep-14	92419	200	416	173	8.0	2	12	36	20.2	18	2.8	1.8	0.2	<0.05	0.3	250	0.2
24-Mar-15	95923	222	421	177	8.3	2	12	40	18.5	17	2.6	<1	0.1	<0.05	0.2	240	-4.0
23-Sep-15	99774	212	424	187	7.9	2	12	38	22.2	9.4	2.8	1.2	0.2	<0.05	0.1	230	-3.8
29-Mar-16	103214	214	430	196	8.1	2	13	41	22.8	15	3	<1	0.06	<0.05	<0.1	220	0.4
22-Sep-16	107588	209	428	189	7.7	2	13	38	22.8	14	2.9	<1	0.2	<0.05	0.2	250	-0.4
03-Apr-17	112035	208	430	195	8.1	3	14	41	22.8	16	3	1	0.2	<0.05	0.3	260	1.7
27-Sep-17	116687	219	433	189	7.9	2	14	39	22.6	16	2.8	1.5	<0.5	<0.5	0.2	240	-1.8
15-Mar-18	120689	221	418	196	8.0	3	14	39	23.6	15	2.8	1.8	<0.5	<0.5	<0.1	230	-1.3
30-Sep-18	126577	237	428	194	7.8	3	14	40	23.1	15	3	1.1	<0.5	<0.5	0.2	230	-4.9
18-Mar-19	130360	208	436	200	8.1	2	15	41	23.6	16	3	1.4	<0.5	<0.5	0.3	240	3.0
09-Sep-19	134992	205	430	198	7.8	3	14	41	23.3	20	3.4	4.1	<0.5	<0.5	0.1	250	4.8
26-Mar-20	139773	210	435	195	7.8	3	17	42	21.7	14	2.7	2.3	<0.5	<0.5	0.3	250	-0.2
01-Sep-20	143841	198	435	191	7.9	3	15	40	22.3	16	3.4	1.2	<0.5	<0.5	0.2	260	2.7
22-Mar-21	148683	210	432	205	7.9	4	17	41	25.0	15	3	1.5	<0.5	<0.5	0.1	250	2.2
27-Sep-21	154083	211	436	201	8.0	3	16	42	23.2	16	3.4	1.4	<0.5	<0.5	0.4	190	2.2
29-Mar-22	159332	205	440	221	8.0	3	17	45	26.2	18	3.4	1.9	<0.5	<0.5	0.1	210	8.0
12-Sep-22	164193	210	443	207	7.8	4	18	41	25.7	15	3	1.2	<0.5	<0.5	0.2	250	2.2
02-Mar-23	168428	211	405	215	8.1	4	21	43	25.8	14	3.1	1.2	0.3	<0.05	0.3	280	2.3
11-Sep-23	174071	215	472		7.8	5	24					<1	0.3	<0.05	0.3	280	
18-Mar-24	179266	217	451	203	8.0	6	25	43	23.5	19	3.5	1.9	0.2	<0.05	0.3	260	1.5
10-Sep-24	184341	216	399	221	7.6	6	47	46	25.8	14	3	1.6	<0.05	<0.05	0.4	260	1.6
TOTAL SAMPLES		35	35	34	32	35	35	34	34	34	34	35	35	35	35	35	
AVERAGE 2024		217	425	212	7.8	6	36	45	24.7	17	3.3	1.8	0.1	<0.05	0.4	260	

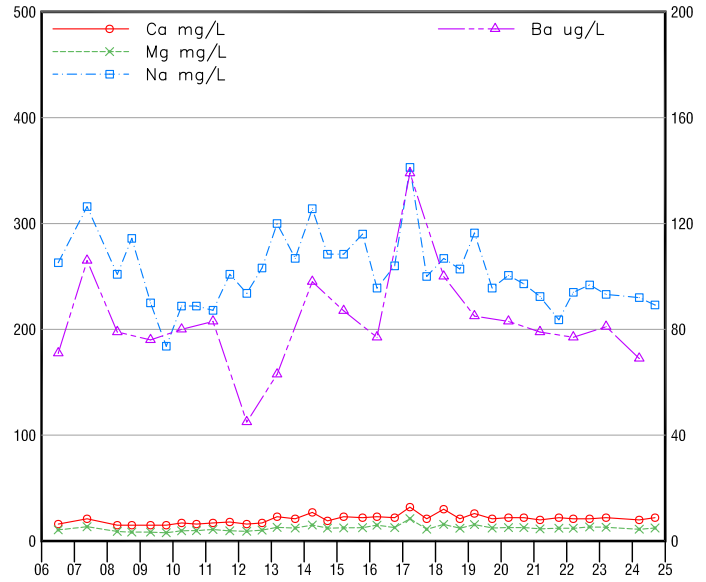
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



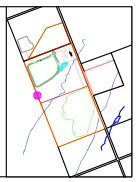








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-89-I

Shallow Bedrock Unit

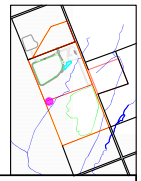
Screen 182.1 - 180.5 masl

CA008825 24 Mar 25	wsp	F224005

BH-89-I

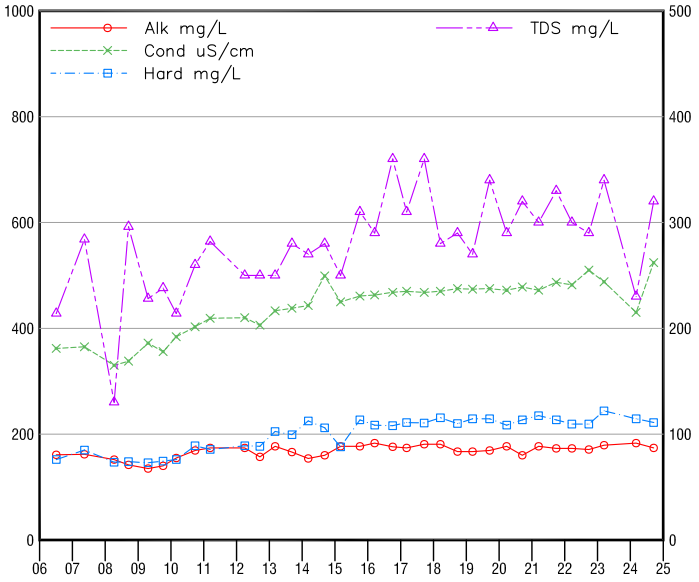
Shallow Bedrock Unit

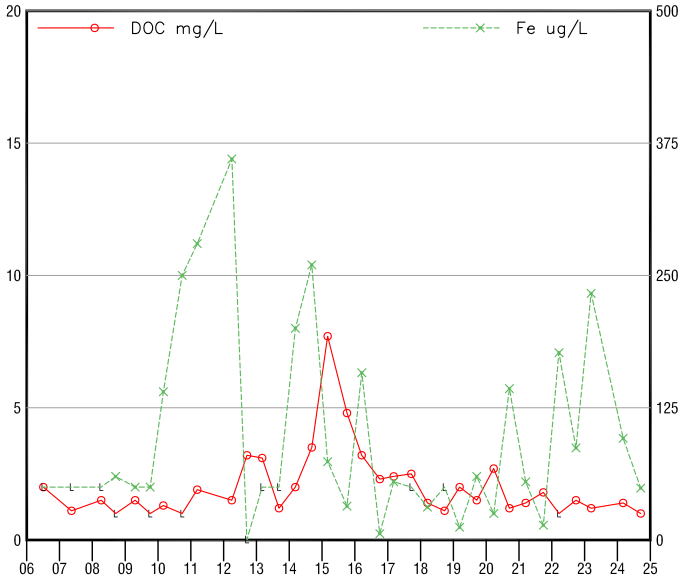
Stand Pipe Piezometer
Screen 182.1 - 180.5 masl

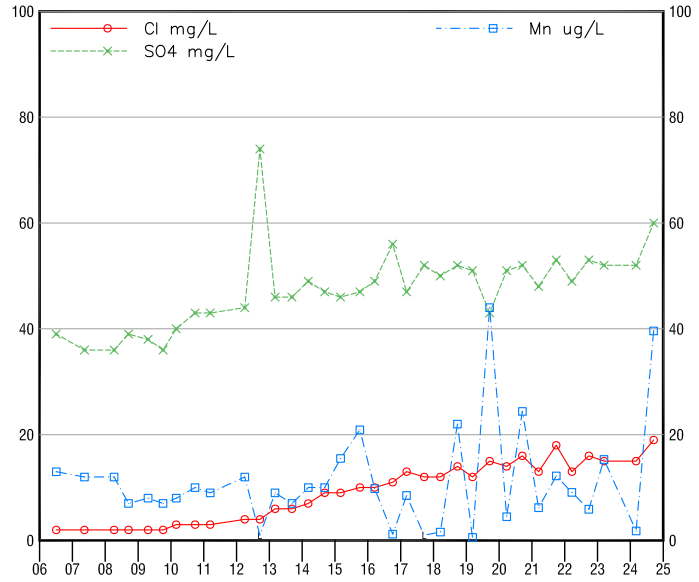


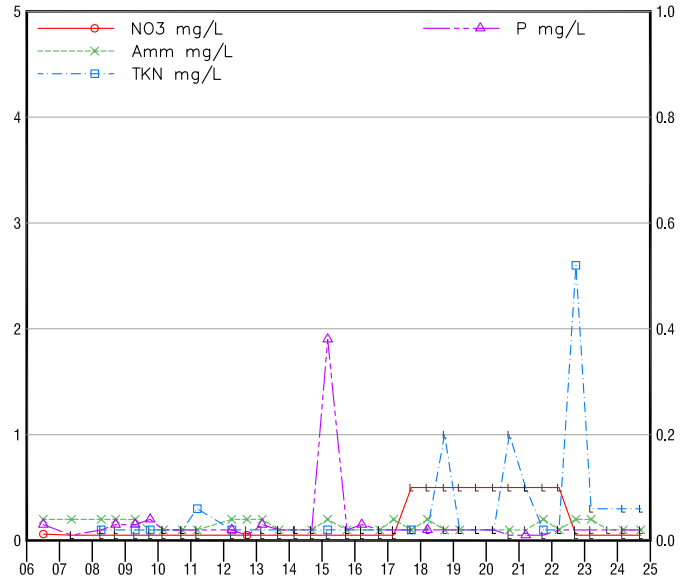
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
07-Apr-10	61792	266	1480	82	8.0	**278**	0.5	17	9.7	**222**	7.63	<1	<0.05	<0.05	1.4	760	-6.4
20-Sep-10	64264	276	1450	79	8.1	**292**	<0.3	16	9.8	**222**	7.75	1.6	<0.05	<0.05	1.6	756	-8.6
23-Mar-11	67148	264	1440	88	8.0	**254**	0.6	17	10.9	**218**	7.8	1.8	0.1	<0.1	1.5	722	-3.8
26-Sep-11	70468	246	1310	83	7.9	**259**	0.7	18	9.6	**252**	7.56	1.7	<0.05	<0.05	1.2	700	2.7
02-Apr-12	73790	270	1490	76	8.1	**295**	2	16	9.2	**234**	6.58	2.6	<0.05	<0.05	1.4	770	-7.0
19-Sep-12	77344	268	1490	85	7.9	**292**	5	17	10.3	**258**	7.7	3.5	<0.05	<0.05	1.3	790	-1.8
05-Mar-13	80688	288	1600	110	8.1	**314**	8	23	12.9	**300**	7.81	3.8	<0.05	<0.05	1.6	810	2.5
23-Sep-13	85306	275	1570	103	8.2	**286**	8	21	12.2	**267**	7.6	3.4	<0.05	<0.05	1.4	840	0.8
01-Apr-14	88815	294	1920	129	7.9	**447**	7	27	15.1	**314**	8.6	1.9	<0.05	<0.05	1.5	1130	-5.8
17-Sep-14	92471	270	1500	99	7.9	**274**	6	19	12.2	**271**	7.7	2.3	<0.05	<0.05	2.8	760	3.3
16-Mar-15	95693	320	1620	108	8.0	**313**	9	23	12.4	**271**	7.8	2.3	<0.05	<0.05	1.3	830	-3.9
13-Oct-15	100143	323	1530	108	7.9	**323**	5	22	12.6	**290**	7.9	**8.2**	<0.05	<0.05	1.1	810	-2.0
21-Mar-16	103105	335	1550	119	8.2	**302**	4	23	15.0	**239**	7.2	3.6	<0.05	<0.05	1.3	800	-7.9
04-Oct-16	107875	343	1550	106	8.0	**315**	3	22	12.7	**260**	7.9	**5.1**	<0.05	<0.05	1.2	890	-7.0
23-Mar-17	111760	310	2120	167	7.9	**566**	1	32	21.1	**353**	9.9	2	<0.05	<0.05	1.6	1090	-7.5
25-Sep-17	116643	297	1430	98	7.9	**261**	3	21	11.1	**250**	6.8	**14**	<0.5	<0.5	0.8	790	-1.1
03-Apr-18	121256	370	1670	139	7.9	**321**	1	30	15.7	**267**	7.7	**6.3**	<0.5	<0.5	1.2	870	-5.8
30-Sep-18	126592	298	1470	103	7.8	**261**	2	21	12.1	**257**	7.6	**12**	<0.5	<0.5	1	770	0.6
11-Mar-19	130202	298	1660	128	8.0	**304**	<2	26	15.5	**291**	8.4	**11**	<0.5	<0.5	0.9	890	3.2
24-Sep-19	135340	294	1440	104	7.9	**267**	2	21	12.3	**239**	7	**11**	<0.5	<0.5	0.9	790	-2.8
23-Mar-20	139728	283	1410	108	7.8	**274**	3	22	12.7	**251**	7.7	**9.3**	<0.5	<0.5	1.2	770	-0.3
10-Sep-20	144077	277	1390	108	7.9	249	112	22	12.7	**243**	7.8	**11**	<0.5	<0.5	1.2	760	-6.7
09-Mar-21	148433	297	1400	97	8.0	**254**	2	20	11.5	**231**	7.1	**9.6**	<0.5	<0.5	1.1	440	-3.5
05-Oct-21	154351	296	1410	104	8.0	**267**	1	22	12.1	**209**	6.8	**9.1**	<0.5	<0.5	1.3	750	-8.1
15-Mar-22	158874	289	1380	102	7.7	229	2	21	12.0	**235**	7.4	**7**	<0.5	<0.5	1.1	700	1.1
13-Sep-22	164237	299	1340	107	7.8	234	1	21	13.3	**242**	7.1	**6**	<0.05	<0.05	1.1	790	1.3
15-Mar-23	168772	305	1300	108	7.9	247	1	22	13.0	**233**	7.2	**6.5**	<0.05	<0.05	1	840	-2.1
12-Sep-23	174117	304			7.6	228	0.8					1.1	<0.05	<0.05	1	690	
18-Mar-24	179269	310	1280	96	7.9	243	0.8	20	11.1	**230**	6.5	4.5	<0.05	<0.05	1	700	2.8
09-Sep-24	184296	300	1120	107	7.5	229	0.5	22	12.3	**223**	6.6	4.2	<0.05	<0.05	0.9	710	0.8
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		305	1200	102	7.7	236	0.7	21	11.7	227	6.6	4.4	<0.05	<0.05	1	705	

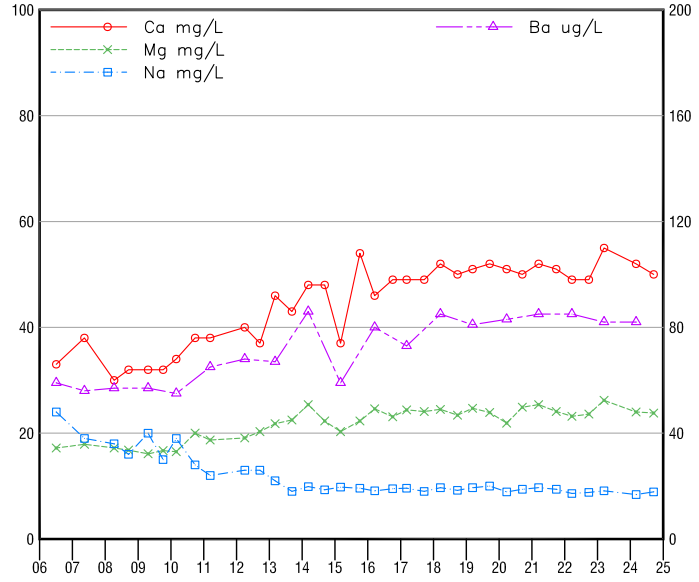
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



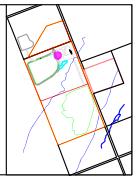








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-91-I

Shallow Bedrock Unit

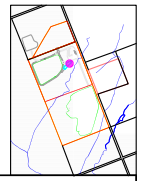
Screen 192.1 - 190.7 masl

CA008825 24 Mar 25	wsp	F224006

BH-91-I

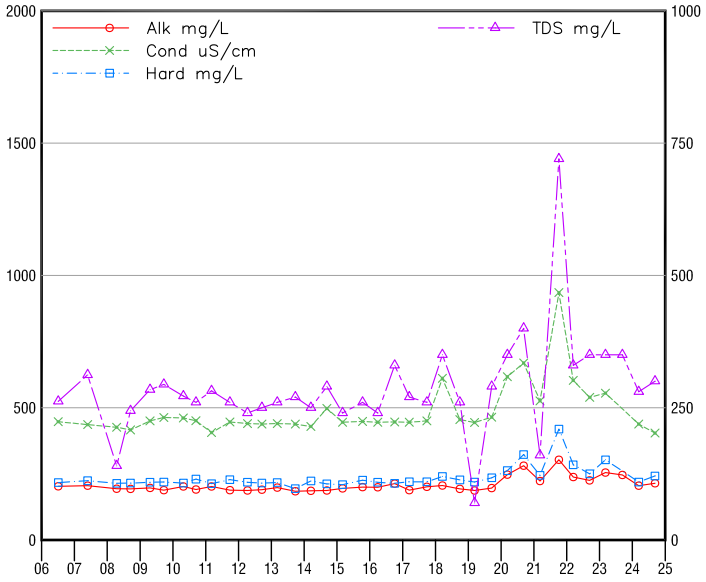
Shallow Bedrock Unit

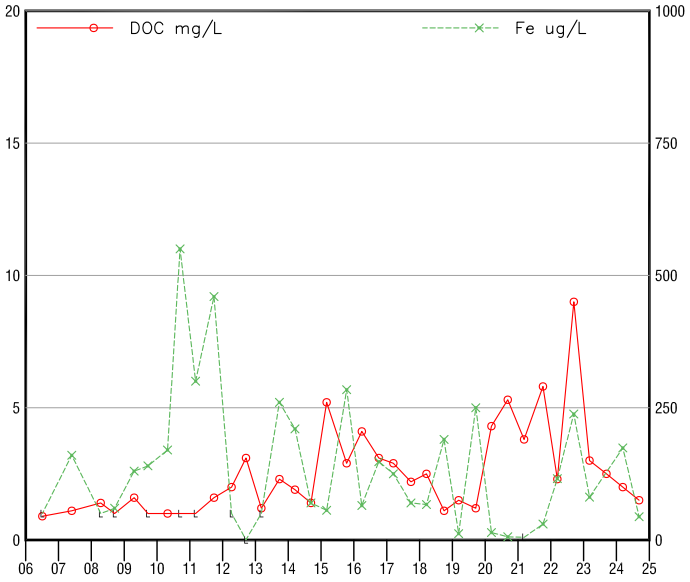
Stand Pipe Piezometer
Screen 192.1 - 190.7 masl

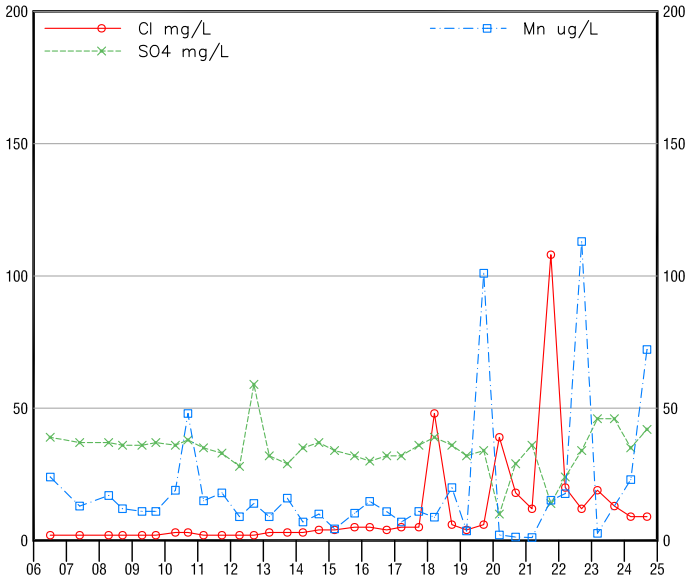


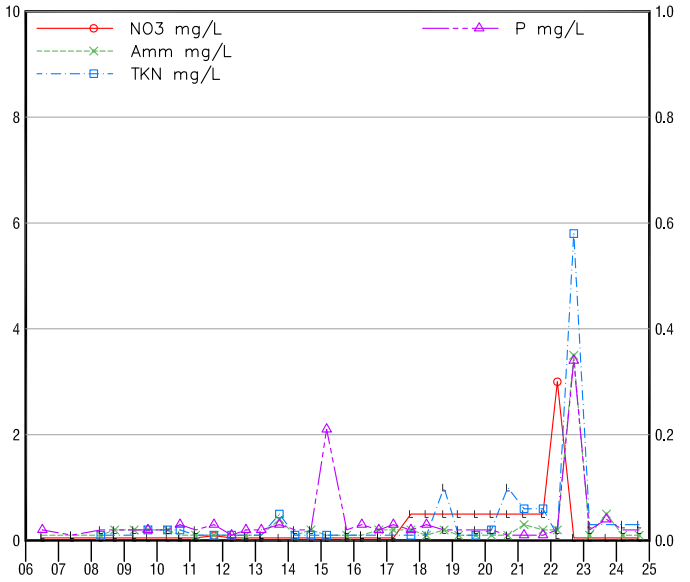
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
06-Oct-09	58348	140	356	149	7.8	2	36	32	16.7	15	1.25	<1	<0.05	<0.1	<0.1	238	0.5
02-Mar-10	60949	155	384	152	8.0	3	40	34	16.5	19	1.31	1.3	<0.05	<0.05	0.1	214	-1.4
27-Sep-10	64382	169	403	178	8.0	3	43	38	20.0	14	1.36	<1	<0.05	<0.05	0.1	260	-1.5
14-Mar-11	66909	174	419	171	8.0	3	43	38	18.7	12	1.33	1.9	<0.05	<0.05	0.1	282	-5.7
02-Apr-12	73793	174	420	178	8.0	4	44	40	19.1	13	1.21	1.5	<0.05	<0.05	0.2	250	-3.6
17-Sep-12	77332	157	406	177	8.0	4	74	37	20.3	13	1.34	3.2	0.05	<0.05	0.2	250	-7.1
05-Mar-13	80694	177	433	205	8.0	6	46	46	21.8	11	1.4	3.1	<0.05	<0.05	0.2	250	-0.4
09-Sep-13	85029	166	438	199	7.5	6	46	43	22.5	9.0	1.6	1.2	<0.05	<0.05	0.1	280	-0.2
10-Mar-14	88316	154	443	225	7.9	7	49	48	25.4	9.9	1.5	2	<0.05	<0.05	<0.1	270	7.5
08-Sep-14	92265	160	499	212	7.8	9	47	48	22.3	9.3	1.5	3.5	<0.05	<0.05	0.1	280	3.0
04-Mar-15	95472	177	450	176	7.7	9	46	37	20.3	9.8	1.16	**7.7**	<0.05	<0.05	0.2	250	-8.5
05-Oct-15	100010	177	461	227	7.9	10	47	54	22.3	9.6	1.4	4.8	<0.05	<0.05	0.1	310	2.2
18-Mar-16	103035	183	463	217	7.7	10	49	46	24.6	9.1	1.4	3.2	<0.05	<0.05	<0.1	290	-2.0
04-Oct-16	107878	176	468	216	8.0	11	56	49	23.1	9.5	1.5	2.3	<0.05	<0.05	0.1	360	-2.4
08-Mar-17	111342	174	470	222	8.1	13	47	49	24.4	9.6	1.6	2.4	<0.05	<0.05	0.2	310	0.9
20-Sep-17	116502	181	468	221	7.8	12	52	49	24.1	9.0	1.5	2.5	<0.5	<0.5	0.1	360	-2.0
19-Mar-18	120795	181	470	231	7.8	12	50	52	24.5	9.7	1.5	1.4	<0.5	<0.5	0.2	280	0.9
25-Sep-18	126474	167	475	220	7.9	14	52	50	23.4	9.2	1.4	1.1	<0.5	<0.5	0.1	290	0.6
12-Mar-19	130225	167	474	229	8.0	12	51	51	24.7	9.7	1.6	2	<0.5	<0.5	0.1	270	3.1
18-Sep-19	135231	169	475	229	8.0	15	43	52	23.9	10	1.6	1.5	<0.5	<0.5	<0.1	340	3.8
26-Mar-20	139776	177	472	217	7.8	14	51	51	21.9	8.9	1.4	2.7	<0.5	<0.5	<0.1	290	-2.4
16-Sep-20	144237	160	478	227	7.8	16	52	50	24.9	9.4	1.5	1.2	<0.5	<0.5	0.1	320	3.0
16-Mar-21	148554	177	472	235	8.0	13	48	52	25.4	9.7	1.7	1.4	<0.5	<0.5	<0.1	300	2.6
29-Sep-21	154169	173	487	227	8.0	18	53	51	24.1	9.4	1.6	1.8	<0.5	<0.5	0.2	330	-0.6
21-Mar-22	159042	173	482	219	7.8	13	49	49	23.2	8.6	1.5	<1	<0.5	<0.5	0.1	300	-0.6
26-Sep-22	164641	171	510	219	7.9	16	53	49	23.6	8.8	1.4	1.5	<0.05	<0.05	0.2	290	-1.7
14-Mar-23	168719	179	488	244	7.8	15	52	55	26.2	9.1	1.6	1.2	<0.05	<0.05	0.2	340	2.5
19-Sep-23	174342				7.8										<0.1		
05-Mar-24	178933	183	430	229	7.7	15	52	52	24.0	8.4	1.7	1.4	<0.05	<0.05	0.1	230	0.3
16-Sep-24	184501	174	524	222	7.7	19	60	50	23.8	8.9	1.5	1	<0.05	<0.05	0.1	320	2.3
TOTAL SAMPLES		34	34	34	32	34	34	34	34	34	34	34	34	34	35	34	
AVERAGE 2024		179	477	226	7.7	17	56	51	23.9	8.7	1.6	1.2	<0.05	<0.05	0.1	275	

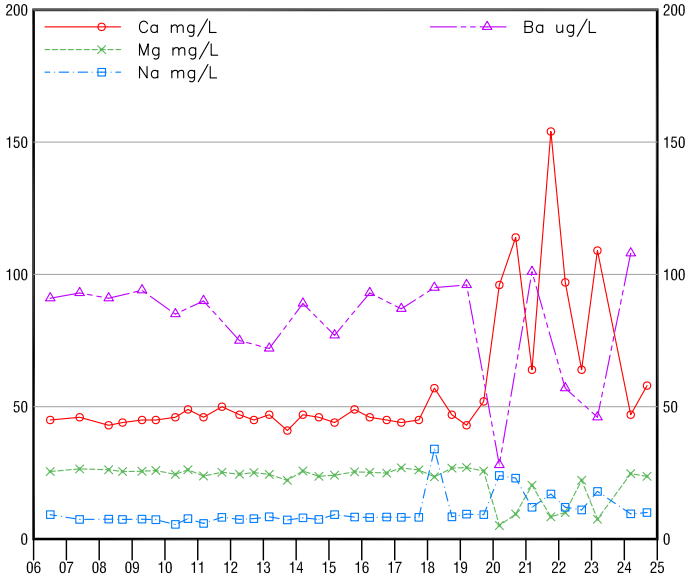
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



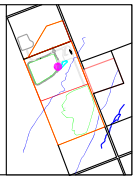








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-92-I

Shallow Bedrock Unit

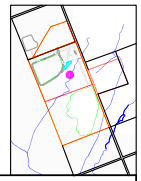
Screen 185.2 - 183.6 masl

CA008825 24 Mar 25	wsp	F224007

BH-92-I

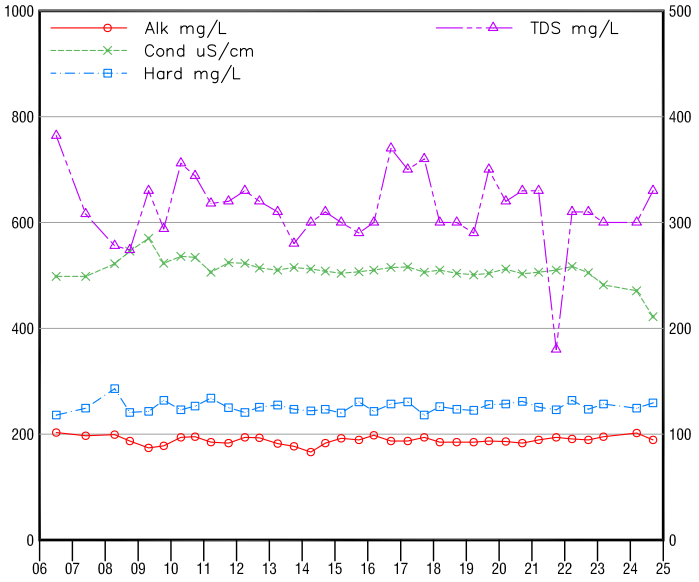
Shallow Bedrock Unit

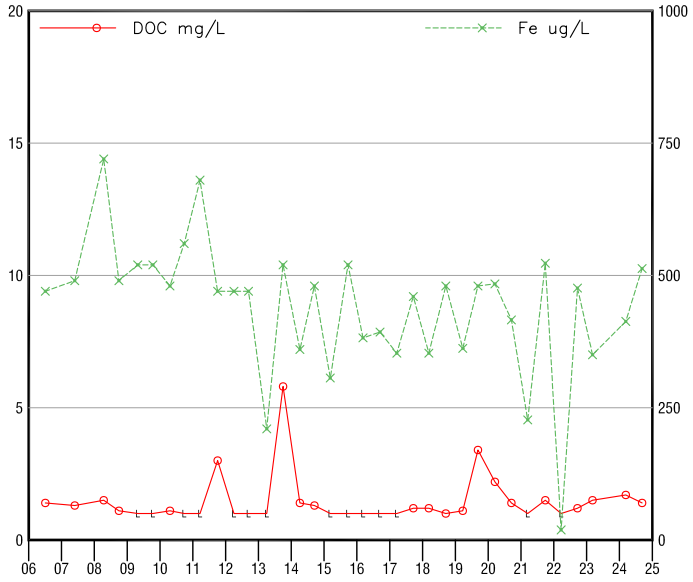
Stand Pipe Piezometer
Screen 185.2 - 183.6 masl

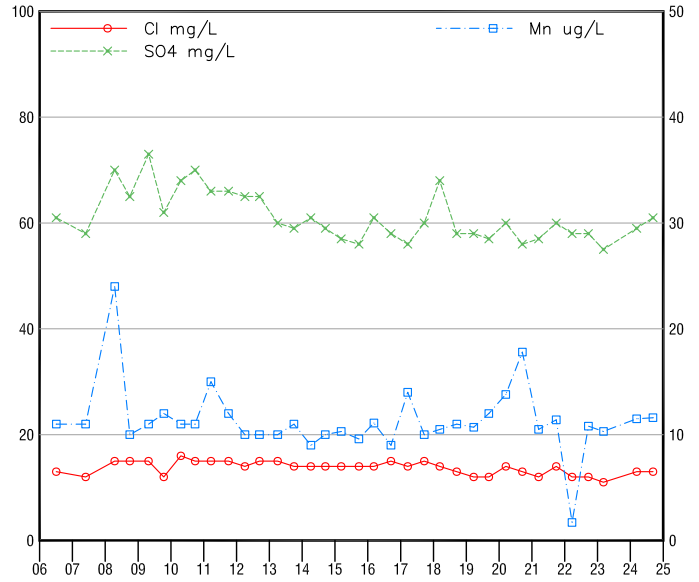


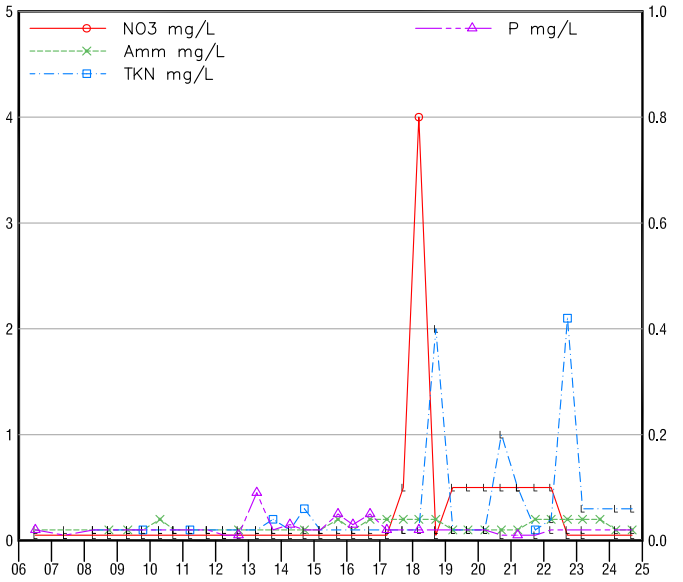
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
28-Apr-10	62144	202	461	215	7.9	3	36	46	24.4	5.5	1.62	1	<0.05	<0.05	0.2	272	-2.7
14-Sep-10	64169	191	451	230	8.0	3	38	49	26.2	7.7	1.6	<1	<0.05	<0.05	<0.1	260	3.3
07-Mar-11	66792	202	406	213	7.9	2	35	46	23.8	5.9	1.69	<1	<0.05	<0.05	0.1	282	-2.8
27-Sep-11	70495	188	446	228	7.9	2	33	50	25.2	8.2	1.79	1.6	0.09	<0.05	0.1	260	5.0
10-Apr-12	73892	187	440	218	7.8	2	28	47	24.5	7.4	1.78	2	<0.05	<0.05	<0.1	240	3.7
17-Sep-12	77329	190	438	215	7.9	2	59	45	25.1	7.7	1.65	3.1	<0.05	<0.05	0.1	250	-4.2
07-Mar-13	80735	198	440	217	7.9	3	32	47	24.4	8.4	1.62	1.2	<0.05	<0.05	<0.1	260	0.4
24-Sep-13	85338	184	438	194	7.8	3	29	41	22.2	7.2	1.6	2.3	<0.05	<0.05	0.4	270	-1.3
17-Mar-14	88486	186	429	223	7.9	3	35	47	25.7	8.0	1.8	1.9	<0.05	<0.05	<0.1	250	3.4
10-Sep-14	92322	187	497	212	7.7	4	37	46	23.7	7.4	1.7	1.4	<0.05	<0.05	0.2	290	0.1
04-Mar-15	95475	195	445	209	7.8	4	34	44	24.1	9.2	1.55	**5.2**	<0.05	<0.05	<0.1	240	-1.2
13-Oct-15	100140	200	448	226	7.8	5	32	49	25.4	8.3	1.7	2.9	<0.05	<0.05	0.1	260	1.4
29-Mar-16	103217	199	445	218	8.0	5	30	46	25.2	8.1	1.7	4.1	<0.05	<0.05	<0.1	240	0.3
04-Oct-16	107881	213	446	214	7.9	4	32	45	24.9	8.3	1.7	3.1	<0.05	<0.05	0.2	330	-3.5
16-Mar-17	111467	188	445	220	7.9	5	32	44	26.9	8.2	1.9	2.9	<0.05	<0.05	0.2	270	2.8
27-Sep-17	116684	201	450	220	7.9	5	36	45	26.1	8.2	1.7	2.2	<0.5	<0.5	0.2	260	-0.7
19-Mar-18	120807	206	611	240	7.8	48	39	57	23.5	34	2.4	2.5	<0.5	<0.5	0.1	350	0.3
30-Sep-18	126583	193	455	227	7.8	6	36	47	26.8	8.4	1.9	1.1	<0.5	<0.5	0.2	260	2.3
12-Mar-19	130234	187	444	219	8.1	4	32	43	27.0	9.4	2	1.5	<0.5	<0.5	0.1	70	3.4
19-Sep-19	135285	196	464	235	7.9	6	34	52	25.7	9.2	1.9	1.2	<0.5	<0.5	0.1	290	3.5
11-Mar-20	139385	247	617	262	7.5	39	10	96	5.1	24	0.5	4.3	<0.5	<0.5	0.1	350	0.3
08-Sep-20	144010	281	669	323	7.5	18	29	114	9.4	23	1.7	**5.3**	<0.5	<0.5	0.1	400	5.7
09-Mar-21	148429	223	526	244	7.9	12	36	64	20.3	12	1.8	3.8	<0.5	<0.5	0.3	160	-0.7
06-Oct-21	154472	303	935	419	7.2	108	14	154	8.4	17	1	**5.8**	<0.5	<0.5	0.2	720	-1.4
14-Mar-22	158783	238	603	284	7.5	20	24	97	10.0	12	1	2.3	3.0	<0.5	0.2	330	1.6
13-Sep-22	164243	225	539	250	7.6	12	34	64	22.2	11	2.6	**9**	<0.05	<0.05	3.5	350	2.2
08-Mar-23	168579	255	555	303	7.8	19	46	109	7.5	18	0.7	3	<0.05	<0.05	0.1	350	1.8
12-Sep-23	174120	246			7.4	13	46					2.5	<0.05	<0.05	0.5	350	
12-Mar-24	179126	205	438	219	7.9	9	35	47	24.7	9.5	2	2	<0.05	<0.05	0.1	280	0.6
09-Sep-24	184303	214	404	242	7.2	9	42	58	23.7	10	2	1.5	<0.05	<0.05	0.1	300	0.8
TOTAL SAMPLES		36	35	35	33	36	36	35	35	35	35	36	36	36	36	36	
AVERAGE 2024		210	421	231	7.6	9	39	53	24.2	10	2	2	<0.05	<0.05	0.1	290	

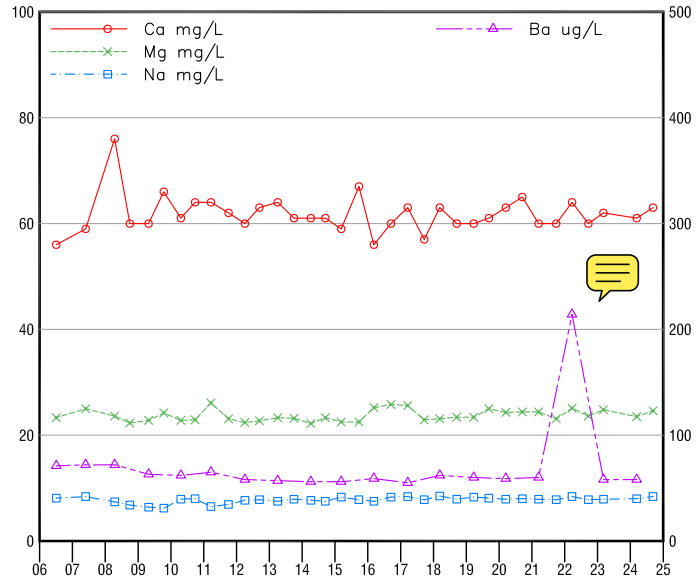
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-94-I

Basal Overburden (Bedrock)

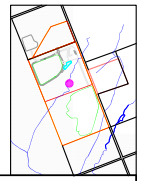
Screen 186.6 - 185.2 masl

CA008825 24 Mar 25	wsp	F224008

BH-94-I

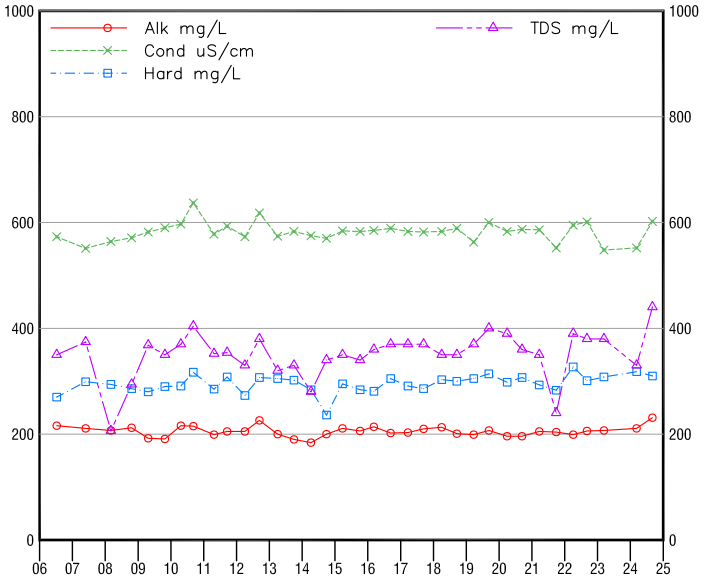
Basal Overburden (Bedrock)

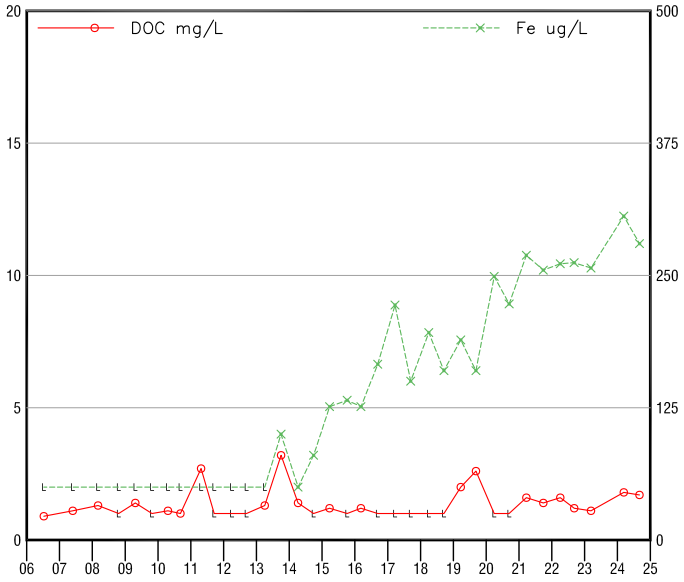
Stand Pipe Piezometer
Screen 186.6 - 185.2 masl

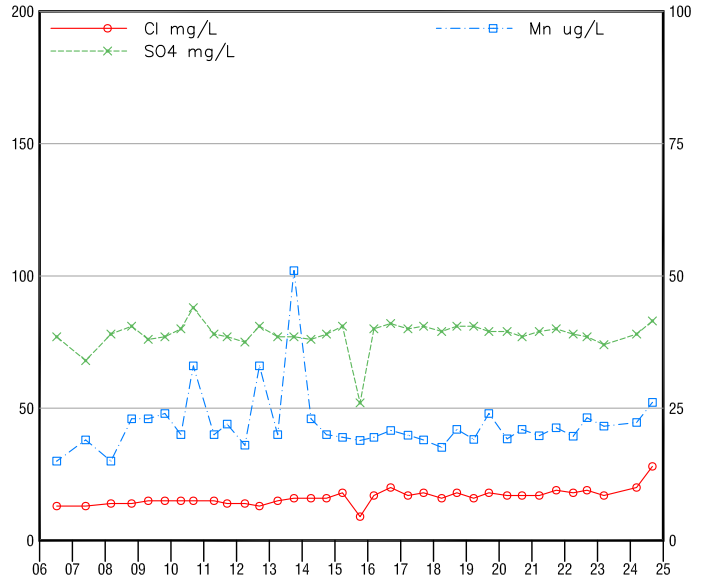


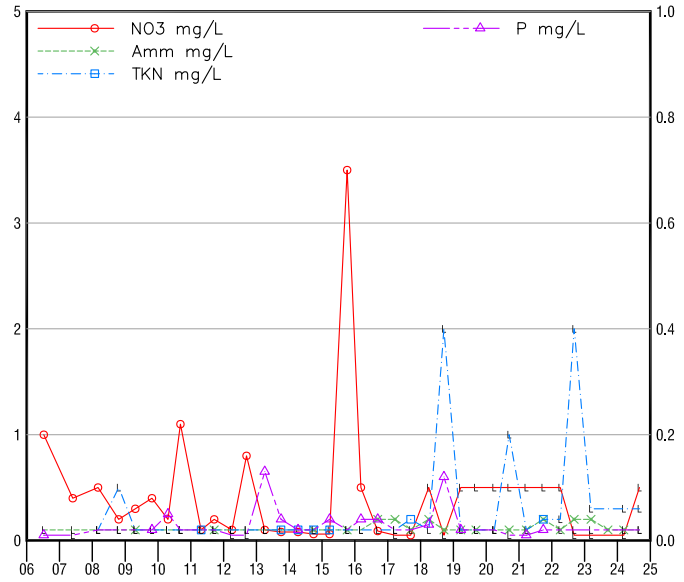
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-10	62015	194	536	246	6.9	16	68	61	22.8	7.9	1.25	1.1	<0.05	<0.05	0.2	356	-3.7
27-Sep-10	64380	195	534	253	7.7	15	70	64	22.9	8.0	1.27	<1	<0.05	<0.05	<0.1	344	-2.9
22-Mar-11	67102	185	506	268	7.7	15	66	64	26.1	6.5	1.3	<1	<0.05	<0.05	<0.1	318	1.9
04-Oct-11	70630	183	524	250	7.8	15	66	62	23.1	6.9	1.28	3	<0.05	<0.05	<0.1	320	-0.9
03-Apr-12	73826	194	523	241	7.8	14	65	60	22.4	7.7	1.17	<1	<0.05	<0.05	<0.1	330	-3.8
12-Sep-12	77195	193	514	251	7.8	15	65	63	22.7	7.8	1.29	<1	<0.05	<0.05	0.1	320	-2.0
03-Apr-13	81355	182	510	255	7.8	15	60	64	23.3	7.5	1.4	<1	<0.05	<0.05	<0.1	310	1.5
01-Oct-13	85460	177	515	247	7.8	14	59	61	23.2	7.9	1.3	**5.8**	<0.05	<0.05	<0.1	280	1.7
07-Apr-14	88904	166	512	244	7.8	14	61	61	22.2	7.7	1.1	1.4	<0.05	<0.05	<0.1	300	2.7
15-Sep-14	92422	183	508	247	7.9	14	59	61	23.3	7.5	1.2	1.3	<0.05	<0.05	0.1	310	0.4
11-Mar-15	95597	192	504	240	7.8	14	57	59	22.5	8.3	1.2	<1	<0.05	<0.05	<0.1	300	-1.9
24-Sep-15	99802	189	507	261	7.7	14	56	67	22.5	7.8	1.2	<1	<0.05	<0.05	0.2	290	2.5
09-Mar-16	102829	198	510	243	8.0	14	61	56	25.2	7.5	1.1	<1	<0.05	<0.05	<0.1	300	-3.6
15-Sep-16	107397	187	515	257	7.9	15	58	60	25.8	8.3	1.4	<1	<0.05	<0.05	0.2	370	1.9
20-Mar-17	111712	187	516	261	7.9	14	56	63	25.6	8.4	1.3	<1	<0.05	<0.05	0.2	350	3.3
20-Sep-17	116508	194	506	236	7.9	15	60	57	22.9	7.8	1.3	1.2	<0.5	<0.5	0.2	360	-3.8
12-Mar-18	120577	185	510	252	7.9	14	68	63	23.1	8.5	1.3	1.2	4.0	<0.5	0.2	300	-2.9
17-Sep-18	126167	185	504	247	7.9	13	58	60	23.4	7.9	1.2	1	<0.05	<0.05	0.2	300	0.6
25-Mar-19	130605	185	501	245	7.9	12	58	60	23.4	8.3	1.3	1.1	<0.5	<0.5	0.1	290	0.9
09-Sep-19	134997	187	504	256	7.8	12	57	61	25.0	8.1	1.4	3.4	<0.5	<0.5	0.1	350	2.5
16-Mar-20	139463	186	512	257	7.9	14	60	63	24.3	7.9	1.3	2.2	<0.5	<0.5	0.1	320	1.7
16-Sep-20	144242	183	503	262	7.7	13	56	65	24.4	8.0	1.4	1.4	<0.5	<0.5	0.1	330	4.2
16-Mar-21	148553	189	506	251	7.9	12	57	60	24.4	7.9	1.3	<1	<0.5	<0.5	0.1	330	0.8
28-Sep-21	154119	194	510	246	7.9	14	60	60	23.1	7.8	1.3	1.5	<0.5	<0.5	0.2	180	-1.9
23-Mar-22	159180	191	517	264	7.9	12	58	64	25.1	8.4	1.4	<1	<0.5	<0.5	0.2	310	3.0
21-Sep-22	164487	189	505	247	7.9	12	58	60	23.6	7.8	1.3	1.2	<0.05	<0.05	0.2	310	0.1
08-Mar-23	168582	195	482	257	8.0	11	55	62	24.8	7.9	1.4	1.5	<0.05	<0.05	0.2	300	1.9
18-Sep-23	174298				7.7										0.2		
11-Mar-24	179077	202	471	249	7.9	13	59	61	23.5	8.0	1.4	1.7	<0.05	<0.05	0.1	300	0.9
09-Sep-24	184306	189	422	259	7.4	13	61	63	24.6	8.4	1.5	1.4	<0.05	<0.05	0.1	330	2.8
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		196	447	254	7.7	13	60	62	24.1	8.2	1.5	1.6	<0.05	<0.05	0.1	315	

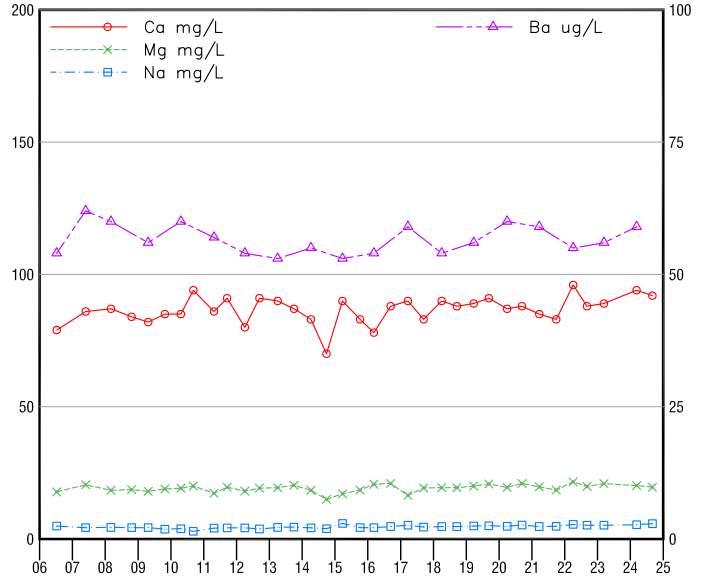
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



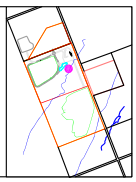








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-95-I

Basal Overburden (Bedrock)

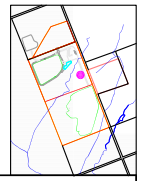
Screen 186.9 - 184.7 masl

CA008825 24 Mar 25	wsp	F224009

BH-95-I

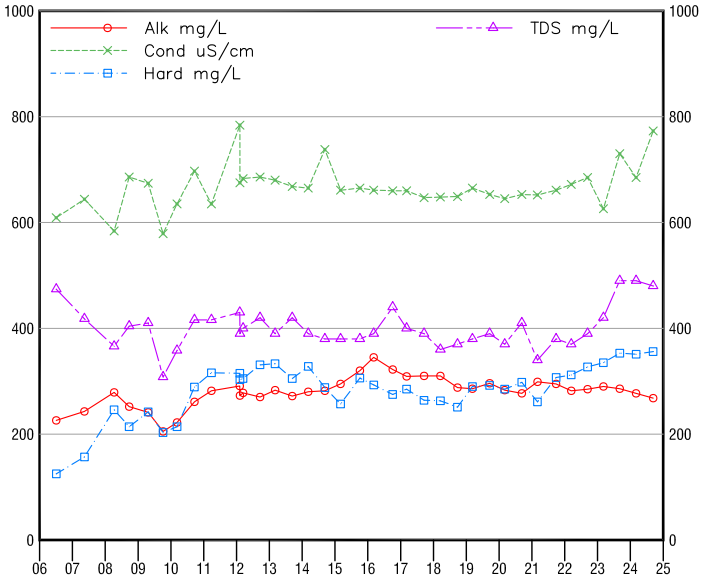
Basal Overburden (Bedrock)

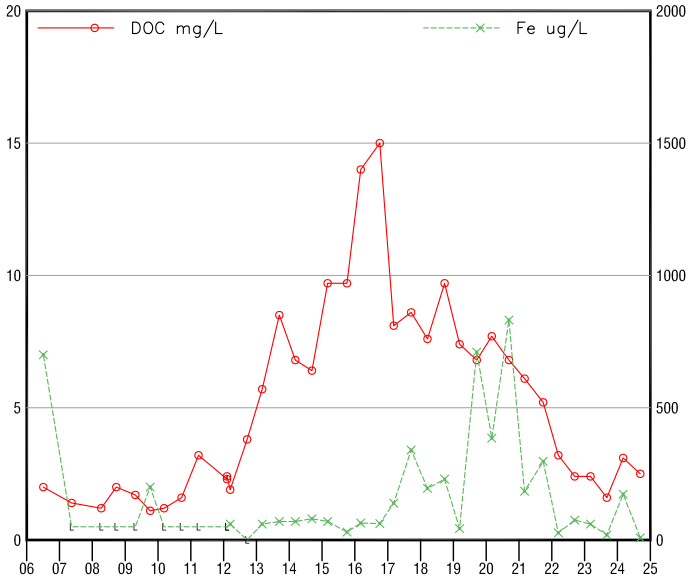
Stand Pipe Piezometer
Screen 186.9 - 184.7 masl

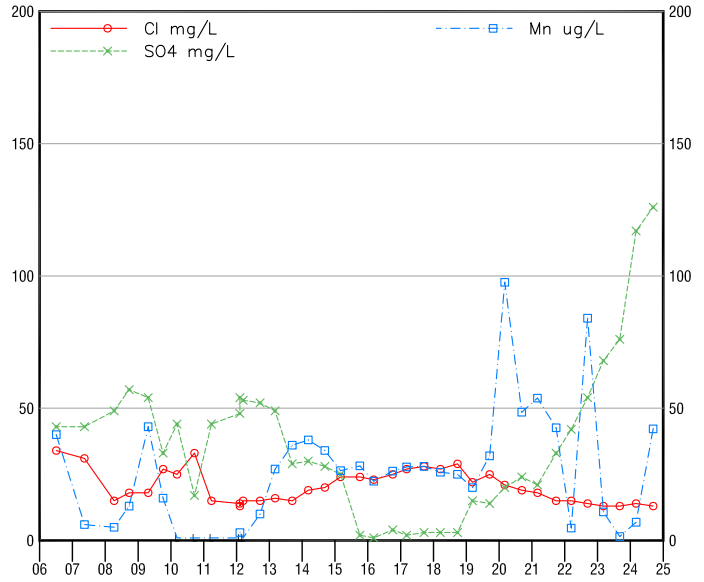


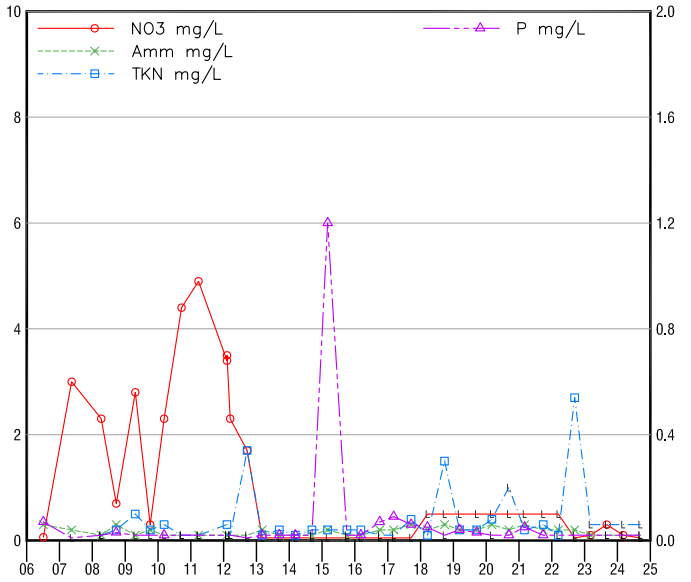
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-10	62017	216	597	291	6.9	15	80	85	19.2	3.9	1.69	1.1	0.2	<0.05	<0.1	370	-3.1
07-Sep-10	64030	215	637	317	7.7	15	88	94	20.0	2.9	1.78	1	1.1	<0.05	<0.1	404	-0.8
26-Apr-11	67652	199	578	285	7.7	15	78	86	17.3	4.1	1.82	2.7	0.1	<0.05	<0.1	352	-0.9
19-Sep-11	70359	205	593	308	7.7	14	77	91	19.6	4.2	1.77	<1	0.2	<0.05	0.1	354	2.4
03-Apr-12	73828	205	573	273	7.6	14	75	80	18.1	4.2	1.63	<1	0.1	<0.05	<0.1	330	-3.2
12-Sep-12	77197	226	618	307	7.6	13	81	91	19.2	3.8	1.8	<1	0.8	<0.05	<0.1	380	-2.2
03-Apr-13	81357	200	574	305	7.7	15	77	90	19.4	4.4	1.78	1.3	0.1	<0.05	<0.1	320	2.3
01-Oct-13	85462	190	583	302	7.7	16	77	87	20.3	4.5	1.7	3.2	0.08	<0.05	<0.1	330	3.5
09-Apr-14	88951	184	575	284	7.7	16	76	83	18.4	4.2	1.7	1.4	0.08	<0.05	<0.1	280	1.7
29-Sep-14	92710	200	570	236	7.6	16	78	70	15.0	3.9	1.5	<1	0.06	<0.05	0.1	340	-10.4
26-Mar-15	95962	211	584	295	7.8	18	81	90	17.1	5.9	1.5	1.2	0.06	<0.05	<0.1	350	-1.6
07-Oct-15	100059	206	583	284	7.6	9	52	83	18.5	4.3	1.5	<1	3.5	<0.05	0.1	340	1.9
09-Mar-16	102831	214	585	281	7.9	17	80	78	20.7	4.3	1.5	1.2	0.5	<0.05	<0.1	360	-4.9
12-Sep-16	107318	202	589	305	7.6	20	82	88	21.0	4.7	1.8	<1	0.09	<0.05	0.2	370	0.5
23-Mar-17	111766	203	583	291	7.6	17	80	90	16.5	5.2	1.8	<1	<0.05	<0.05	0.2	370	-0.8
13-Sep-17	116305	210	582	286	7.8	18	81	83	19.3	4.5	1.5	<1	0.05	<0.5	0.1	370	-3.5
03-Apr-18	121262	213	583	303	7.6	16	79	90	19.4	4.7	1.5	<1	<0.5	<0.5	0.2	350	-0.2
18-Sep-18	126211	201	589	300	7.7	18	81	88	19.4	4.7	1.5	<1	<0.05	<0.05	0.1	350	0.2
25-Mar-19	130607	199	563	305	7.8	16	81	89	20.0	4.9	1.8	2	<0.5	<0.5	0.1	370	2.1
09-Sep-19	135002	207	600	314	7.6	18	79	91	20.8	5.0	1.7	2.6	<0.5	<0.5	0.1	400	2.1
31-Mar-20	139933	196	583	298	7.8	17	79	87	19.5	4.8	1.6	<1	<0.5	<0.5	<0.1	390	1.5
13-Sep-20	144103	196	587	307	7.7	17	77	88	21.0	5.3	1.7	<1	<0.5	<0.5	0.1	360	3.3
23-Mar-21	148724	205	586	293	7.7	17	79	85	19.7	4.7	1.6	1.6	<0.5	<0.5	0.1	350	-0.8
28-Sep-21	154121	204	552	283	7.7	19	80	83	18.5	4.8	1.6	1.4	<0.5	<0.5	0.2	240	-2.9
05-Apr-22	159588	199	595	327	7.7	18	78	96	21.6	5.5	1.9	1.6	<0.5	<0.5	0.1	390	5.9
06-Sep-22	164057	206	601	301	7.7	19	77	88	19.9	5.2	1.6	1.2	<0.05	<0.05	0.2	380	0.5
13-Mar-23	168680	207	548	308	7.6	17	74	89	20.9	5.2	1.8	1.1	<0.05	<0.05	0.2	380	2.4
18-Sep-23	174301				7.6										0.1		
11-Mar-24	179075	211	552	318	7.7	20	78	94	20.2	5.4	1.8	1.8	<0.05	<0.05	0.1	330	3.1
03-Sep-24	184148	231	602	310	7.3	28	83	92	19.6	5.8	1.7	1.7	<0.5	<0.5	<0.1	440	3.4
TOTAL SAMPLES		35	35	35	33	35	35	35	35	35	35	35	35	35	36	35	
AVERAGE 2024		221	577	314	7.5	24	81	93	19.9	5.6	1.8	1.8	<0.5	<0.5	<0.1	385	

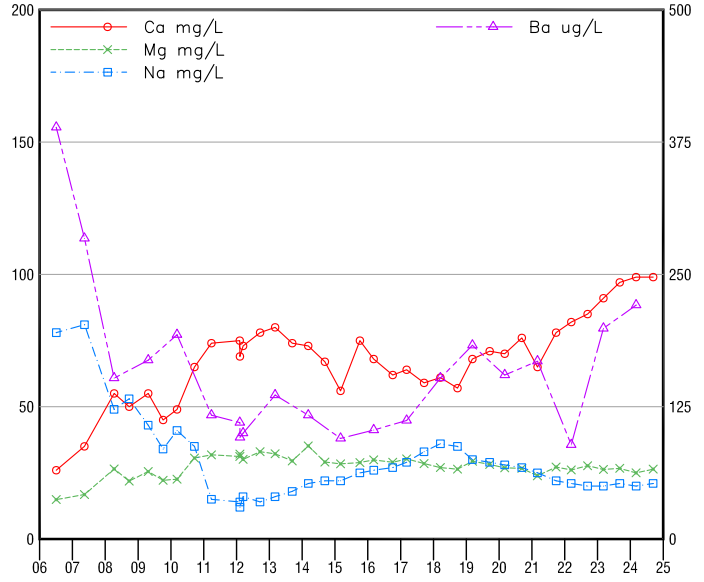
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



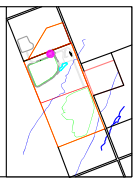








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-104-I

Shallow Bedrock Unit

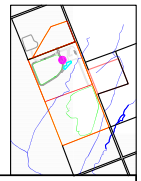
Screen 185.1 - 183.9 masl

CA008825 24 Mar 25	wsp	F224010

BH-104-I

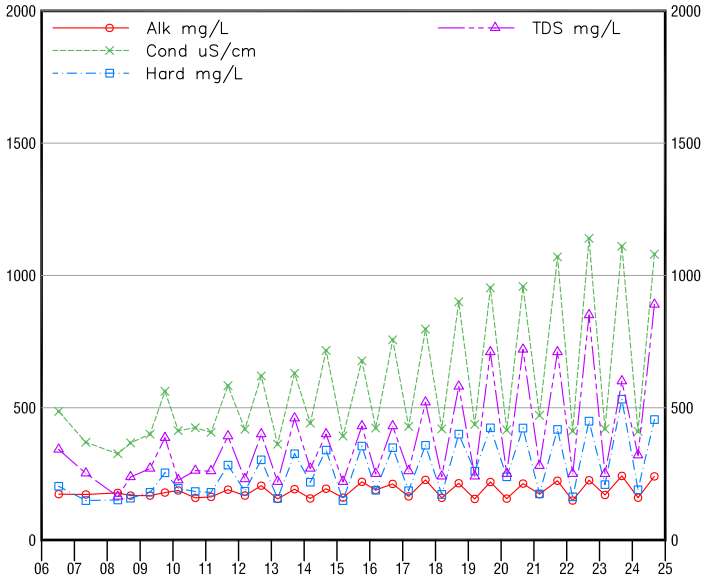
Shallow Bedrock Unit

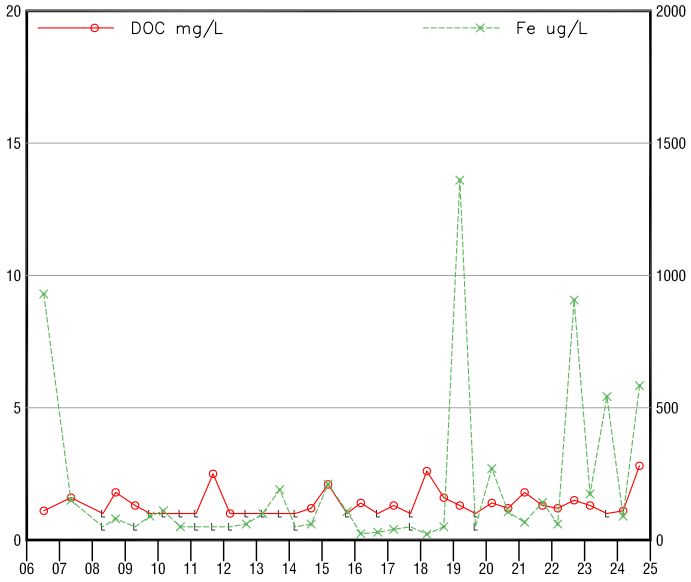
Stand Pipe Piezometer
Screen 185.1 - 183.9 masl

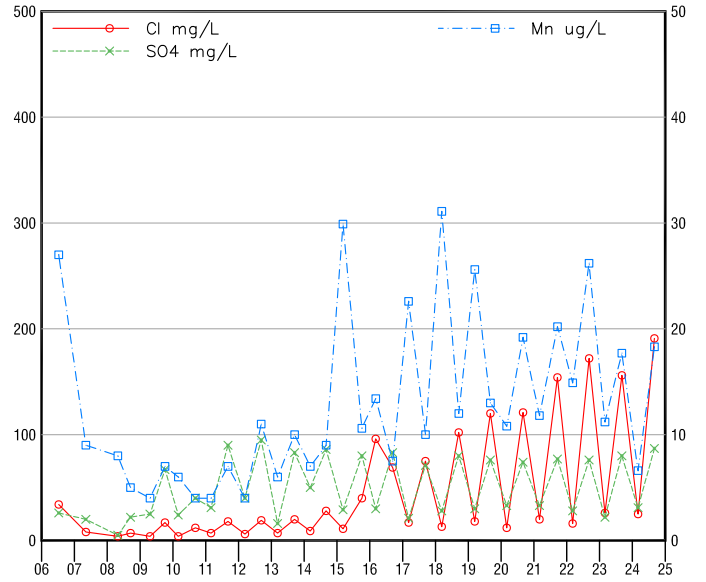


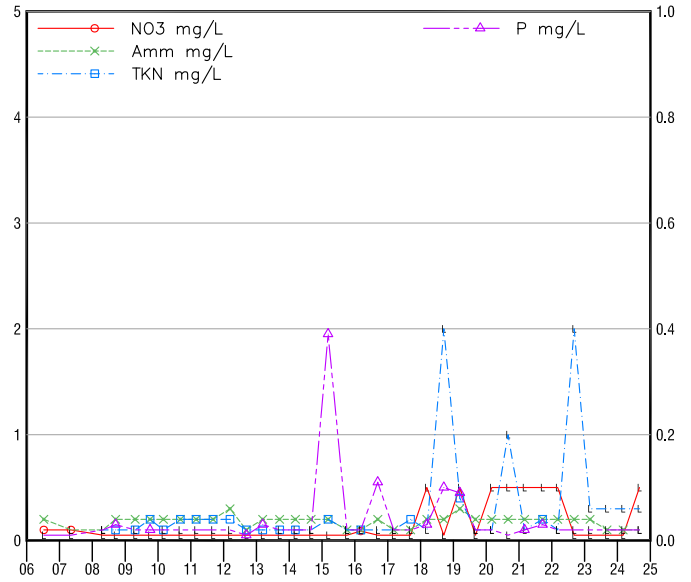
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
20-Sep-10	64258	261	697	289	7.7	33	17	65	30.6	35	8.12	1.6	4.4	<0.05	<0.1	416	5.0
28-Mar-11	67209	282	635	316	7.9	15	44	74	31.8	15	5.24	3.2	4.9	<0.05	0.1	416	-1.6
07-Feb-12	72852	291	784	315	7.7	14	48	75	31.2	14	4.33	2.3	3.4	<0.05	0.1	430	-2.9
08-Feb-12	72871	273	675	303	7.6	13	54	69	32.1	12	4.06	2.4	3.5	<0.05	<0.1	390	-3.5
14-Mar-12	73436	278	683	305	7.8	15	53	73	30.1	16	4.89	1.9	2.3	<0.05	<0.1	400	-2.5
19-Sep-12	77341	270	686	331	7.6	15	52	78	33.0	14	4.45	3.8	1.7	0.20	<0.1	420	2.3
05-Mar-13	80682	283	680	333	7.9	16	49	80	32.2	16	4.44	**5.7**	<0.05	<0.05	0.2	390	2.4
12-Sep-13	85141	272	668	305	7.7	15	29	74	29.5	18	4.7	**8.5**	<0.05	<0.05	0.1	420	4.1
10-Mar-14	88319	280	665	328	7.8	19	30	73	35.2	21	5	**6.8**	<0.05	<0.05	<0.1	390	5.7
10-Sep-14	92325	282	738	288	7.7	20	28	67	29.1	22	4.9	**6.4**	<0.05	<0.05	0.1	380	0.4
04-Mar-15	95478	295	661	257	7.7	24	25	56	28.4	22	4.27	**9.7**	<0.05	<0.05	0.2	380	-6.4
05-Oct-15	100004	320	665	306	7.8	24	2	75	28.9	25	4.9	**9.7**	<0.05	<0.05	0.1	380	1.6
07-Mar-16	102766	345	661	293	7.9	23	1	68	29.9	26	4.9	**14**	<0.05	<0.05	0.1	390	-2.8
04-Oct-16	107869	322	660	275	7.7	25	4	62	29.0	27	5.4	**15**	<0.05	<0.05	0.2	440	-2.8
08-Mar-17	111345	309	660	285	8.0	27	2	64	30.3	29	5.6	**8.1**	<0.05	<0.05	0.2	400	1
18-Sep-17	116453	310	647	264	7.8	28	3	59	28.5	33	5.4	**8.6**	<0.05	<0.05	0.3	390	-1.3
19-Mar-18	120798	310	648	263	7.7	27	3	61	27.0	36	5.5	**7.6**	<0.5	<0.5	0.2	360	-0.2
25-Sep-18	126477	288	649	251	7.8	29	3	57	26.4	35	5.2	**9.7**	<0.5	<0.5	0.3	370	0.8
11-Mar-19	130207	286	665	290	7.8	22	15	68	29.4	30	5	**7.4**	<0.5	<0.5	0.2	380	4.4
18-Sep-19	135228	296	653	292	7.8	25	14	71	28.2	29	4.6	**6.8**	<0.5	<0.5	0.2	390	2.3
04-Mar-20	139237	283	645	285	7.6	21	20	70	26.9	28	4.7	**7.7**	<0.5	<0.5	0.3	370	3.2
10-Sep-20	144080	277	653	298	7.7	19	24	76	26.7	27	4.9	**6.8**	<0.5	<0.5	0.2	410	5.4
03-Mar-21	148210	299	652	261	7.6	18	21	65	23.9	25	4.3	**6.1**	<0.5	<0.5	0.3	340	-3.6
27-Sep-21	154089	295	661	307	7.7	15	33	78	27.2	22	4.2	**5.2**	<0.5	<0.5	0.2	380	1.6
14-Mar-22	158779	282	672	312	7.4	15	42	82	26.1	21	4.1	3.2	<0.5	<0.5	0.2	370	2.4
12-Sep-22	164190	285	685	327	7.7	14	54	85	27.7	20	4.1	2.4	<0.05	<0.05	0.2	390	2.3
07-Mar-23	168532	290	626	335	7.7	13	68	91	26.3	20	4.3	2.4	0.1	<0.05	0.1	420	0.6
05-Sep-23	173899	286	730	353	7.6	13	76	97	26.7	21	4.2	1.6	0.3	<0.05	<0.1	490	2.4
05-Mar-24	178929	277	685	351	7.3	14	117	99	25.0	20	4.2	3.1	0.1	<0.05	<0.1	490	1
11-Sep-24	184377	268	773	356	7.3	13	126	99	26.4	21	4.4	2.5	<0.05	<0.05	<0.1	480	0.0
TOTAL SAMPLES		37	37	37	34	37	37	37	37	37	37	37	37	37	37	37	
AVERAGE 2024		273	729	354	7.3	14	122	99	25.7	21	4.3	2.8	0.1	<0.05	<0.1	485	

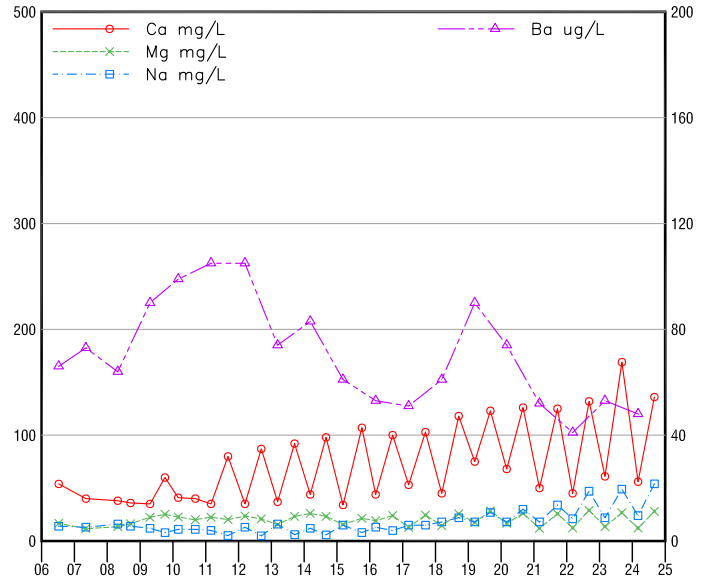
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
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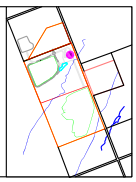
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-106-I

Shallow Bedrock Unit

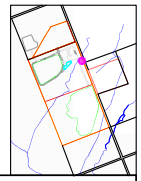
Screen 183.7 - 182.4 masl

CA008825 24 Mar 25	wsp	F224011

BH-106-I

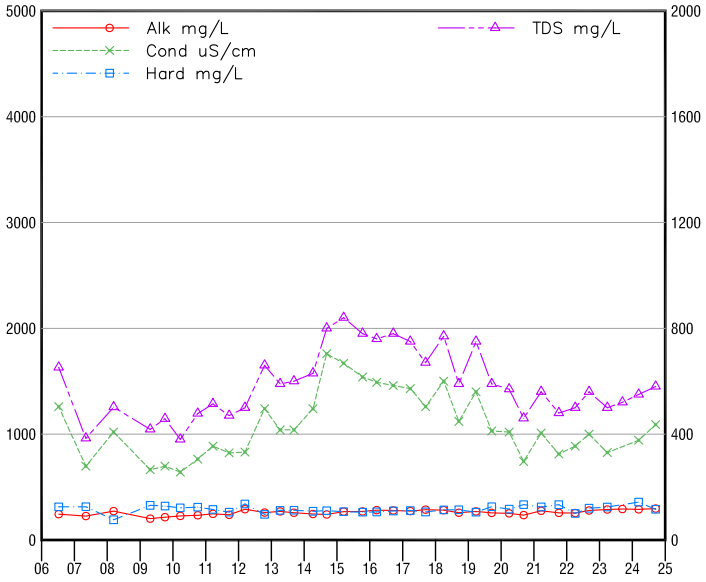
Shallow Bedrock Unit

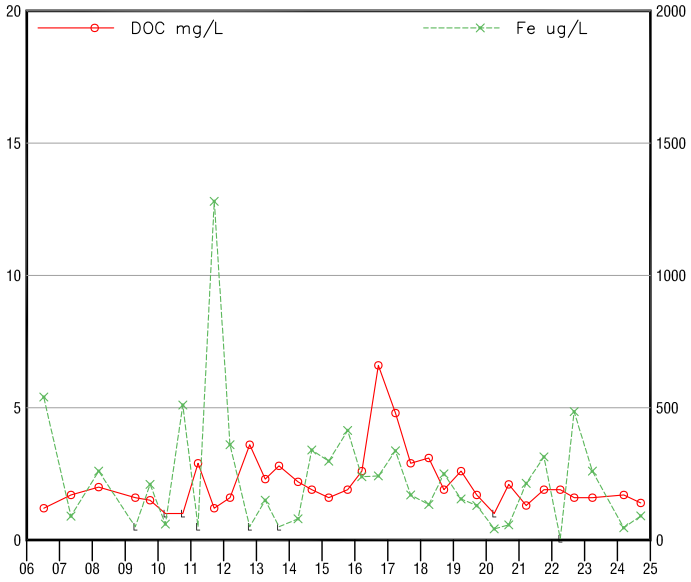
Stand Pipe Piezometer
Screen 183.7 - 182.4 masl

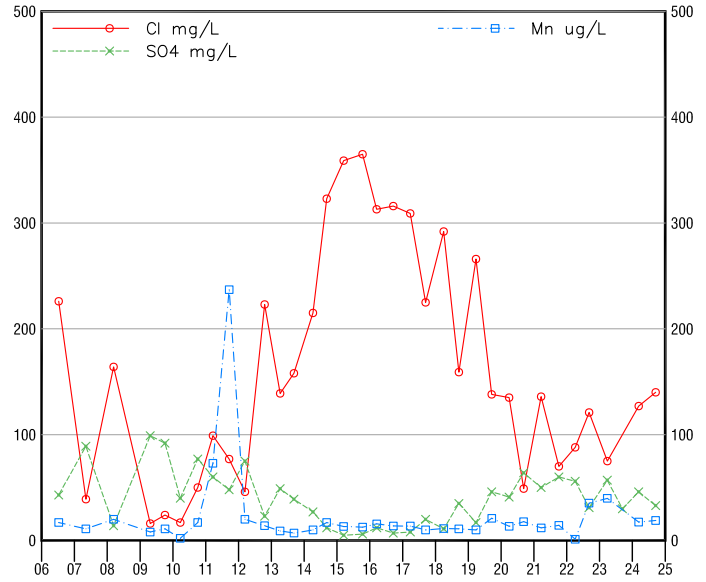


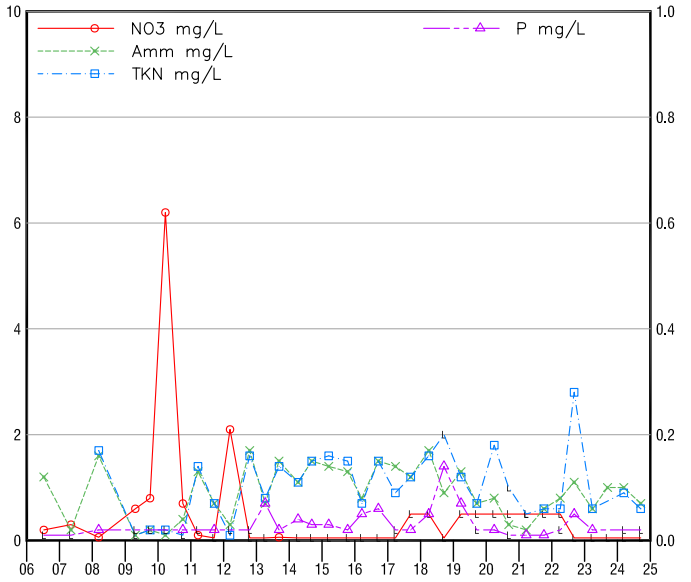
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
02-Mar-10	60952	187	413	195	8.0	4	24	41	22.6	11	1.51	<1	<0.05	<0.05	0.2	226	0.8
07-Sep-10	64027	159	424	183	8.1	12	40	40	20.1	11	1.41	<1	<0.05	<0.05	0.2	262	-1.9
01-Mar-11	66688	163	407	180	8.1	7	31	35	22.5	10	1.46	<1	<0.05	<0.05	0.2	260	-0.3
06-Sep-11	70156	190	583	283	7.8	18	90	80	20.2	5.1	1.51	2.5	<0.05	<0.05	0.2	392	-2.0
12-Mar-12	73370	168	419	184	8.0	6	40	35	23.6	13	1.35	1	<0.05	<0.05	0.3	230	-0.8
10-Sep-12	77142	205	620	303	7.5	19	95	87	20.8	4.9	1.52	<1	<0.05	<0.05	0.1	400	-2.4
11-Mar-13	80779	155	362	157	8.2	7	16	37	15.6	16	1.42	<1	<0.05	<0.05	0.2	220	3.8
16-Sep-13	85200	192	630	326	7.6	20	83	92	23.3	6.0	1.5	<1	<0.05	<0.05	0.2	460	5.3
10-Mar-14	88322	157	442	218	8.0	9	50	44	26.1	12	1.5	<1	<0.05	<0.05	0.2	270	5.5
02-Sep-14	92071	194	716	340	7.7	28	86	98	23.3	5.8	1.6	1.2	<0.05	<0.05	0.2	400	4.8
09-Mar-15	95548	160	393	149	8.0	11	29	34	15.6	15	1.31	2.1	<0.05	<0.05	0.2	220	-5.0
05-Oct-15	100001	220	677	355	7.7	40	80	107	21.4	8.0	1.5	<1	<0.05	<0.05	0.1	430	2.1
07-Mar-16	102769	189	423	188	8.2	96	30	44	19.1	13	1.4	1.4	0.09	<0.05	0.1	250	-24.0
12-Sep-16	107306	212	757	349	7.6	69	83	100	24.0	9.9	1.8	<1	<0.05	<0.05	0.2	430	-3.0
08-Mar-17	111338	165	429	186	8.2	17	21	53	12.9	15	1.6	1.3	<0.05	<0.05	0.1	260	2.5
12-Sep-17	116270	227	797	358	7.7	75	71	103	24.5	15	1.8	<1	<0.05	<0.05	0.1	520	-1.7
12-Mar-18	120568	159	420	172	8.0	13	28	45	14.5	18	1.4	2.6	<0.5	<0.5	0.2	240	1.9
17-Sep-18	126161	214	900	400	7.6	102	80	118	25.7	22	2	1.6	<0.05	<0.05	0.2	580	1.2
14-Mar-19	130275	155	437	260	7.9	18	30	75	17.6	18	2	1.3	<0.5	<0.5	0.3	240	17.9
04-Sep-19	134868	219	953	424	7.5	120	76	123	28.5	27	2.1	<1	<0.05	<0.05	0.2	710	2.2
04-Mar-20	139241	156	416	239	8.0	12	33	68	16.6	18	1.7	1.4	<0.5	<0.5	0.2	250	15.3
01-Sep-20	143835	213	958	423	7.6	121	74	126	26.2	30	2.7	1.2	<0.5	<0.5	0.2	720	3.3
03-Mar-21	148207	173	471	174	7.9	20	33	50	11.9	18	1.5	1.8	<0.5	<0.5	0.2	280	-4.4
20-Sep-21	153829	224	1070	418	7.6	154	77	125	25.8	34	2.3	1.3	<0.5	<0.5	0.2	710	-2.4
08-Mar-22	158622	149	412	163	8.0	16	28	45	12.4	21	1.5	1.2	<0.5	<0.5	0.2	250	3.2
06-Sep-22	164048	226	1140	449	7.5	172	76	132	28.9	47	2.7	1.5	<0.05	<0.05	0.2	850	0.8
02-Mar-23	168424	170	420	209	7.9	26	22	61	13.6	22	1.7	1.3	<0.05	<0.05	0.2	250	6.0
06-Sep-23	173957	242	1110	532	7.5	156	80	169	26.7	49	2.7	<1	<0.05	<0.05	0.1	600	8.3
04-Mar-24	178890	160	410	190	7.8	25	31	56	12.2	24	1.7	1.1	<0.05	<0.05	0.1	320	4.8
03-Sep-24	184142	240	1080	455	7.5	191	87	136	28.0	54	2.8	2.8	<0.5	<0.5	<0.1	890	1.3
TOTAL SAMPLES		36	36	36	34	36	36	36	36	36	36	36	36	36	36	36	
AVERAGE 2024		200	745	323	7.7	108	59	96	20.1	39	2.3	2.0	<0.5	<0.5	<0.1	605	

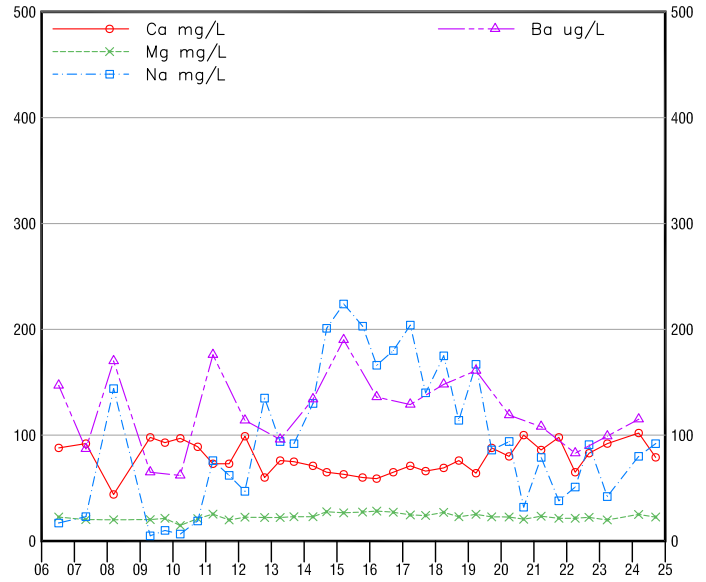
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



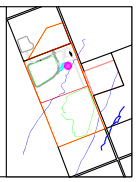








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

BH-107-I

Shallow Bedrock Unit

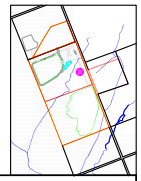
Screen 181.1 - 179.8 masl

CA008825 24 Mar 25	wsp	F224012

BH-107-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 181.1 - 179.8 masl



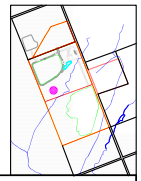
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Mar-10	61542	228	641	304	7.8	17	40	97	14.7	6.6	1.44	<1	6.2	<0.05	0.1	380	0.8
04-Oct-10	64474	234	764	310	7.8	50	77	89	21.1	19	2.68	<1	0.7	<0.05	0.4	478	-4.2
22-Mar-11	67099	247	886	288	7.8	99	60	73	25.4	76	7.11	2.9	0.1	<0.05	1.3	514	1.8
19-Sep-11	70356	238	823	263	7.8	77	48	73	19.9	62	5.18	1.2	<0.05	<0.05	0.7	470	1.5
12-Mar-12	73373	291	830	340	7.6	46	75	99	22.5	47	3.8	1.6	2.1	<0.05	0.3	500	0.8
17-Oct-12	78003	259	1240	242	7.8	223	23	60	22.2	135	8	3.6	<0.05	<0.05	1.7	660	-4.0
08-Apr-13	81441	269	1040	280	7.9	139	49	76	22.2	94	6.11	2.3	<0.05	<0.05	0.7	590	-2.2
09-Sep-13	85032	257	1040	281	7.8	158	39	75	23.0	92	8.9	2.8	0.06	<0.05	1.5	600	-2.2
09-Apr-14	88948	245	1240	271	7.8	215	27	71	22.9	130	8.2	2.2	<0.05	<0.05	1.1	630	-0.7
08-Sep-14	92268	241	1760	277	7.7	**323**	12	65	27.7	**201**	11.3	1.9	<0.05	<0.05	1.5	800	1.8
16-Mar-15	95690	268	1670	267	7.7	**359**	5	63	26.6	**224**	10.6	1.6	<0.05	<0.05	1.4	840	-0.4
13-Oct-15	100137	270	1540	263	7.8	**365**	6	60	27.4	**203**	10.9	1.9	<0.05	<0.05	1.3	780	-4.4
18-Mar-16	103024	281	1490	265	7.7	**313**	12	59	28.3	166	9.4	2.6	<0.05	<0.05	0.8	760	-6.8
19-Sep-16	107504	278	1460	274	7.8	**316**	7	65	27.2	180	11.1	**6.6**	<0.05	<0.05	1.5	780	-3.2
27-Mar-17	111806	273	1430	278	7.7	**309**	8	71	24.6	**204**	9.8	4.8	<0.05	<0.05	1.4	750	1.5
13-Sep-17	116302	286	1260	265	7.9	225	20	66	24.1	140	8.4	2.9	<0.5	<0.5	1.2	670	-3.2
03-Apr-18	121259	281	1500	284	7.9	**292**	11	69	27.0	175	9.9	3.1	<0.5	<0.5	1.7	770	-1.5
18-Sep-18	126213	258	1120	285	7.8	159	35	76	22.9	114	6.9	1.9	<0.05	<0.05	0.9	590	2.5
28-Mar-19	130672	269	1400	263	7.9	**266**	17	64	25.2	167	9.4	2.6	<0.5	<0.5	1.3	750	-1.5
19-Sep-19	135289	256	1030	314	7.8	138	46	88	22.8	86	5.6	1.7	<0.5	<0.5	0.7	590	1.1
31-Mar-20	139935	252	1020	292	7.8	135	41	80	22.7	94	6.4	<1	<0.5	<0.5	0.8	570	2.3
08-Sep-20	144013	235	742	334	7.7	49	64	100	20.6	32	3.3	2.1	<0.5	<0.5	0.3	460	5.0
22-Mar-21	148686	275	1010	312	7.7	136	50	86	23.4	79	5.8	1.3	<0.5	<0.5	0.2	560	-2.7
05-Oct-21	154356	256	812	333	7.8	70	60	98	21.5	38	4	1.9	<0.5	<0.5	0.6	480	0.7
05-Apr-22	159590	255	887	251	7.8	88	56	65	21.5	51	4.5	1.9	<0.5	<0.5	0.8	500	-8.4
06-Sep-22	164054	278	1000	300	7.8	121	31	83	22.3	91	6.8	1.6	<0.05	<0.05	1.1	560	2.9
28-Mar-23	169181	288	826	311	7.7	75	57	92	19.9	42	4.1	1.6	<0.05	<0.05	0.6	500	-5.0
13-Sep-23	174178	292			7.7		30						<0.05	<0.05	1	520	
11-Mar-24	179072	290	942	358	7.8	127	46	102	25.1	80	5.4	1.7	<0.05	<0.05	1	550	3.6
16-Sep-24	184490	297	1090	290	7.5	140	33	79	22.6	92	6.8	1.4	<0.05	<0.05	0.7	580	1.6
TOTAL SAMPLES		35	34	34	32	34	35	34	34	34	34	34	35	35	35	35	
AVERAGE 2024		294	1016	324	7.7	134	40	91	23.9	86	6.1	1.6	<0.05	<0.05	1	565	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-84-I

Basal Overburden (Bedrock)

Stand Pipe Piezometer
Screen 186.1 - 184.4 masl



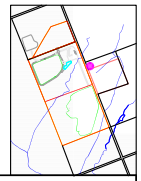
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
29-Oct-09	58890								<50		7		<1					
27-Apr-10	62092	<20	83	<1	440	<1	<2	<5	<50	<20	6	<5	<1		<2	<5		<30
21-Sep-10	64269								130		11		<1					
14-Mar-11	66912	30	69	<1	460	<1	<2	<5	<50	<20	8	<5	<1			<5		<30
26-Sep-11	70473								150		8		<1					
02-Apr-12	73788	<20	67	<1	460	<0.3	<2	<5	<50	<1.5	6	5	<1			<5		<30
24-Sep-12	77495								0.8		6		<1					
02-Apr-13	81306	<20	64	<1	410	<1	<2	<5	<50	<10	7	6	<1		<2	<5		<10
23-Sep-13	85304								140		7		<1					
18-Mar-14	88522	<20	82	<1	440	<1	<2	<5	90	<10	8	<5	<1		<2	<5		<30
17-Sep-14	92469								170		6		<1					
16-Mar-15	95696	<25	83	<0.1	440	<0.1	<0.5	<0.5	50	<0.5	4.7	6.1	2		<0.1	<2		4.1
23-Sep-15	99777								<50		6		<1					
21-Mar-16	103103	<25	75	<0.1	440	<0.1	<0.5	<0.5	14	<0.5	4.3	6	<1		<0.1	<2		1.2
04-Oct-16	107873								25		4		<1					
20-Mar-17	111707	<25	82	<0.1	438	<0.1	<0.5	<0.5	72	<0.5	4.3	6	1		0.2	<2		1
25-Sep-17	116640								160		6		<1					
19-Mar-18	120814	<25	96	<0.1	392	<0.1	<0.5	<0.5	118	<0.5	5.3	6.6	<1		<0.1	<2		0.6
19-Sep-18	126251								270		6		<1					
11-Mar-19	130205	<25	96	<0.5	449	<0.1	<0.5	<0.5	37	<0.5	4.9	7.1	<1		<0.5	<2		1.3
19-Sep-19	135283								280		5		<1					
16-Mar-20	139457	<25	92	<0.5	455	<0.1	<0.5	<0.5	38	<0.5	4.7	6.5	<1		<0.5	<2		2.3
03-Sep-20	143905								188		5.7		1					
03-Mar-21	148218	<25	98	<0.5	485	<0.1	<0.5	<0.5	21	<0.5	4.5	7.5	<1		<0.5	<2		<0.5
05-Oct-21	154354								111		4.3		<1					
14-Mar-22	158786	<25	96	<0.5	536	<0.1	<0.5	0.9	72	<0.5	5.1	8.3	<1		<0.5	<2		1.8
07-Sep-22	164088								97		6		<1					
06-Mar-23	168501	<25	98	<0.5	493	<0.1	<0.5	<0.5	68	<0.5	4.7	7.1	<1		<0.5	<2		0.7
13-Mar-24	179160	72	86	<0.5	480	<0.1	<0.5	<0.5	207	<0.5	22	8.2	<1		<0.5	<2		<5
16-Sep-24	184494								**309**		19.1		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									258		21		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-86-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 178.1 - 176.1 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Mar-10	61539	<20	19	<1	460	<1	<2	<5	60	<20	2	<5	<1		<2	<5		<30
13-Sep-10	64127								70		2		<1					
15-Mar-11	66985	<20	18	<1	530	<1	<2	<5	80	<20	2	5	<1		<2	<5		<30
04-Oct-11	70624								<50		2		2					
12-Mar-12	73367	<20	20	<1	500	<0.3	<2	<5	<50	6	2	<5	<1			<5		<30
12-Sep-12	77189								<0.4		3		<1					
08-Apr-13	81438	<20	28	<1	470	<1	<2	<5	<50	<10	2	<5	<1		<2	<5		<10
03-Oct-13	85515								<50		2		1					
16-Apr-14	89108	<20	21	<1	510	<1	<2	<5	<50	10	2	<5	1		<2	<5		<30
08-Sep-14	92262								50		2		<1					
07-Apr-15	96138	<20	17	<1	320	1	2	<5	<50	<10	3	<5	<1		<2	<5		<30
05-Oct-15	99998								21		2.2		2					
18-Mar-16	103032	<25	20	<0.1	400	<0.1	<0.5	<0.5	19	<0.5	2.2	<0.5	1		<0.1	<2		1
12-Sep-16	107312								49		2		<1					
03-Apr-17	112032	<25	19	<0.1	570	<0.1	<0.5	<0.5	13	<0.5	1.7	<0.5	<1		<0.1	3		0.6
12-Sep-17	116266								<50		2		<1					
03-Apr-18	121264	<25	20	<0.1	380	<0.1	<0.5	<0.5	26	<0.5	2.2	<0.5	<1		<0.1	<2		0.6
25-Sep-18	126471								<50		3		<1					
07-Apr-19	130903	<25	19	<0.5	357	<0.1	<0.5	<0.5	16	<0.5	2.1	<0.5	<1		<0.5	<2		<0.5
24-Sep-19	135333								<50		2		<1					
16-Mar-20	139459	<25	18	<0.5	415	<0.1	<0.5	<0.5	16	<0.5	1.9	<0.5	<1		<0.5	<2		0.8
08-Sep-20	144007								48		2.7		1					
30-Mar-21	148863	<25	18	<0.5	446	<0.1	<0.5	<0.5	24	<0.5	2	<0.5	3		<0.5	<2		<0.5
29-Sep-21	154166								26		2.2		<1					
05-Apr-22	159585	<25	24	<0.5	526	<0.1	<0.5	<0.5	37	<0.5	2.2	<0.5	<1		<0.5	<2		0.8
06-Sep-22	164045								23		2		<1					
28-Mar-23	169179	<25	12	<0.5	249	<0.1	<0.5	<0.5	6	<0.5	2	<0.5	<1		<0.5	<2		<5
05-Sep-23	173895								26		1.8							
04-Mar-24	178887	<25	19	<0.5	422	<0.1	<0.5	<0.5	26	<0.5	2.1	<0.5	<1		<0.5	<2		<5
03-Sep-24	184138								27		2.2		<1					

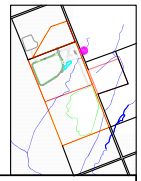
TOTAL SAMPLES	19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024								27		2.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-87-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 184.1 - 182.3 masl



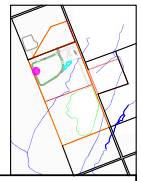
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
09-Mar-10	61122	<20	169	<1	50	<1	<2	<5	<50	<20	2	<5	<1		<2	<5		<30
13-Sep-10	64124								60		3		<1					
14-Mar-11	66905	<20	117	<1	200	<1	<2	<5	90	<20	6	<5	<1			<5		<30
04-Oct-11	70627								<50		4		2					
06-Mar-12	73262	<20	157	<1	60	<0.3	<2	<5	<50	<1.5	5	<5	<1		<2	<5		<30
10-Sep-12	77139								<50		5		<1					
11-Mar-13	80785	<20	144	<1	70	<1	<2	<5	<50	<10	4	6	<1		<2	<5		<10
16-Sep-13	85197								60		4		<1					
10-Mar-14	88313	<20	147	<1	60	<1	<2	<5	50	<10	4	<5	<1		<2	<5		<30
02-Sep-14	92068								<50		4		<1					
09-Mar-15	95544	<25	130	<0.1	56	<0.1	<0.5	<0.5	38	<0.5	4.1	0.9	<1		<0.1	<2		6.3
01-Oct-15	99920								48		5		1					
07-Mar-16	102776	<25	120	0.2	50.2	<0.1	<0.5	<0.5	21	<0.5	3.6	2.4	<1		<0.1	<2		0.8
12-Sep-16	107315								36		3.8		<1					
08-Mar-17	111335	<25	149	<0.1	54.3	<0.1	<0.5	<0.5	24	<0.5	4.4	0.8	1		<0.1	<2		<0.5
12-Sep-17	116263								60		5		<1					
12-Mar-18	120565	<25	91	<0.1	178	<0.1	<0.5	<0.5	45	<0.5	4.2	0.9	<1		<0.1	<2		<0.5
17-Sep-18	126158								70		5		<1					
14-Mar-19	130278	<25	153	<0.5	59.9	<0.1	<0.5	<0.5	85	<0.5	5.1	1.3	<1		<0.5	<2		0.5
04-Sep-19	134871								<50		6		<1					
03-Mar-20	139191	<25	167	<0.5	63.4	<0.1	<0.5	1.6	21	<0.5	5.2	1.6	<1		<0.5	<2		1.2
01-Sep-20	143832								88		6.7		<1					
03-Mar-21	148204	<25	162	<0.5	64.6	<0.1	<0.5	<0.5	65	<0.5	5.6	1.4	<1		<0.5	<2		<0.5
20-Sep-21	153823								120		7.3		1					
08-Mar-22	158619	<25	155	<0.5	52.3	<0.1	<0.5	<0.5	40	<0.5	6.2	0.8	<1		<0.5	<2		<0.5
06-Sep-22	164042								118		6.4		<1					
02-Mar-23	168421	<25	166	<0.5	58.6	<0.1	<0.5	<0.5	65	<0.5	5.5	1.3	1		<0.5	<2		<0.5
05-Sep-23	173892								129		7.5							
04-Mar-24	178884	<25	103	<0.5	176	<0.1	<0.5	<0.5	72	<0.5	7.9	2.3	<1		<0.5	<2		<5
03-Sep-24	184135								45		9		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	18	19	2	19
AVERAGE 2024									59		8		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-88-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 187.8 - 186.3 masl



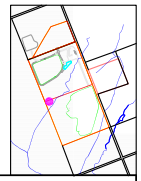
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
28-Apr-09	55316	**170**	124	<1	180	<1	<2	<5	50	<20	12	<5	1		<2	<5		<30
07-Apr-10	61789	<20	125	<1	160	<1	<2	<5	130	<20	10	<5	<1		<2	<5		<30
20-Sep-10	64261								90		10		<1					
23-Mar-11	67144	<20	142	<1	130	<1	<2	<5	<50	<20	<1	<5	<1			<5		<30
22-Sep-11	70443								170		9		1					
03-Apr-12	73821	<20	122	<1	120	<0.3	<2	<5	90	2.8	10	<5	<1			<5		<30
17-Oct-12	78007								<50		21		<1					
12-Mar-13	80844	<20	125	<1	120	<1	<2	<5	130	<10	7	<5	<1		<2	<5		<10
01-Oct-13	85457								70		3		<1					
07-Apr-14	88899	<20	124	<1	130	<1	<2	<5	60	<10	2	<5	<1		<2	<5		<30
15-Sep-14	92419								190		6		<1					
24-Mar-15	95923	<25	128	<0.1	115	<0.1	<0.5	<0.5	79	<0.5	2.9	<0.5	<1		<0.1	<2		2.6
23-Sep-15	99774								<50		2		4					
29-Mar-16	103214	<25	148	<0.1	115	<0.1	<0.5	<0.5	30	<0.5	1.4	<0.5	<1		<0.1	<2		1.6
22-Sep-16	107588								34		5.9		<1					
03-Apr-17	112035	<25	139	<0.1	121	<0.1	<0.5	<0.5	60	<0.5	2.3	<0.5	<1		<0.1	<2		0.6
27-Sep-17	116687								110		8		<1					
15-Mar-18	120689	<25	142	<0.1	117	<0.1	<0.5	<0.5	50	<0.5	3.9	<0.5	<1		<0.1	<2		1.5
30-Sep-18	126577								<50		2		<1					
18-Mar-19	130360	<25	142	<0.5	126	<0.1	<0.5	<0.5	161	<0.5	9.5	0.7	1		<0.5	<2		1.5
09-Sep-19	134992								220		10		<1					
26-Mar-20	139773	**193**	157	<0.5	113	<0.1	<0.5	1.3	**342**	<0.5	12.8	<0.5	<1		<0.5	<2		1.6
01-Sep-20	143841								39		2.5		<1					
22-Mar-21	148683	<25	157	<0.5	110	<0.1	<0.5	0.8	32	<0.5	5.8	<0.5	<1		<0.5	<2		1.8
27-Sep-21	154083								130		6.6		<1					
29-Mar-22	159332	<25	152	<0.5	99.7	<0.1	<0.5	<0.5	288	<0.5	10	<0.5	<1		<0.5	3		<0.5
12-Sep-22	164193								61		2.5		<1					
02-Mar-23	168428	<25	163	<0.5	115	<0.1	<0.5	<0.5	20	<0.5	1	<0.5	<1		<0.5	<2		1.2
18-Mar-24	179266	<25	160	<0.5	128	<0.1	<0.5	<0.5	**414**	<0.5	11.4	<0.5	<1		<0.5	<2		<5
10-Sep-24	184341								117		14.3		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	34	19	34	19	32	2	17	19	2	19
AVERAGE 2024									266		12.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-89-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 182.1 - 180.5 masl



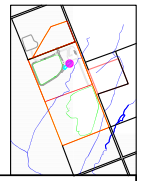
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
19-Oct-09	58613								**330**		18		<1					
07-Apr-10	61792	<20	80	<1	710	<1	<2	<5	<50	<20	7	<5	<1		<2	<5		<30
20-Sep-10	64264								**610**		13		<1					
23-Mar-11	67148	<20	83	<1	790	<1	<2	<5	200	<20	5	6	<1			<5		<30
26-Sep-11	70468								**540**		7		<1					
02-Apr-12	73790	<20	45	<1	700	<0.3	<2	<5	<50	3.2	5	8	<1			<5		<30
19-Sep-12	77344								<0.4		6		<1					
05-Mar-13	80688	<20	63	<1	710	<1	<2	<5	<50	**20**	9	12	<1		<2	<5		<10
23-Sep-13	85306								<50		8		<1					
01-Apr-14	88815	<20	98	<1	800	<1	<2	<5	<50	10	7	13	<1		<2	<5		<30
17-Sep-14	92471								60		9		1					
16-Mar-15	95693	51	87	<0.1	770	<0.1	<0.5	<0.5	99	<0.5	11.3	10.6	<1		<0.1	<2		2.8
13-Oct-15	100143								21		11		4					
21-Mar-16	103105	<25	77	<0.1	830	<0.1	<0.5	<0.5	15	<0.5	11.1	7.9	<1		<0.1	<2		0.7
04-Oct-16	107875								125		9.6		<1					
23-Mar-17	111760	<25	139	<0.1	880	<0.1	<0.5	<0.5	**605**	<0.5	12.7	5.2	<1		<0.1	<2		0.9
25-Sep-17	116643								110		10		<1					
03-Apr-18	121256	<25	100	<0.1	840	<0.1	<0.5	<0.5	179	<0.5	11.8	4	<1		<0.1	<2		1.9
30-Sep-18	126592								**360**		11		<1					
11-Mar-19	130202	<25	85	<0.5	880	<0.1	<0.5	<0.5	69	<0.5	11.9	3	<1		<0.5	<2		1
24-Sep-19	135340								190		11		1					
23-Mar-20	139728	<25	83	<0.5	820	<0.1	<0.5	0.6	36	<0.5	11.8	2.5	<1		<0.5	<2		3.4
10-Sep-20	144077								241		10.5		48					
09-Mar-21	148433	<25	79	<0.5	803	<0.1	<0.5	<0.5	253	<0.5	9.1	2.7	<1		<0.5	<2		0.9
05-Oct-21	154351								234		9.9		<1					
15-Mar-22	158874	<25	77	<0.5	983	<0.1	<0.5	<0.5	167	<0.5	8.6	2.7	<1		<0.5	<2		<0.5
13-Sep-22	164237								108		7.9		<1					
15-Mar-23	168772	<25	81	<0.5	800	<0.1	<0.5	<0.5	113	<0.5	8.6	2.7	<1		<0.5	<2		<5
18-Mar-24	179269	<25	69	<0.5	890	<0.1	<0.5	<0.5	97	<0.5	7.8	2.5	<1		<0.5	<2		<5
09-Sep-24	184296								95		7.9		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									96		7.9		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-91-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 192.1 - 190.7 masl



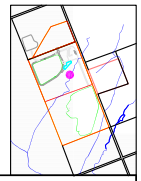
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-09	55179	50	57	<1	80	<1	<2	<5	50	<20	8	5	2		<2	<5		<30
06-Oct-09	58348								50		7		<1					
02-Mar-10	60949	<20	55	<1	60	<1	<2	<5	140	<20	8	6	1		<2	<5		<30
27-Sep-10	64382								250		10		<1					
14-Mar-11	66909	<20	65	<1	50	<1	<2	<5	280	<20	9	<5	<1			<5		<30
02-Apr-12	73793	<20	68	<1	40	<0.3	<2	<5	**360**	<1.5	12	<5	<1			<5		<30
17-Sep-12	77332								<0.4		<1		<1					
05-Mar-13	80694	<20	67	<1	<20	<1	<2	<5	<50	<10	9	<5	<1		<2	<5		<10
09-Sep-13	85029								<50		7		<1					
10-Mar-14	88316	<20	86	<1	30	<1	<2	<5	200	<10	10	<5	<1		<2	9		<30
08-Sep-14	92265								260		10		<1					
04-Mar-15	95472	<25	59	<0.1	23.4	<0.1	<0.5	<0.5	74	<0.5	15.5	13.6	<1		<0.1	<2		1.4
05-Oct-15	100010								32		20.9		2					
18-Mar-16	103035	<25	80	0.1	27.9	<0.1	<0.5	<0.5	158	<0.5	9.8	3.4	<1		<0.1	<2		1.5
04-Oct-16	107878								6		1.2		<1					
08-Mar-17	111342	<25	73	<0.1	20.6	<0.1	<0.5	<0.5	55	<0.5	8.5	1	1		0.2	<2		0.6
20-Sep-17	116502								<50		<1		<1					
19-Mar-18	120795	<25	85	<0.1	15.4	<0.1	<0.5	<0.5	31	<0.5	1.6	1.1	<1		<0.1	<2		1.6
25-Sep-18	126474								<50		22		<1					
12-Mar-19	130225	<25	81	<0.5	26.6	<0.1	<0.5	<0.5	12	<0.5	0.6	1.2	<1		<0.5	<2		1.8
18-Sep-19	135231								60		44		<1					
26-Mar-20	139776	<25	83	<0.5	24.7	<0.1	<0.5	<0.5	25	<0.5	4.5	1.1	<1		<0.5	<2		2.2
16-Sep-20	144237								143		24.4		<1					
16-Mar-21	148554	<25	85	<0.5	23.8	<0.1	<0.5	<0.5	55	<0.5	6.2	1.2	<1		<0.5	<2		1.3
29-Sep-21	154169								14		12.2		<1					
21-Mar-22	159042	<25	85	<0.5	30.2	<0.1	<0.5	<0.5	177	<0.5	9.1	1.1	<1		<0.5	<2		0.7
26-Sep-22	164641								87		5.9		<1					
14-Mar-23	168719	<25	82	<0.5	23	<0.1	<0.5	<0.5	233	<0.5	15.3	1.2	<1		<0.5	<2		<5
05-Mar-24	178933	<25	82	<0.5	21	<0.1	<0.5	0.7	96	<0.5	1.8	1.8	<1		<0.5	<2		<5
16-Sep-24	184501								49		39.6		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	34	19	34	19	32	2	17	19	2	19
AVERAGE 2024									73		20.7		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-92-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 185.2 - 183.6 masl



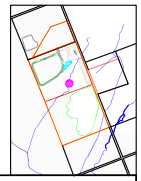
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Sep-09	58094								140		11		2					
28-Apr-10	62144	<20	85	<1	<30	<1	<2	<5	170	<20	19	<5	<1		<2	<5		<30
14-Sep-10	64169								**550**		48		<1					
07-Mar-11	66792	<20	90	<1	<30	<1	<2	<5	300	<20	15	<5	<1			<5		<30
27-Sep-11	70495								**460**		18		2					
10-Apr-12	73892	<20	75	<1	30	<0.3	<2	<5	<50	<1.5	9	<5	<1			<5		<30
17-Sep-12	77329								<0.4		14		1					
07-Mar-13	80735	<20	72	<1	20	<1	<2	<5	<50	<10	9	<5	<1		<2	<5		<10
24-Sep-13	85338								260		16		<1					
17-Mar-14	88486	<20	89	<1	30	<1	<2	<5	210	<10	7	<5	1		<2	<5		<30
10-Sep-14	92322								70		10		1					
04-Mar-15	95475	<25	77	<0.1	22.7	<0.1	<0.5	<0.5	56	<0.5	4.4	1.1	<1		<0.1	<2		4
13-Oct-15	100140								284		10.3		1					
29-Mar-16	103217	<25	93	<0.1	32.1	<0.1	<0.5	<0.5	65	<0.5	14.8	1.3	1		<0.1	<2		0.8
04-Oct-16	107881								148		10.9		<1					
16-Mar-17	111467	<25	87	<0.1	29.8	<0.1	<0.5	<0.5	125	<0.5	7	1.2	2		<0.1	<2		0.8
27-Sep-17	116684								70		11		<1					
19-Mar-18	120807	<25	95	<0.1	36.5	<0.1	<0.5	<0.5	67	<0.5	8.8	0.8	<1		<0.1	<2		1.2
30-Sep-18	126583								190		20		<1					
12-Mar-19	130234	<25	96	<0.5	37.8	<0.1	<0.5	<0.5	12	<0.5	3.6	1	1		<0.5	<2		1.1
19-Sep-19	135285								250		**101**		<1					
11-Mar-20	139385	<25	28	<0.5	39.2	<0.1	<0.5	1.3	14	<0.5	2.1	<0.5	<1		<0.5	<2		4.5
08-Sep-20	144010								6		1.3		<1					
09-Mar-21	148429	<25	101	<0.5	40.8	<0.1	<0.5	<0.5	<5	<0.5	1.1	0.9	<1		<0.5	<2		<0.5
06-Oct-21	154472								30		15.2		2					
14-Mar-22	158783	87	57	<0.5	40.2	<0.1	<0.5	1.1	116	<0.5	17.7	<0.5	2		<0.5	<2		2.8
13-Sep-22	164243								238		**113**		75					
08-Mar-23	168579	39	46	<0.5	64.2	<0.1	<0.5	1	81	<0.5	2.7	<0.5	<1		<0.5	<2		1.5
12-Mar-24	179126	40	108	<0.5	41	<0.1	<0.5	<0.5	174	<0.5	23	1	<1		<0.5	<2		<5
09-Sep-24	184303								44		**72.2**		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									109		47.60		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-94-I

Basal Overburden (Bedrock)

Stand Pipe Piezometer
Screen 186.6 - 185.2 masl



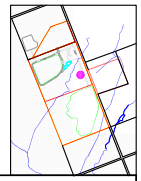
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
14-Oct-09	58549								**520**		12		<1					
22-Apr-10	62015	<20	62	<1	<30	<1	<2	<5	**480**	<20	11	<5	<1		<2	<5		<30
27-Sep-10	64380								**560**		11		<1					
22-Mar-11	67102	40	65	<1	30	<1	<2	<5	**680**	<20	15	<5	<1			<5		<30
04-Oct-11	70630								**470**		12		<1					
03-Apr-12	73826	<20	58	<1	<30	0.3	<2	<5	**470**	1.5	10	<5	<1			<5		<30
12-Sep-12	77195								**470**		10		<1					
03-Apr-13	81355	<20	57	<1	20	<1	<2	<5	210	<10	10	<5	<1		<2	<5		<10
01-Oct-13	85460								**520**		11		<1					
07-Apr-14	88904	<20	56	<1	<30	<1	<2	<5	**360**	<10	9	<5	<1		<2	<5		<30
15-Sep-14	92422								**480**		10		<1					
11-Mar-15	95597	<25	56	<0.1	26.3	<0.1	<0.5	<0.5	**306**	<0.5	10.3	1.1	<1		<0.1	<2		2
24-Sep-15	99802								**520**		9.6		<1					
09-Mar-16	102829	<25	59	<0.1	27.5	<0.1	<0.5	<0.5	**382**	<0.5	11.1	1.1	<1		<0.1	<2		0.7
15-Sep-16	107397								**393**		9		<1					
20-Mar-17	111712	49	55	<0.1	30.9	<0.1	<0.5	<0.5	**353**	<0.5	14	1	<1		<0.1	<2		0.9
20-Sep-17	116508								**460**		10		<1					
12-Mar-18	120577	<25	62	<0.1	24.6	<0.1	<0.5	<0.5	**353**	<0.5	10.5	1.1	<1		<0.1	<2		0.8
17-Sep-18	126167								**480**		11		<1					
25-Mar-19	130605	<25	60	<0.5	27	<0.1	<0.5	<0.5	**362**	<0.5	10.7	1	<1		<0.5	<2		<0.5
09-Sep-19	134997								**480**		12		<1					
16-Mar-20	139463	82	59	<0.5	24.9	<0.1	<0.5	<0.5	**484**	<0.5	13.8	1	<1		<0.5	<2		<0.5
16-Sep-20	144242								**416**		17.8		1					
16-Mar-21	148553	<25	60	<0.5	27.2	<0.1	<0.5	<0.5	227	<0.5	10.5	1.2	1		<0.5	<2		<0.5
28-Sep-21	154119								**523**		11.4		<1					
23-Mar-22	159180	<25	214	<0.5	22.5	<0.1	<0.5	<0.5	19	<0.5	1.7	<0.5	<1		<0.5	<2		<0.5
21-Sep-22	164487								**476**		10.8		<1					
08-Mar-23	168582	<25	58	<0.5	42.4	<0.1	<0.5	<0.5	**350**	<0.5	10.3	1	<1		<0.5	<2		0.9
11-Mar-24	179077	<25	58	<0.5	30	<0.1	<0.5	<0.5	**413**	<0.5	11.5	1.3	<1		<0.5	<2		<5
09-Sep-24	184306								**513**		11.6		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									463		11.6		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-95-I

Basal Overburden (Bedrock)

Stand Pipe Piezometer
Screen 186.9 - 184.7 masl



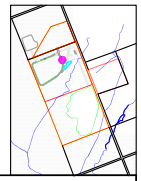
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
26-Oct-09	58831								<50		24		<1					
22-Apr-10	62017	<20	60	<1	<30	<1	<2	<5	<50	<20	20	<5	<1		<2	<5		<30
07-Sep-10	64030								<50		33		<1					
26-Apr-11	67652	<20	57	<1	<30	<1	<2	<5	<50	<20	20	<5	<1			<5		<30
19-Sep-11	70359								<50		22		<1					
03-Apr-12	73828	<20	54	<1	<30	0.3	<2	<5	<50	2.3	18	<5	<1			<5		<30
12-Sep-12	77197								<50		33		<1					
03-Apr-13	81357	<20	53	<1	<20	<1	<2	<5	<50	<10	20	<5	<1		<2	<5		<10
01-Oct-13	85462								100		**51**		<1					
09-Apr-14	88951	<20	55	<1	<30	<1	<2	<5	50	<10	23	<5	<1		<2	<5		<30
29-Sep-14	92710								80		20		<1					
26-Mar-15	95962	<25	53	<0.1	11.5	<0.1	<0.5	0.6	126	<0.5	19.5	0.8	<1		0.2	<2		4.3
07-Oct-15	100059								132		18.9		<1					
09-Mar-16	102831	<25	54	<0.1	11.6	<0.1	<0.5	<0.5	126	<0.5	19.5	0.6	<1		0.2	<2		2.2
12-Sep-16	107318								166		20.8		<1					
23-Mar-17	111766	28	59	<0.1	12.3	<0.1	<0.5	0.6	222	<0.5	19.9	0.6	<1		0.2	<2		2
13-Sep-17	116305								150		19		<1					
03-Apr-18	121262	<25	54	<0.1	16.1	<0.1	<0.5	0.9	196	<0.5	17.6	0.6	<1		0.1	<2		1.6
18-Sep-18	126211								160		21		<1					
25-Mar-19	130607	<25	56	<0.5	11	<0.1	<0.5	0.5	189	<0.5	19.1	0.5	<1		<0.5	<2		1.4
09-Sep-19	135002								160		24		<1					
31-Mar-20	139933	<25	60	<0.5	12.4	<0.1	<0.5	1.6	249	<0.5	19.2	0.7	<1		<0.5	<2		2
13-Sep-20	144103								223		21		1					
23-Mar-21	148724	<25	59	<0.5	18.7	<0.1	<0.5	1.1	269	<0.5	19.8	0.7	<1		<0.5	<2		1.8
28-Sep-21	154121								255		21.3		<1					
05-Apr-22	159588	<25	55	<0.5	9.2	<0.1	<0.5	0.6	261	<0.5	19.7	0.6	<1		<0.5	<2		1.1
06-Sep-22	164057								262		23.2		<1					
13-Mar-23	168680	<25	56	<0.5	12	<0.1	<0.5	0.5	257	<0.5	21.6	0.6	<1		<0.5	<2		<5
11-Mar-24	179075	<25	59	<0.5	10	<0.1	<0.5	0.6	**306**	<0.5	22.3	1	<1		<0.5	<2		<5
03-Sep-24	184148								280		26.1		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	35	19	35	19	33	2	17	19	2	19
AVERAGE 2024									293		24.2		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-104-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 185.1 - 183.9 masl



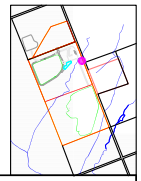
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
20-Sep-10	64258								<50		<1		1					
28-Mar-11	67209	<20	117	<1	710	<1	<2	<5	<50	<20	<1	7	<1			<5		<30
07-Feb-12	72852	<20	110	<1	470	<0.3	<2	<5	<50	<1.5	<1	<5	<1		<2	<5		<30
08-Feb-12	72871	<20	96	<1	440	0.5	<2	<5	<50	<1.5	3	<5	<1		<2	<5		<30
14-Mar-12	73436	<20	100	<1	510	<0.3	<2	<5	60	<1.5	<1	<5	<1			<5		<30
19-Sep-12	77341								<0.4		10		<1					
05-Mar-13	80682	<20	136	<1	470	<1	<2	<5	60	<10	27	<5	1		<2	<5		<10
12-Sep-13	85141								70		36		<1					
10-Mar-14	88319	<20	117	<1	570	<1	<2	<5	70	<10	38	<5	<1		<2	<5		<30
10-Sep-14	92325								80		34		<1					
04-Mar-15	95478	<25	95	<0.1	530	<0.1	<0.5	<0.5	70	<0.5	26.4	0.6	3		<0.1	<2		2.4
05-Oct-15	100004								30		28.2		<1					
07-Mar-16	102766	<25	103	<0.1	523	<0.1	<0.5	<0.5	64	<0.5	22.4	<0.5	2		<0.1	<2		0.6
04-Oct-16	107869								62		26.2		6					
08-Mar-17	111345	<25	112	<0.1	720	<0.1	<0.5	<0.5	139	<0.5	27.8	<0.5	1		0.2	<2		0.6
18-Sep-17	116453								**340**		28		<1					
19-Mar-18	120798	<25	152	<0.1	716	<0.1	<0.5	<0.5	195	<0.5	25.8	0.7	<1		<0.1	<2		1.1
25-Sep-18	126477								230		25		<1					
11-Mar-19	130207	<25	183	<0.5	600	<0.1	<0.5	0.8	43	<0.5	20	2.2	<1		<0.5	<2		3
18-Sep-19	135228								**710**		32		<1					
04-Mar-20	139237	<25	155	<0.5	553	<0.1	<0.5	0.6	**385**	<0.5	**97.6**	1.1	3		0.6	<2		4
10-Sep-20	144080								**831**		48.5		<1					
03-Mar-21	148210	<25	168	<0.5	452	<0.1	<0.5	<0.5	184	<0.5	**53.8**	0.8	<1		<0.5	<2		<0.5
27-Sep-21	154089								297		42.6		<1					
14-Mar-22	158779	<25	89	<0.5	67.1	<0.1	<0.5	0.6	27	<0.5	4.7	2	2		<0.5	<2		0.8
12-Sep-22	164190								75		**84**		<1					
07-Mar-23	168532	<25	199	<0.5	276	<0.1	<0.5	0.6	60	<0.5	10.8	0.9	<1		<0.5	<2		2.8
05-Sep-23	173899								19		1.5							
05-Mar-24	178929	<25	221	<0.5	219	<0.1	<0.5	1.2	173	<0.5	6.9	2.1	<1		<0.5	<2		<5
11-Sep-24	184377								8		42.2		<1					
TOTAL SAMPLES		21	21	21	21	21	21	21	37	21	37	21	34	2	19	21	2	21
AVERAGE 2024									91		24.6		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-106-I

Shallow Bedrock Unit

Stand Pipe Piezometer
Screen 183.7 - 182.4 masl



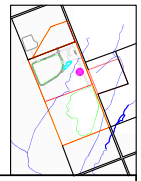
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
02-Mar-10	60952	<20	99	<1	70	<1	<2	<5	110	<20	6	<5	<1		<2	<5		<30
07-Sep-10	64027								50		4		<1					
01-Mar-11	66688	<20	105	<1	70	<1	<2	<5	<50	<20	4	<5	<1			<5		<30
06-Sep-11	70156								<50		7		<1					
12-Mar-12	73370	30	105	<1	70	<0.3	<2	<5	<50	1.8	4	<5	<1			<5		<30
10-Sep-12	77142								60		11		<1					
11-Mar-13	80779	<20	74	<1	90	<1	<2	<5	100	<10	6	<5	<1		<2	<5		<10
16-Sep-13	85200								190		10		<1					
10-Mar-14	88322	<20	83	<1	60	<1	<2	<5	<50	<10	7	<5	<1		<2	<5		<30
02-Sep-14	92071								60		9		<1					
09-Mar-15	95548	<25	61	<0.1	74	<0.1	<0.5	<0.5	211	<0.5	29.9	<0.5	<1		<0.1	<2		2.3
05-Oct-15	100001								108		10.6		2					
07-Mar-16	102769	<25	53	<0.1	54.4	<0.1	<0.5	<0.5	24	<0.5	13.4	<0.5	<1		<0.1	<2		1.2
12-Sep-16	107306								29		7.5		2					
08-Mar-17	111338	<25	51	<0.1	39.8	<0.1	<0.5	<0.5	40	<0.5	22.6	<0.5	1		<0.1	<2		<0.5
12-Sep-17	116270								<50		10		<1					
12-Mar-18	120568	<25	61	<0.1	76.9	<0.1	<0.5	0.6	22	<0.5	31.1	<0.5	<1		<0.1	<2		2.7
17-Sep-18	126161								50		12		<1					
14-Mar-19	130275	<25	90	<0.5	51	<0.1	<0.5	<0.5	**1360**	<0.5	25.6	<0.5	1		<0.5	<2		0.8
04-Sep-19	134868								<50		13		<1					
04-Mar-20	139241	<25	74	<0.5	68.5	<0.1	<0.5	<0.5	270	<0.5	10.8	<0.5	<1		<0.5	<2		0.5
01-Sep-20	143835								106		19.2		<1					
03-Mar-21	148207	<25	52	<0.5	66.7	<0.1	<0.5	<0.5	67	<0.5	11.8	<0.5	<1		<0.5	<2		<0.5
20-Sep-21	153829								142		20.2		2					
08-Mar-22	158622	<25	41	<0.5	69.4	<0.1	<0.5	<0.5	60	<0.5	14.9	<0.5	2		<0.5	<2		<0.5
06-Sep-22	164048								**907**		26.2		<1					
02-Mar-23	168424	<25	53	<0.5	39.7	<0.1	<0.5	<0.5	174	<0.5	11.2	<0.5	<1		<0.5	<2		<0.5
06-Sep-23	173957								**542**		17.7							
04-Mar-24	178890	<25	48	<0.5	59	<0.1	<0.5	<0.5	90	<0.5	6.6	<0.5	<1		<0.5	<2		<5
03-Sep-24	184142								**583**		18.3		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	36	19	36	19	33	2	17	19	2	19
AVERAGE 2024									337		12.5		<1					

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

BH-107-I

Shallow Bedrock Unit

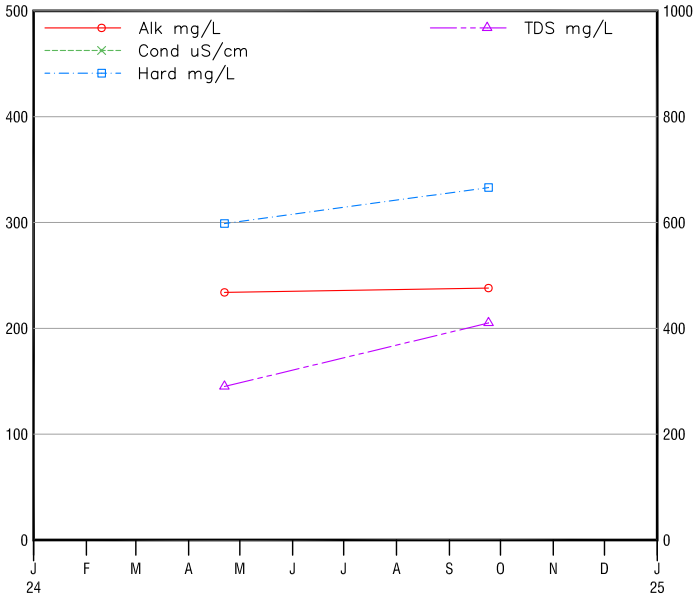
Stand Pipe Piezometer
Screen 181.1 - 179.8 masl

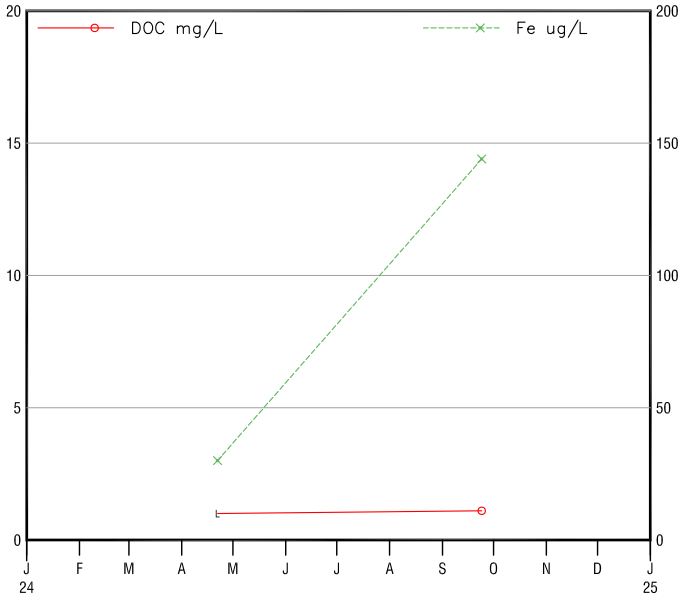


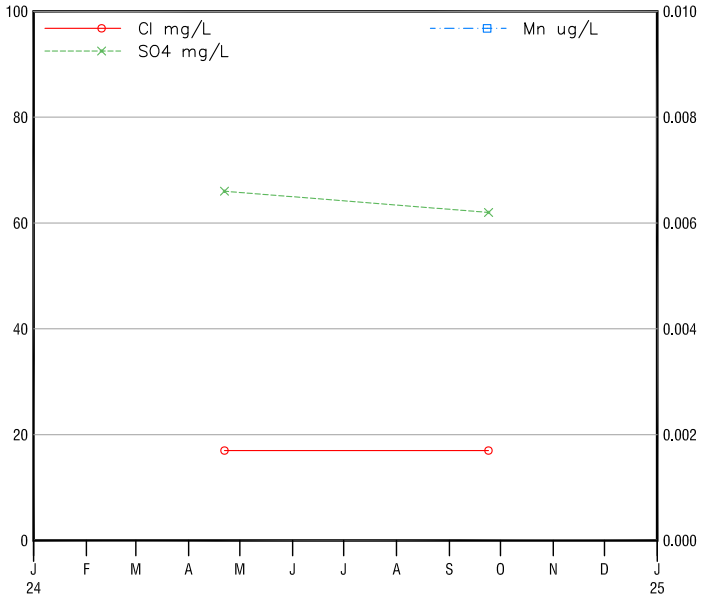
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
05-Oct-09	58296								210		11		<1					
24-Mar-10	61542	<20	62	<1	<30	<1	<2	<5	60	<20	2	<5	<1		<2	<5		<30
04-Oct-10	64474								**510**		17		<1					
22-Mar-11	67099	<20	176	<1	590	<1	<2	<5	<50	<20	**73**	<5	<1			<5		<30
19-Sep-11	70356								**1280**		**237**		2					
12-Mar-12	73373	<20	114	<1	460	<0.3	<2	<5	**360**	<1.5	20	<5	<1			<5		<30
17-Oct-12	78003								<50		14		<1					
08-Apr-13	81441	<20	96	<1	1070	<1	<2	<5	150	<10	9	<5	<1		<2	<5		<10
09-Sep-13	85032								<50		7		<1					
09-Apr-14	88948	20	134	<1	1130	<1	<2	<5	80	<10	10	<5	<1		<2	<5		<30
08-Sep-14	92268								**340**		17		<1					
16-Mar-15	95690	<25	190	<0.1	1380	<0.1	<0.5	<0.5	298	<0.5	13.2	0.6	<1		<0.1	<2		3.3
13-Oct-15	100137								**414**		12.6		<1					
18-Mar-16	103024	<25	136	<0.1	1390	<0.1	<0.5	<0.5	239	<0.5	15.7	<0.5	2		<0.1	<2		1.1
19-Sep-16	107504								242		13.7		<1					
27-Mar-17	111806	91	129	<0.1	1320	<0.1	<0.5	<0.5	**337**	<0.5	13.6	<0.5	<1		<0.1	<2		3
13-Sep-17	116302								170		10		<1					
03-Apr-18	121259	35	148	<0.1	1330	<0.1	<0.5	<0.5	134	<0.5	11.3	<0.5	<1		<0.1	<2		1.9
18-Sep-18	126213								250		11		<1					
28-Mar-19	130672	52	161	<0.5	1370	<0.1	<0.5	<0.5	155	<0.5	10	<0.5	1		<0.5	<2		1.7
19-Sep-19	135289								130		21		<1					
31-Mar-20	139935	<25	119	<0.5	572	<0.1	<0.5	<0.5	42	<0.5	13.4	<0.5	<1		<0.5	<2		3.4
08-Sep-20	144013								57		17.8		2					
22-Mar-21	148686	**175**	108	<0.5	524	<0.1	<0.5	0.5	214	<0.5	11.9	<0.5	49		<0.5	<2		2.1
05-Oct-21	154356								**314**		14.3		<1					
05-Apr-22	159590	<25	83	<0.5	303	<0.1	<0.5	<0.5	<5	<0.5	1.2	<0.5	<1		<0.5	<2		<0.5
06-Sep-22	164054								**485**		35.3		<1					
28-Mar-23	169181	89	99	<0.5	336	<0.1	<0.5	<0.5	260	<0.5	39.8	<0.5	<1		<0.5	<2		<5
11-Mar-24	179072	<25	115	<0.5	570	<0.1	<0.5	<0.5	46	<0.5	17.4	<0.5	<1		<0.5	<2		<5
16-Sep-24	184490								91		18.9		<1					
TOTAL SAMPLES		19	19	19	19	19	19	19	34	19	34	19	32	2	17	19	2	19
AVERAGE 2024									69		18.2		<1					

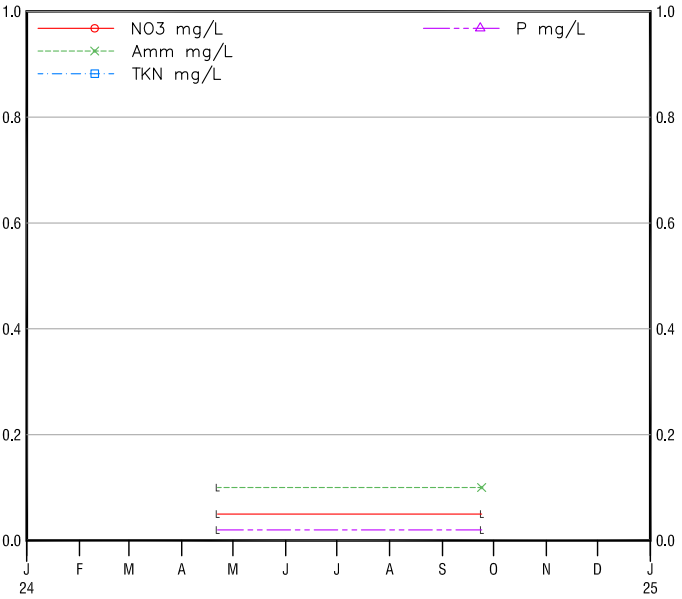
all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

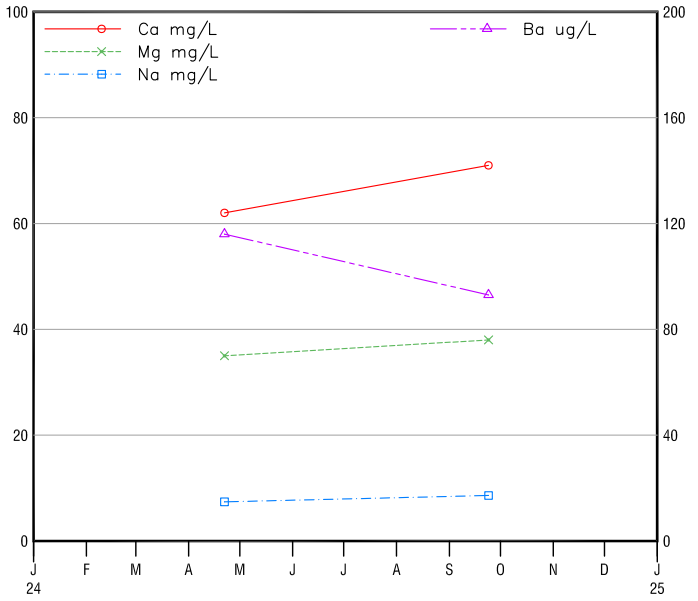
Peterborough Organics Facility - Overburden Monitors









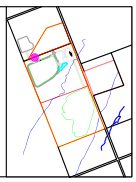


L Concentration Reported Less Than

G Concentration Reported Greater Than

A Concentration Determined Anomalous

Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

MW20-01

Shallow Overburden

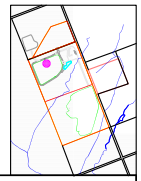
Screen 203.8 - 200.8 masl

CA008825 24 Mar 25	wsp	F524001

MW20-01

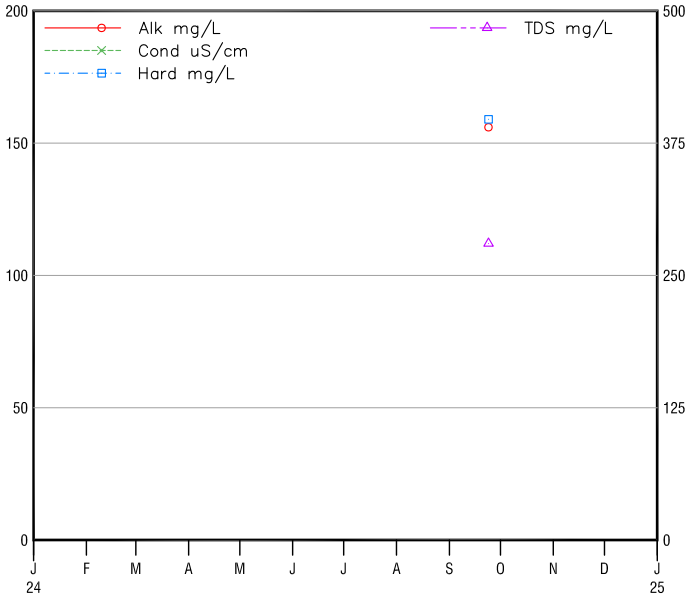
Shallow Overburden

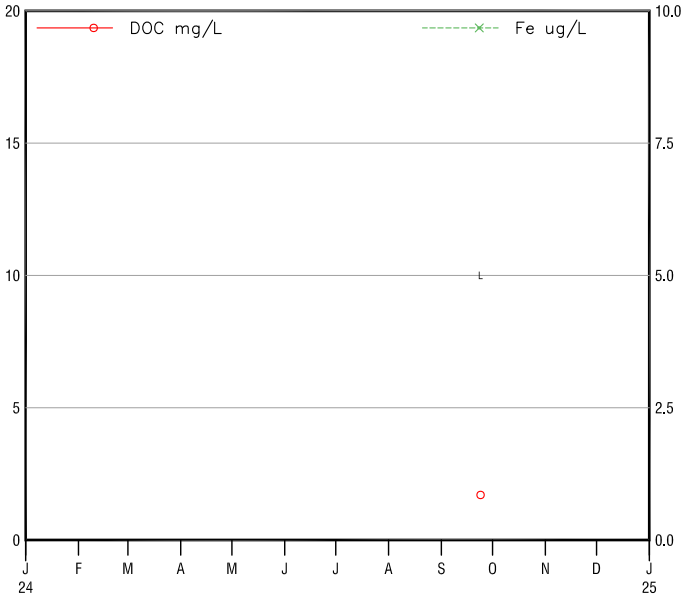
Monitoring Well
Screen 203.8 - 200.8 masl

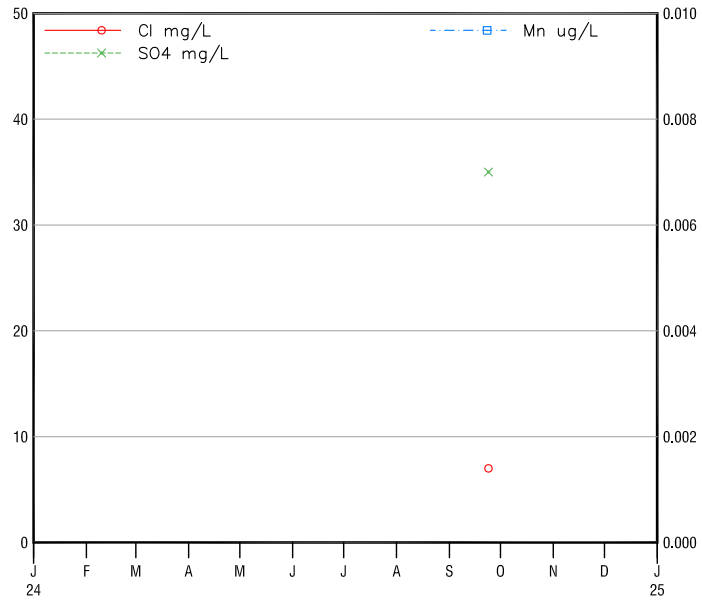


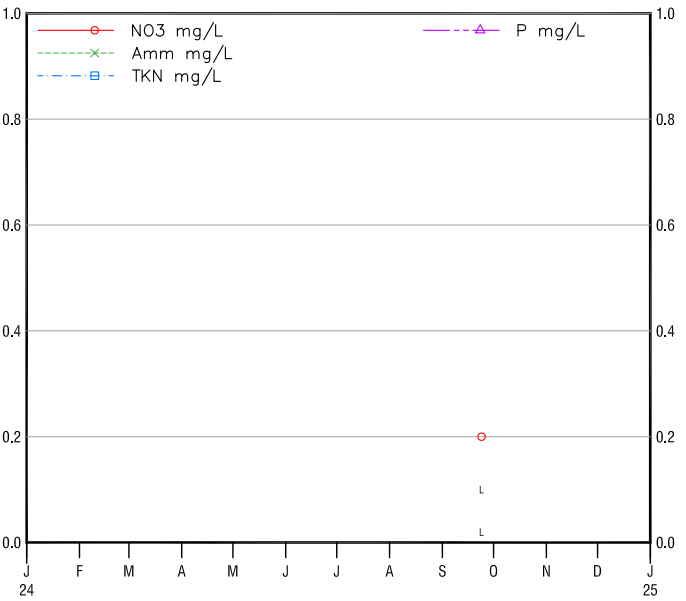
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-24	180348	234		299	7.4	17	66	62	35.0	7.4		<1	<0.05		<0.1	290	-1.7
24-Sep-24	184768	238		333	7.4	17	62	71	38.0	8.6		1.1	<0.05		0.1	410	3.7
TOTAL SAMPLES		2	0	2	2	2	2	2	2	2	0	2	2	0	2	2	
AVERAGE 2024		236		316	7.4	17	64	67	36.5	8.0		<1	<0.05		<0.1	350	

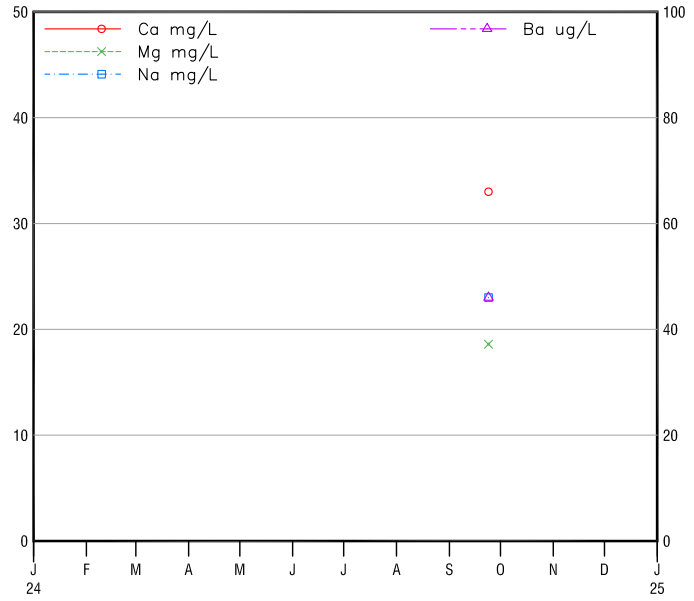
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



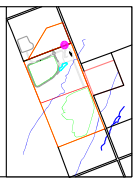








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

MW20-19R

FORMERLY 20-19
CONVERTED Jul 24

Shallow Overburden

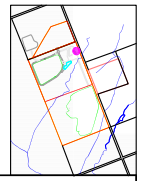
CA008825 24 Mar 25	wsp	F524002

MW20-19R

Shallow Overburden

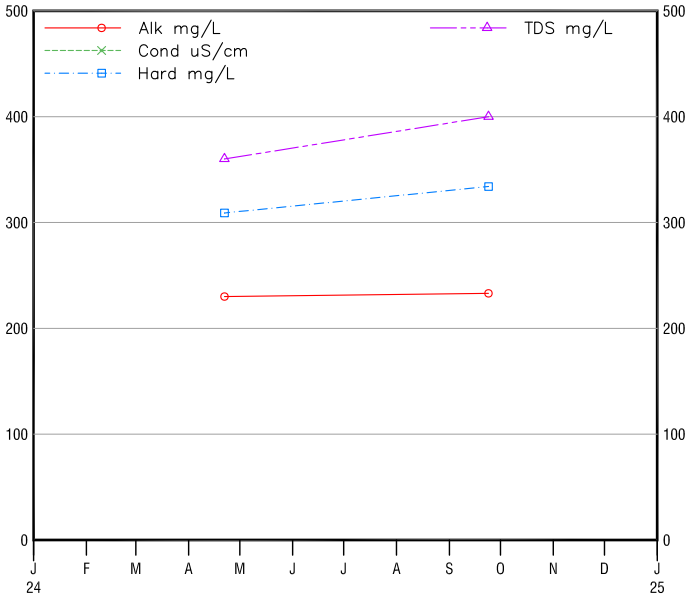
Monitoring Well

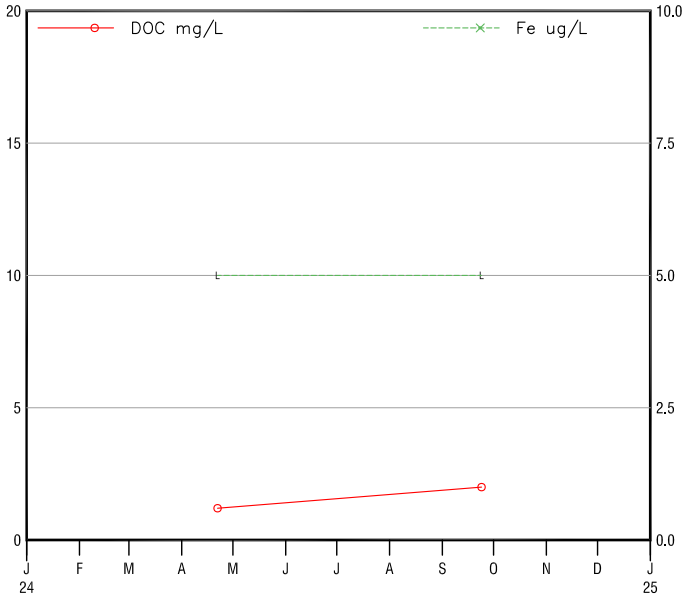
FORMERLY MW20-19
CONVERTED Jul 24

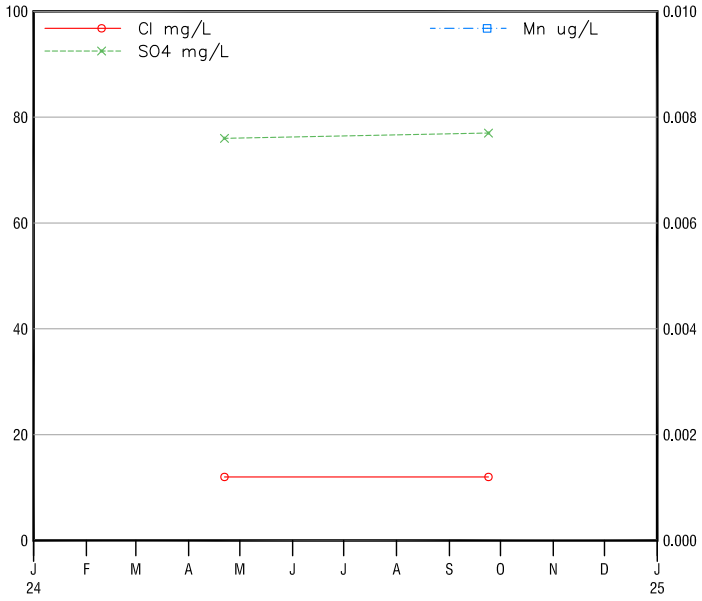


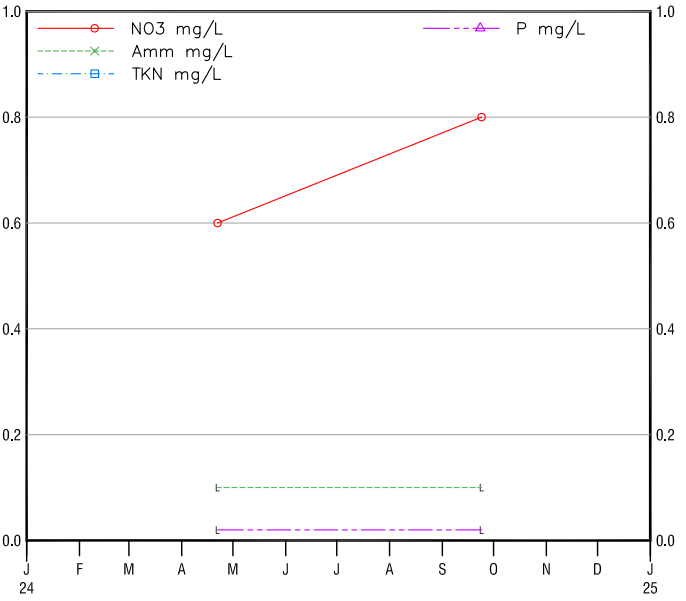
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
24-Sep-24	184770	156		159	7.6	7	35	33	18.6	23		1.7	0.2		<0.1	280	2.0
TOTAL SAMPLES		1	0	1	1	1	1	1	1	1	0	1	1	0	1	1	
AVERAGE 2024																	

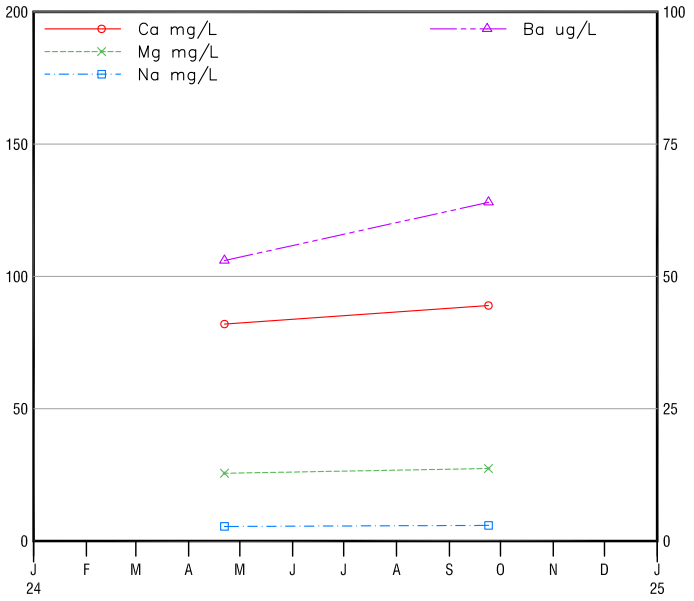
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



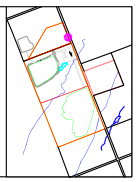








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

MW20-22

Shallow Overburden

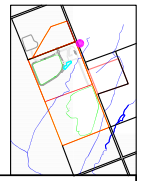
Screen 196.9 - 193.9 masl

CA008825 24 Mar 25	wsp	F524003

MW20-22

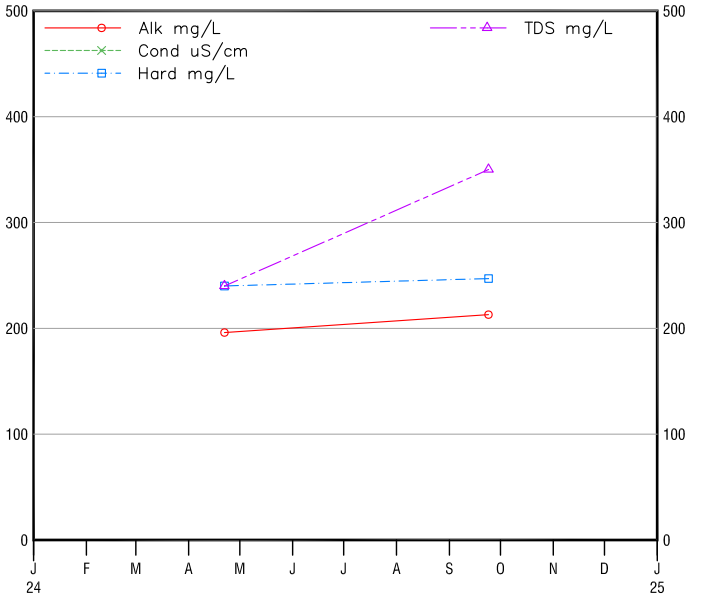
Shallow Overburden

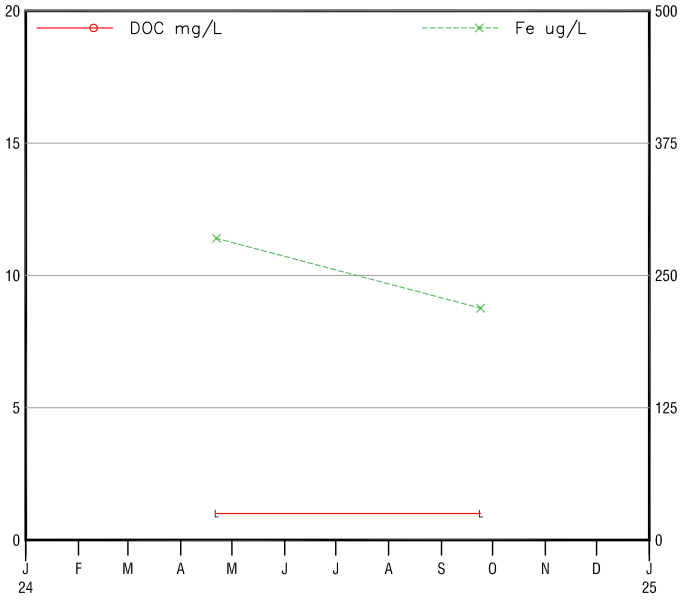
Monitoring Well
Screen 196.9 - 193.9 masl

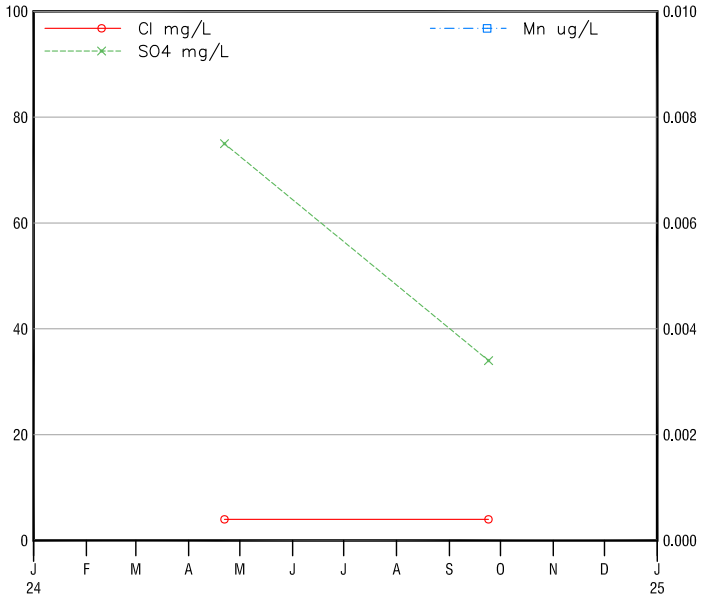


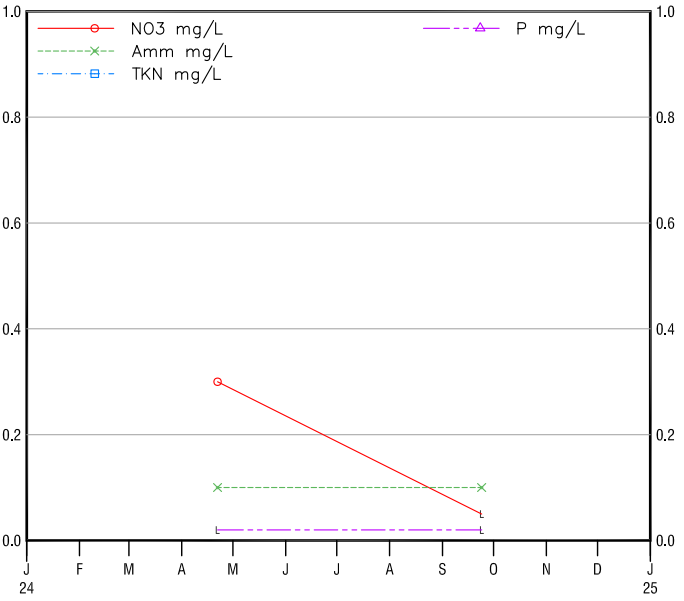
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-24	180345	230		309	7.3	12	76	82	25.6	5.5		1.2	0.6		<0.1	360	-1.0
24-Sep-24	184772	233		334	7.3	12	77	89	27.4	5.9		2	0.8		<0.1	400	2.1
TOTAL SAMPLES		2	0	2	2	2	2	2	2	2	0	2	2	0	2	2	
AVERAGE 2024		232		322	7.3	12	77	86	26.5	5.7		2	0.7		<0.1	380	

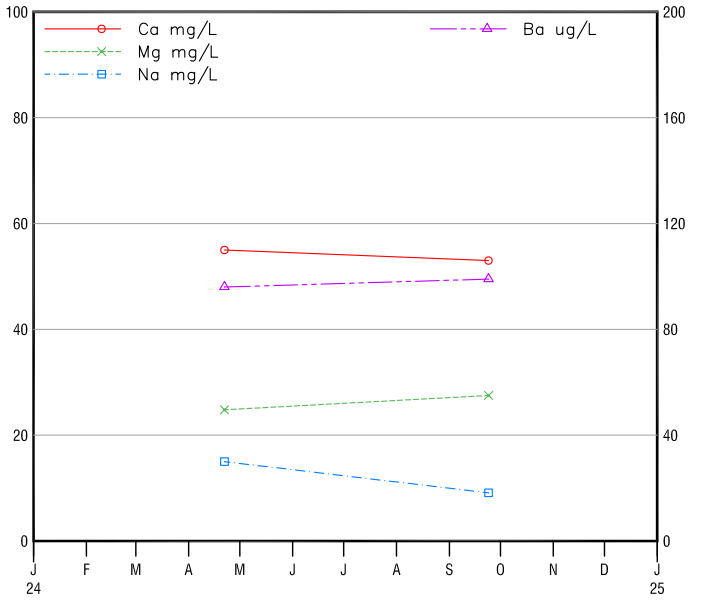
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



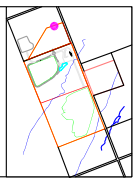








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

MW20-28A

Shallow Overburden

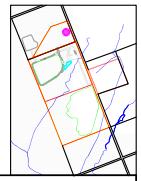
Screen 196.3 - 193.2 masl

CA008825 24 Mar 25	wsp	F524004

MW20-28A

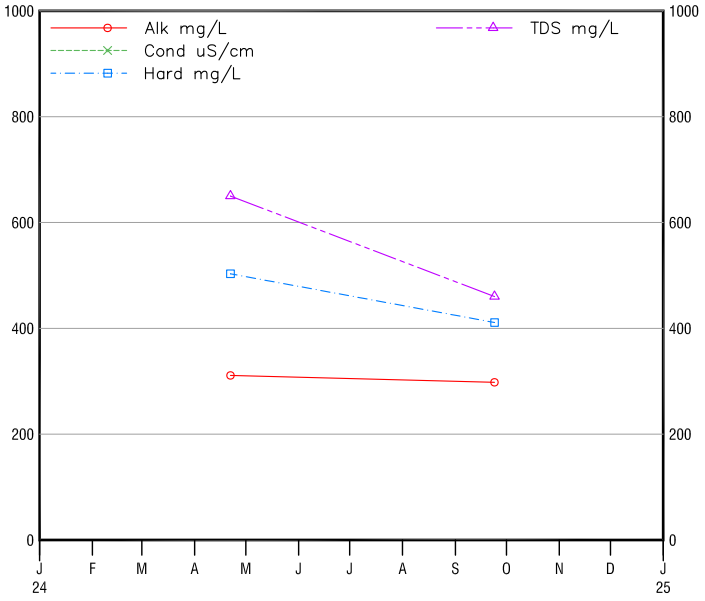
Shallow Overburden

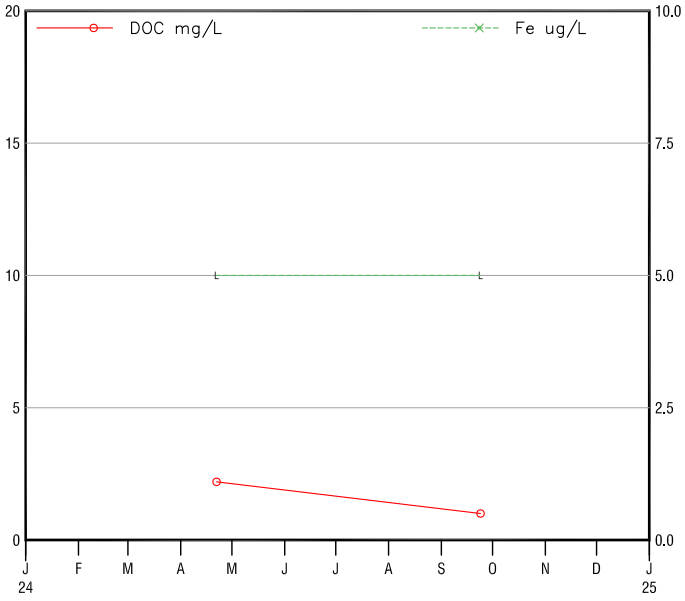
Monitoring Well
Screen 196.3 - 193.2 masl

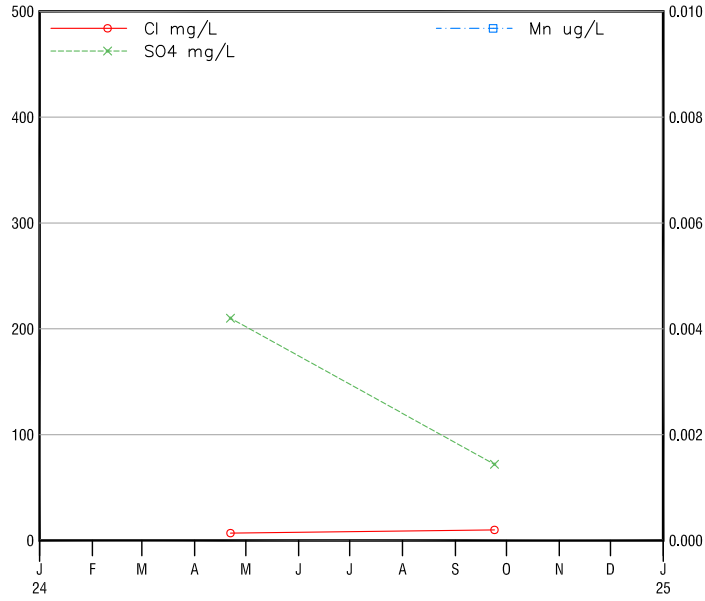


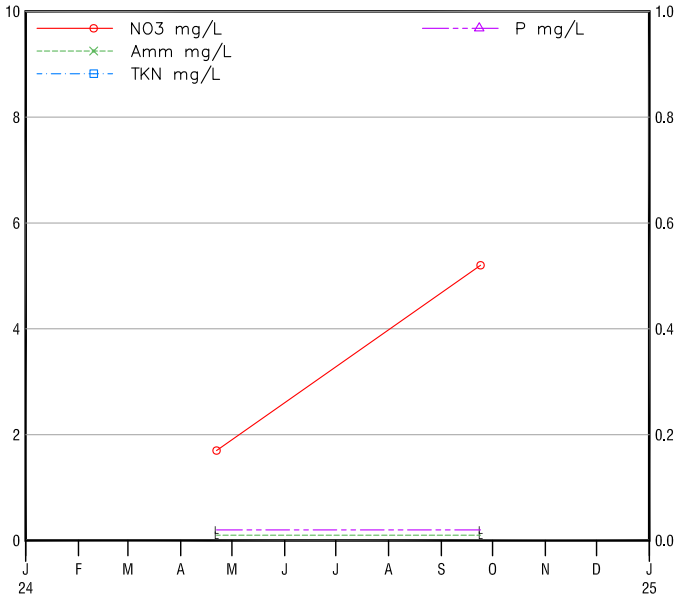
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-24	180349	196		240	7.5	4	75	55	24.8	15		<1	0.3		0.1	240	-1.1
24-Sep-24	184771	213		247	7.5	4	34	53	27.5	9.1		<1	<0.05		0.1	350	2.7
TOTAL SAMPLES		2	0	2	2	2	2	2	2	2	0	2	2	0	2	2	
AVERAGE 2024		205		244	7.5	4	55	54	26.2	12		<1	0.2		0.1	295	

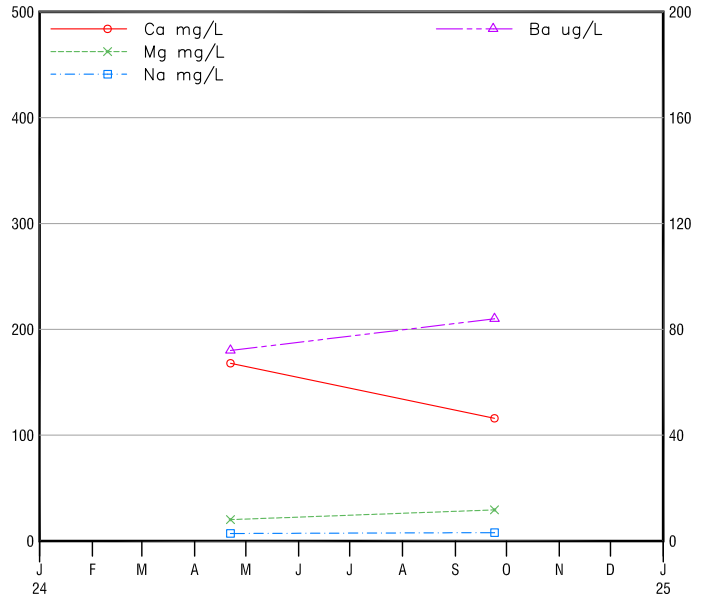
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



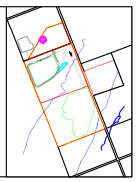








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

MW20-30

Shallow Overburden

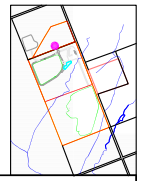
Screen 203.1 - 200.1 masl

CA008825 24 Mar 25	wsp	F524005

MW20-30

Shallow Overburden

Monitoring Well
Screen 203.1 - 200.1 masl



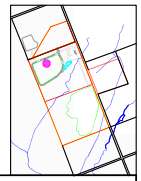
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	DOC	NO3	NO2	Amm	TDS	Ion B %
	ODWS					250	500			200		5	10	1			
22-Apr-24	180346	311		503	7.1	7	210	168	20.2	7.1		2.2	1.7		<0.1	650	-2.5
24-Sep-24	184769	298		411	7.0	10	72	116	29.4	7.9		1	5.2		<0.1	460	2.7
TOTAL SAMPLES		2	0	2	2	2	2	2	2	2	0	2	2	0	2	2	
AVERAGE 2024		305		457	7.1	9	141	142	24.8	7.5		1.6	3.5		<0.1	555	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MW20-01

Shallow Overburden

Monitoring Well
Screen 203.8 - 200.8 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-24	180348		116		21			0.6	30	<0.5						2		<5
24-Sep-24	184768		93		22			<0.5	144	<0.5						<2		<5
TOTAL SAMPLES		0	2	0	2	0	0	2	2	2	0	0	0	0	0	2	0	2
AVERAGE 2024			105		22			<0.5	87	<0.5						<2		<5

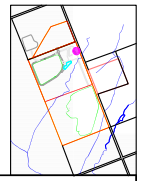
all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MW20-19R

Shallow Overburden

Monitoring Well

FORMERLY MW20-19
CONVERTED Jul 24



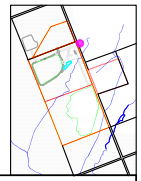
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
24-Sep-24	184770		46		65			<0.5	<5	<0.5						<2		<5
TOTAL SAMPLES		0	1	0	1	0	0	1	1	1	0	0	0	0	0	1	0	1
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MW20-22

Shallow Overburden

Monitoring Well
Screen 196.9 - 193.9 masl



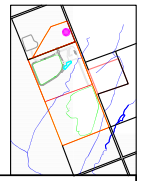
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-24	180345		53		10			<0.5	<5	<0.5						<2		<5
24-Sep-24	184772		64		11			<0.5	<5	<0.5						<2		<5
TOTAL SAMPLES		0	2	0	2	0	0	2	2	2	0	0	0	0	0	2	0	2
AVERAGE 2024			59		11			<0.5	<5	<0.5						<2		<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MW20-28A

Shallow Overburden

Monitoring Well
Screen 196.3 - 193.2 masl



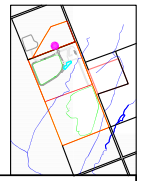
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-24	180349		96		47			0.6	285	<0.5						<2		<5
24-Sep-24	184771		99		33			<0.5	219	<0.5						<2		<5
TOTAL SAMPLES		0	2	0	2	0	0	2	2	2	0	0	0	0	0	2	0	2
AVERAGE 2024			98		40			<0.5	252	<0.5						<2		<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

MW20-30

Shallow Overburden

Monitoring Well
Screen 203.1 - 200.1 masl



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	PhnI	Ag	Co	Ni	Va	Zn
	ODWS	100	1000			5	50	1000	300	10	50							5000
22-Apr-24	180346		72		10			0.8	<5	<0.5						<2		<5
24-Sep-24	184769		84		14			<0.5	<5	<0.5						<2		<5
TOTAL SAMPLES		0	2	0	2	0	0	2	2	2	0	0	0	0	0	2	0	2
AVERAGE 2024			78		12			<0.5	<5	<0.5						<2		<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

APPENDIX G

QA / QC Results

Table G.1
Field Duplicate Samples - Relative Percent Differences - Groundwater (Inorganics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	March 2024															
		BH-106-III				BH-94-I				BH-114-III				BH-17B			
		MDL	178892 Original	178893 Duplicate	RPD (%)	MDL	179077 Original	179078 Duplicate	RPD (%)	MDL	179264 Original	179265 Duplicate	RPD (%)	MDL	179413 Original	179414 Duplicate	RPD (%)
Alkalinity	mg/L	5	277	262	**6**	5	202	196	**3**	5	389	389	**0**	5	648	821	**24**
Conductivity	µS/cm	0.5	2430	2590	**6**	0.5	471	471	**0**	0.5	920	805	**13**	0.5	1410	2030	**36**
Hardness	mg/L	0.71	640	594	**7**	0.71	249	251	**1**	0.71	513	522	**2**	0.71	615	680	**10**
pH	units	0.1	7.4	7.34	**1**	0.1	7.9	7.88	**0**	0.1	7.4	7.43	**0**	0.1	6.9	6.82	**1**
Cl	mg/L	0.1	630	642	**2**	0.1	13	12.6	**3**	0.1	13	13	**0**	0.1	136	194	**35**
SO_4	mg/L	0.2	58	66.4	**14**	0.2	59	58.6	**1**	0.2	168	167	**1**	0.2	13	18.2	**33**
Ca	mg/L	0.2	208	196	**6**	0.2	61	62.2	**2**	0.2	150	153	**2**	0.2	186	210	**12**
Mg	mg/L	0.05	29.3	25.4	**14**	0.05	23.5	23.2	**1**	0.05	33.6	34	**1**	0.05	36.5	37.7	**3**
Na	mg/L	0.1	281	286	**2**	0.1	8	7.9	**1**	0.1	10	10.2	**2**	0.1	94	106	**12**
K	mg/L	0.5	2.3	1.9	-	0.5	1.4	1.4	-	0.5	7.1	7.3	**3**	0.5	22.1	23.6	**7**
Fe	µg/L	5	57	46	**21**	5	413	412	**0**	5	<5	5	-	5	403	441	**9**
COD	mg/L	10	<10	<10	-	10	<10	<10	-	10	40	20	-	10	70	70	**0**
DOC	mg/L	1	1.8	1.6	-	1	1.7	1.9	-	1	3.8	3.4	-	1	17	17.5	**3**
Phenols	µg/L	1	<1	<1	-	1	<1	<1	-	1	2	2	-	1	<1	<1	-
NO_3	mg/L	0.05	1.1	1.56	**35**	0.05	<0.05	<0.05	-	0.05	1.6	1.5	**8**	0.05	2.3	1.49	**43**
NO_2	mg/L	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-	0.05	0.36	0.35	**3**	0.05	0.12	0.11	-
TKN	mg/L	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	0.3	16	15	**6**
Ammonia	mg/L	0.1	0.1	<0.1	-	0.1	0.1	0.1	-	0.1	0.2	0.3	-	0.1	14	13.9	**1**
As	µg/L	0.5	<0.5	<0.5	-	0.5	2	2	-	0.5	<0.5	<0.5	-	0.5	0.6	0.6	-
Ba	µg/L	1	246	227	**8**	1	58	57	**2**	1	307	324	**5**	1	599	607	**1**
Cd	µg/L	0.1	<0.1	<0.1	-	0.1	<0.1	<0.1	-	0.1	<0.1	<0.1	-	0.1	<0.1	<0.1	-
Cr	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.5	0.6	-
Cu	µg/L	0.5	1.1	1.3	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	5.1	5.4	**6**
Pb	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Mn	µg/L	0.5	10.7	11.1	**4**	0.5	11.5	11.4	**1**	0.5	242	256.000	**6**	1	1020	1190	**15**
Zn	µg/L	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-
Al	µg/L	25	29	29.00	-	25	<25	<25	-	25	<25	<25	-	25	<25	<25	-
Co	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.6	0.7	-	0.5	6.4	6.8	**6**
Mo	µg/L	0.5	<0.5	<0.5	-	0.5	1.3	1.4	-	0.5	5.4	5.7	**5**	0.5	<0.5	<0.5	-
Ni	µg/L	2	<2	<2	-	2	<2	<2	-	2	2	2	-	2	17	18	**6**
P	mg/L	0.02	<0.02	<0.02	-	0.02	<0.02	<0.02	-	0.02	0.02	0.02	-	0.02	0.03	<0.02	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) mg/L - milligrams per litre, µg/L - micrograms per litre
4) µS/cm - microSiemens per centimetre
5) MDL - Method Detection Limit
6) For values >5xMDL, RPDs of >20% are shaded

Table G.1
Field Duplicate Samples - Relative Percent Differences - Groundwater (Inorganics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	March 2024				April 2024											
		BH-63-III				BH-16A				BH-53-I				MW20-30			
		MDL	179556 Original	179557 Duplicate	RPD (%)	MDL	179751 Original	179752 Duplicate	RPD (%)	MDL	179935 Original	179936 Duplicate	RPD (%)	MDL	180346 Original	180347 Duplicate	RPD (%)
Alkalinity	mg/L	5	202	201	**0**	5	263	274	**4**	5	340	336	**1**	5	311	317	**2**
Conductivity	µS/cm	0.5	728	717	**2**	0.5	768	693	**10**	0.5	617	646	**5**				
Hardness	mg/L	0.71	300	310	**3**	0.71	350	348	**1**	0.71	357	358	**0**		503	529	**5**
pH	units	0.1	7.7	7.67	**0**	0.1	7.2	7.25	**1**	0.1	7	6.95	**1**	0.1	7.1	7.07	**0**
Cl	mg/L	0.1	16	16.1	**1**	0.1	101	95.2	**6**	0.1	2	1.5	**29**	0.1	7	6.8	**3**
SO_4	mg/L	0.2	23	22.7	**1**	0.2	18	16.1	**11**	0.2	37	37.4	**1**	0.2	210	213	**1**
Ca	mg/L	0.2	110	114	**4**	0.2	110	110	**0**	0.2	99	98.1	**1**	0.2	168	179	**6**
Mg	mg/L	0.05	6.1	6.11	**0**	0.05	18.4	17.9	**3**	0.05	26.6	27.5	**3**	0.05	20.2	19.9	**1**
Na	mg/L	0.1	2.9	3	**3**	0.1	40	37.2	**7**	0.1	5.1	5.2	**2**	0.1	7.100	7.1	**0**
K	mg/L	0.5	<0.5	<0.5	-	0.5	1.8	1.8	-	0.5	1.9	2	-				
Fe	µg/L	5	90	69	**26**	5	<5	<5	-	5	927	969	**4**	5	<5	<5	-
COD	mg/L	10	<10	<10	-	10	10	<10	-	10	10	20	-	10	<10	20	-
DOC	mg/L	1	1.6	1.6	-	1	1	<1	-	1	2.1	2.5	-	1	2.2	1.8	-
Phenols	µg/L	1	<1	<1	-	1	<1	<1	-	1	<1	<1	-				
NO_3	mg/L	0.05	33.8	33.9	**0**	0.05	1.3	1.66	**24**	0.05	<0.05	<0.05	-	0.05	1.7	1.72	**1**
NO_2	mg/L	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-				
TKN	mg/L	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-				
Ammonia	mg/L	0.1	0.1	0.1	-	0.1	0.2	0.1	-	0.1	0.2	0.2	-	0.1	<0.1	<0.1	-
As	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.9	0.9	-				
Ba	µg/L	1	36	37	**3**									1	72	71	**1**
Cd	µg/L	0.1	<0.1	<0.1	-												
Cr	µg/L	0.5	<0.5	<0.5	-												
Cu	µg/L	0.5	<0.5	<0.5	-									0.5	0.8	0.8	-
Pb	µg/L	0.5	<0.5	<0.5	-									0.5	<0.5	<0.5	-
Mn	µg/L	0.5	1.9	1.2	-	0.5	3.5	3.7	**6**	0.5	19.9	20.6	**3**				
Zn	µg/L	5	<5	<5	-									5	<5	<5	-
Al	µg/L	25	118	103	-												
Co	µg/L	0.5	<0.5	<0.5	-												
Mo	µg/L	0.5	<0.5	<0.5	-												
Ni	µg/L	2	<2	<2	-									2	<2	<2	-
P	mg/L	0.02	<0.02	0.27	-	0.02	<0.02	<0.02	-	0.02	0.02	0.02	-		<0.02	<0.02	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) mg/L - milligrams per litre, µg/L - micrograms per litre
4) µS/cm - microSiemens per centimetre
5) MDL - Method Detection Limit
6) For values >5xMDL, RPDs of >20% are shaded

Table G.1
Field Duplicate Samples - Relative Percent Differences - Groundwater (Inorganics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

		September 2024															
PARAMETER	**UNITS**	**BH-86-III**				**BH-108-III**				**BH-107-II**				**BH-18A**			
		MDL	184140 Original	184141 Duplicate	**RPD (%)**	MDL	184301 Original	184302 Duplicate	**RPD (%)**	MDL	184491 Original	184492 Duplicate	**RPD (%)**	MDL	184716 Original	184717 Duplicate	**RPD (%)**
Alkalinity	mg/L	5	275	271	**1**	5	490	498	**2**	5	301	308	**2**	5	252	249	**1**
Conductivity	µS/cm	0.5	853	839	**2**	0.5	951	956	**1**	0.5	886	889	**0**	0.5	906	912	**1**
Hardness	mg/L	0.71	303	306	**1**	0.71	586	592	**1**	0.71	393	393	**0**	0.71	347	345	**1**
pH	units	0.1	7.6	7.58	**0**	0.1	6.6	6.63	**0**	0.1	7.3	7.35	**1**	0.1	7.3	7.34	**1**
Cl	mg/L	0.1	132	125	**5**	0.1	25	25.4	**2**	0.1	65	68.4	**5**	0.1	120	118	**2**
SO_4	mg/L	0.2	16	15.9	**1**	0.2	102	106	**4**	0.2	70	70.8	**1**	0.2	50	51.1	**2**
Ca	mg/L	0.2	62	62.5	**1**	0.2	190	191	**1**	0.2	127	127	**0**	0.2	86	85.1	**1**
Mg	mg/L	0.05	36.1	36.4	**1**	0.05	27.2	27.9	**3**	0.05	18.5	18.4	**1**	0.05	32.2	32.2	**0**
Na	mg/L	0.1	57	57.8	**1**	0.1	12	12	**0**	0.1	17	17.4	**2**	0.1	52	52	**0**
K	mg/L	0.5	2.6	2.6	**0**	0.5	1.2	1.3	-	0.5	1.6	1.6	-	0.5	5	5.1	**2**
Fe	µg/L	5	542	562	**4**	5	<5	<5	-	5	<5	<5	-	5	253	263	**4**
COD	mg/L	10	70	<10	-	10	<10	<10	-	10	<10	<10	-	10	<10	<10	-
DOC	mg/L	1	1.7	1.8	-	1	2.7	2.6	-	1	1.6	1.3	-	1	1	1	-
Phenols	µg/L	1	<1	<1	-	1	<1	<1	-	1	<1	<1	-	1	<1	<1	-
NO_3	mg/L	0.5	<0.5	<0.5	-	0.05	0.6	0.55	**9**	0.05	0.2	0.24	-	0.05	<0.05	<0.05	-
NO_2	mg/L	0.5	<0.5	<0.5	-	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-
TKN	mg/L	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	0.3	<0.3	<0.3	-	0.3	0.6	0.6	-
Ammonia	mg/L	0.1	0.2	0.2	-	0.1	0.1	0.1	-	0.1	0.1	0.1	-	0.1	0.7	0.7	**0**
As	µg/L	0.5	1.4	1.3	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Ba	µg/L																
Cd	µg/L																
Cr	µg/L																
Cu	µg/L																
Pb	µg/L																
Mn	µg/L	0.5	45.5	47.60	**5**	0.5	31.9	31.9	**0**	0.5	2.3	2.5	-	0.5	11.4	12.2	**7**
Zn	µg/L																
Al	µg/L																
Co	µg/L																
Mo	µg/L																
Ni	µg/L																
P	mg/L	0.02	<0.02	<0.02	-	0.02	<0.02	<0.02	-	0.02	<0.02	<0.02	-	0.02	<0.02	<0.02	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) mg/L - milligrams per litre, µg/L - micrograms per litre
4) µS/cm - microSiemens per centimetre
5) MDL - Method Detection Limit
6) For values >5xMDL, RPDs of >20% are shaded

Table G.1
Field Duplicate Samples - Relative Percent Differences - Groundwater (Inorganics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

		September 2024				October 2024			
		MW20-22				BH-17-I			
PARAMETER	UNITS	MDL	184772 Original	184809 Duplicate	RPD (%)	MDL	185174 Original	185175 Duplicate	RPD (%)
Alkalinity	mg/L	5	233	222	**5**	5	352	353	**0**
Conductivity	µS/cm								
Hardness	mg/L		334	324	**3**		753	751	**0**
pH	units	0.1	7.3	7.3	**0**	0.1	7	7.09	**1**
Cl	mg/L	0.1	12	13.7	**13**	0.1	1590	1580	**1**
SO_4	mg/L	0.2	77	87	**12**	2	<2	<2	-
Ca	mg/L	0.2	89	86.4	**3**	0.2	155	154	**1**
Mg	mg/L	0.05	27.4	26.4	**4**	0.05	88.8	89.1	**0**
Na	mg/L	0.1	5.9	5.7	**3**	0.1	384	373	**3**
K	mg/L					0.5	16.9	16.8	**1**
Fe	µg/L	5	<5	<5	-	50	1120	1090	**3**
COD	mg/L	10	<10	<10	-	10	<10	<10	-
DOC	mg/L	1	2	1.7	-	1	2.6	2.8	-
Phenols	µg/L								
NO_3	mg/L	0.05	0.8	0.18	-	0.5	<0.5	<0.5	-
NO_2	mg/L					0.5	<0.5	<0.5	-
TKN	mg/L								
Ammonia	mg/L	0.1	<0.1	<0.1	-	0.1	2.6	2.8	**7**
As	µg/L					5	<5	<5	-
Ba	µg/L	1	64	56	**13**				
Cd	µg/L								
Cr	µg/L								
Cu	µg/L	0.5	<0.5	<0.5	-				
Pb	µg/L	0.5	<0.5	<0.5	-				
Mn	µg/L					1	45	45	**0**
Zn	µg/L	5	<5	<5	-				
Al	µg/L								
Co	µg/L								
Mo	µg/L								
Ni	µg/L	2	<2	<2	-				
P	mg/L		<0.02	<0.02	-	0.02	<0.02	<0.02	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) mg/L - milligrams per litre, µg/L - micrograms per litre
4) µS/cm - microSiemens per centimetre
5) MDL - Method Detection Limit
6) For values >5xMDL, RPDs of >20% are shaded

Table G.2
Field Duplicate Samples - Relative Percent Differences - Groundwater (Organics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	March 2024															
		BH-106-III				BH-94-I				BH-114-III				BH-17B			
		MDL	178892 Original	178893 Duplicate	RPD (%)	MDL	179077 Original	179078 Duplicate	RPD (%)	MDL	179264 Original	179265 Duplicate	RPD (%)	MDL	179413 Original	179414 Duplicate	RPD (%)
Benzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.8	1.2	-	0.5	1.8	1.7	-
Bromodichloromethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Bromoform	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Bromomethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Carbon Tetrachloride	µg/L	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-
Chlorobenzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	2.5	2.8	-
Chloroethane	µg/L	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-
Chloroform	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Chloromethane	µg/L	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-
Dibromochloromethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Ethylene Dibromide	µg/L	0.2		<0.2		0.2	<0.2			0.2				0.2		<0.2	
1,2-Dichlorobenzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,3-Dichlorobenzene	µg/L	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	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,1-Dichloroethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,2-Dichloroethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
cis-1,2-Dichloroethylene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
trans-1,2-Dichloroethylene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,1-Dichloroethylene	µg/L	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	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,2-Dichlorpropane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,3-Dichloropropene(Z)	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Ethylbenzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
m/p-Xylenes	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.6	0.6	-	0.5	<0.5	<0.5	-
o-Xylene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	2.8	2.9	**4**	0.5	<0.5	<0.5	-
Styrene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,1,2,2-Tetrachlorethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Tetrachloroethylene	µg/L	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	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	1.9	2	-	0.5	<0.5	<0.5	-
Trichloroethylene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
1,1,2-Trichlorethane	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Trichlorofluoromethane	µg/L	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-
Vinyl Chloride	µg/L	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-	0.2	<0.2	<0.2	-
Xylenes - total	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	3.4	3.5	**3**	0.5	<0.5	<0.5	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) µg/L - micrograms per litre
4) MDL - Method Detection Limit
5) For values >5xMDL, RPDs of >20% are shaded

Table G.2
Field Duplicate Samples - Relative Percent Differences - Groundwater (Organics)
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	March 2024				April 2024				September 2024			
		BH-63-III				MW20-30				MW20-22			
		MDL	179556 Original	179557 Duplicate	RPD (%)	MDL	180346 Original	180347 Duplicate	RPD (%)	MDL	184772 Original	184809 Duplicate	RPD (%)
Benzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Bromodichloromethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Bromoform	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Bromomethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Carbon Tetrachloride	µg/L	0.2	<0.2	<0.2	-					0.2	<0.2	<0.2	-
Chlorobenzene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Chloroethane	µg/L	5	<5	<5	-					5	<5	<5	-
Chloroform	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Chloromethane	µg/L	5	<5	<5	-					5	<5	<5	-
Dibromochloromethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Ethylene Dibromide	µg/L	0.2	<0.2							0.2	<0.2	<0.2	-
1,2-Dichlorobenzene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,3-Dichlorobenzene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,4-Dichlorobenzene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,1-Dichloroethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,2-Dichloroethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
cis-1,2-Dichloroethylene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
trans-1,2-Dichloroethylene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,1-Dichloroethylene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Dichloromethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,2-Dichlorpropane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,3-Dichloropropene(Z)	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Ethylbenzene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
m/p-Xylenes	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
o-Xylene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Styrene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,1,2,2-Tetrachlorethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Tetrachloroethylene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Toluene	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-
Trichloroethylene	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
1,1,2-Trichlorethane	µg/L	0.5	<0.5	<0.5	-					0.5	<0.5	<0.5	-
Trichlorofluoromethane	µg/L	5	<5	<5	-					5	<5	<5	-
Vinyl Chloride	µg/L	0.2	<0.2	<0.2	-					0.2	<0.2	<0.2	-
Xylenes - total	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference
3) µg/L - micrograms per litre
4) MDL - Method Detection Limit
5) For values >5xMDL, RPDs of >20% are shaded

$$RPD = \frac{X1-X2}{Xavg} \times 100$$

Table G.3
Field Duplicate Samples - Relative Percent Differences - Surface Water
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	February 2024				April 2024				June 2024				October 2024			
		SW17				SW17				SW2				SW23			
		MDL	178220 Original	178221 Duplicate	RPD (%)	MDL	180158 Original	180166 Duplicate	RPD (%)	MDL	181860 Original	181869 Duplicate	RPD (%)	MDL	185321 Original	185322 Duplicate	RPD (%)
Alkalinity	mg/L	5	235	243	**3**	5	195	200	**3**	5	360	357	**1**	5	324	329	**2**
Conductivity	µS/cm	0.5	790	785	**1**	0.5	587	588	**0**	0.5	764	771	**1**				
pH	units	0.1	7.5	7.54	**1**	0.1	7.4	7.4	**0**	0.1	7.3	7.25	**1**	0.1	7.3	7.27	**0**
Cl	mg/L	0.1	84	83.7	**0**	0.1	50	52	**4**	0.1	41	40.7	**1**				
SO_4	mg/L	0.2	34	34.2	**1**	0.2	23	23.1	**0**	0.2	4	4.7	**16**	0.2	21	27	**25**
Fe	µg/L	5	51	74	**37**	5	136	132	**3**	5	745	816	**9**				
COD	mg/L	10	20	20	-	10	30	30	-	10	30	50	-				
Phenols	µg/L	1	<1	<1	-	1	<1	<1	-	1	<1	<1	-				
NO_3	mg/L	0.05	2.2	2.13	**3**	0.05	0.4	0.36	**11**	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-
NO_2	mg/L	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-	0.05	<0.05	<0.05	-
TKN	mg/L	0.3	<0.3	0.4	-	0.3	0.5	0.5	-	0.3	1	0.9	-				
Ammonia	mg/L	0.1	<0.1	0.1	-	0.1	0.1	0.2	-	0.1	0.1	0.1	-				
As	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	0.5	0.6	-				
Ba	µg/L	1	54	54	**0**	1	44	43	**2**	1	54	55	**2**				
Cd	µg/L	0.1	<0.1	<0.1	-	0.1	<0.1	<0.1	-	0.1	<0.1	<0.1	-				
Cr	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-				
Cu	µg/L	0.5	0.9	0.8	-	0.5	1	0.9	-	0.5	<0.5	<0.5	-				
Pb	µg/L	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-	0.5	<0.5	<0.5	-				
Zn	µg/L	5	<5	<5	-	5	<5	<5	-	5	<5	<5	-				
P	mg/L	0.02	<0.02	<0.02	-	0.02	0.02	0.02	-	0.02	0.13	0.14	**7**				

NOTES: 1) Blank indicates parameter not analysed
2) RPD = Relative Percent Difference $RPD = \frac{X1-X2}{Xavg} \times 100$
3) mg/L - milligrams per litre, µg/L - micrograms per litre
4) µS/cm - microSiemens per centimetre
5) MDL - Method Detection Limit
6) For values >5xMDL, RPDs of >20% are shaded

TABLE G.4
Field Blanks Chemical Results
Peterborough County/CityWaste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	Field Blanks										Hydrasleeve Field Blanks		
		178786	179132	29-Oct-90	179821	179985	180165	181868	184147	184546	184725	178932	179603	184380
		28-Feb-24	**12-Mar-24**	**18-Mar-24**	**04-Apr-24**	**10-Apr-24**	**16-Apr-24**	**12-Jun-24**	**03-Sep-24**	**17-Sep-24**	**23-Sep-24**	**05-Mar-24**	**26-Mar-24**	**11-Sep-24**
Inorganics														
Alkalinity	mg/L	<5.0	<5.0			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Aluminum	mg/L	<20	<25	<25								<25		
Ammonia	mg/L	<0.1	**0.1**			**0.1**	**0.1**	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.2**	**0.1**
Arsenic	mg/L	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Barium	mg/L	<1	<1	<1			<1	<1				<1		
Beryllium	mg/L		<0.5	<0.5								<0.5		
Biochemical Oxygen Demand	mg/L						<2.0	<2.0						
Boron	mg/L	<5	<5	<5			<5	<5				<5		
Cadmium	mg/L	<0.1	<0.1	<0.1			<0.1	<0.1				<0.1		
Calcium	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chemical Oxygen Demand	mg/L		<10			**20**	<10	<10	<10	<10	<10	<10	<10	<10
Chloride	mg/L	<0.1	<0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	mg/L	<0.5	<0.5	<0.5			<0.5	<0.5				<0.5		
Cobalt	mg/L	<0.5	<0.5	<0.5								<0.5		
Copper	mg/L	<0.5	<0.5	<0.5			<0.5	<0.5				<0.5		
Dissolved Organic Carbon	mg/L	<1.0	<1.0	**1**	<1.0	<1.0			**1**	<1.0	<1.0	<1.0	<1.0	<1.0
Iron	mg/L	<5	<5	<5	<5		<5	<5	<5	<5	<50	<5	**8**	<5
Lead	mg/L	<0.5	<0.5	<0.5			<0.5	<0.5				<0.5		
Magnesium	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	mg/L	<0.5	<0.5	<0.5	<0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mercury	µg/L						<0.1	<0.1						
Molybdenum	mg/L		**0.7**	**4.7**								**4.6**		
Nickel	mg/L	<2	<2	<2								<2		
Nitrate	mg/L	<0.05	<0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite	mg/L	<0.05	<0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenols	µg/L	<1	<1			<1	<1	<1	<1	<1	<1	<1	<1	<1
Phosphate	mg/L	<0.02	<0.02	<0.02		<0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus	mg/L	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Potassium	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sodium	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphate	mg/L	<0.2	<0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Dissolved Solids	mg/L	<50	<50			<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Kjeldahl Nitrogen	mg/L		<0.3			<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total Suspended Solids	mg/L						<2	<2						
Vanadium	mg/L	<0.5												
Zinc	mg/L	<5	<5	<5			<5	<5				<5		

NOTES: 1) Blank indicates parameter not analysed.
2) mg/L - milligrams per litre, µg/L - micrograms per litre
3) µS/cm - microSiemens per centimetre
4) Detected results bold and shaded

TABLE G.4
Field Blanks Chemical Results
Peterborough County/CityWaste Management Facility - 2024 Monitoring Program

PARAMETER	UNITS	Field Blank	Hydrasleeve Field Blank
		178932	179132
		05-Mar-24	**12-Mar-24**
Organics			
Benzene	µg/L	<0.5	<0.5
Bromodichloromethane	µg/L	<0.5	<0.5
Bromoform	µg/L	<0.5	<0.5
Bromomethane	µg/L	<0.5	<0.5
Carbon Tetrachloride	µg/L	<0.2	<0.2
Chlorobenzene	µg/L	<0.5	<0.5
Chloroethane	µg/L	<5	<5
Chloroform	µg/L	<0.5	<0.5
Chloromethane	µg/L	<5	<5
Dibromochloromethane	µg/L	<0.5	<0.5
Ethylene Dibromide	µg/L	<0.2	<0.2
1,2-Dichlorobenzene	µg/L	<0.5	<0.5
1,3-Dichlorobenzene	µg/L	<0.5	<0.5
1,4-Dichlorobenzene	µg/L	<0.5	<0.5
1,1-Dichloroethane	µg/L	<0.5	<0.5
1,2-Dichloroethane	µg/L	<0.5	<0.5
cis-1,2-Dichloroethylene	µg/L	<0.5	<0.5
trans-1,2-Dichloroethylene	µg/L	<0.5	<0.5
1,1-Dichloroethylene	µg/L	<0.5	<0.5
Dichloromethane	µg/L	<0.5	<0.5
1,2-Dichlorpropane	µg/L	<0.5	<0.5
1,3-Dichloropropene(Z)	µg/L	<0.5	<0.5
Ethylbenzene	µg/L	<0.5	<0.5
m/p-Xylenes	µg/L	<0.5	<0.5
o-Xylene	µg/L	<0.5	<0.5
Styrene	µg/L	<0.5	<0.5
1,1,2,2-Tetrachlorethane	µg/L	<0.5	<0.5
Tetrachloroethylene	µg/L	<0.5	<0.5
Toluene	µg/L	<0.5	<0.5
Trichloroethylene	µg/L	<0.5	<0.5
1,1,2-Trichlorethane	µg/L	<0.5	<0.5
Trichlorofluoromethane	µg/L	<5	<5
Vinyl Chloride	µg/L	<0.2	<0.2
Xylenes - total	µg/L	<0.5	<0.5

NOTES: 1) Blank indicates parameter not analysed.
2) mg/L - milligrams per litre, µg/L - micrograms per litre
3) µS/cm - microSiemens per centimetre
4) Detected results bold and shaded

APPENDIX H

Surface Water Quality Data

Table H.1
Surface Water Flow Measurements
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

AREA	STATION	EVENT	FLOW RATE (L/s)
CENTRAL WATER COURSE	SW1	Feb-24	71.9
		Apr-24	108.8
		Jun-24	NMF
		Aug-24	Dry
		Oct-24	Dry
		Dec-24	NMF
	SW2	Feb-24	70.7
		Apr-24	106.0
		Jun-24	NMF
		Aug-24	NMF
		Oct-24	NMF
		Dec-24	NMF
	SW3	Feb-24	73.1
		Apr-24	97.8
		Jun-24	NMF
		Aug-24	Dry
		Oct-24	NMF
		Dec-24	NMF
	SW18	Feb-24	Frozen
		Apr-24	113.3
		Jun-24	NMF
		Aug-24	NMF
		Oct-24	NMF
		Dec-24	NMF
	SW19	Feb-24	Frozen
		Apr-24	NMF
		Jun-24	NMF
		Aug-24	Dry
		Oct-24	Dry
		Dec-24	Frozen
	SW20	Feb-24	Frozen
		Apr-24	47.0
		Jun-24	NMF
		Aug-24	NMF
		Oct-24	Dry
		Dec-24	Frozen

NOTES: 1) NMF - No measurable flow.
2) Frozen - Unable to measure flow due to frozen conditions.
3) Dry - Dry conditions, no sample obtained.

Table H.1
Surface Water Flow Measurements
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

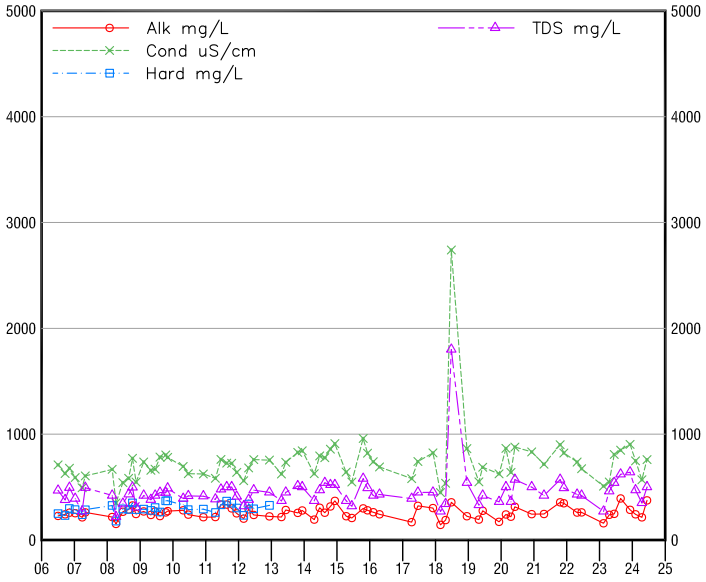
AREA	STATION	EVENT	FLOW RATE (L/s)
BENSFORT ROAD	SW17	Feb-24	20.3
		Apr-24	50.8
		Jun-24	Dry
		Aug-24	Dry
		Oct-24	Dry
		Dec-24	Frozen
	SW21	Feb-24	21.6
		Apr-24	32.9
		Jun-24	NMF
		Aug-24	NMF
		Oct-24	NMF
		Dec-24	NMF
	SW23	Feb-24	27.9
		Apr-24	47.3
		Jun-24	NMF
		Aug-24	NMF
		Oct-24	NMF
		Dec-24	NMF
WETLAND (WESTERN WATER COURSE)	SW24	Feb-24	Frozen
		Apr-24	NMF
		Jun-24	NMF
		Aug-24	Dry
		Oct-24	Dry
		Dec-24	Frozen

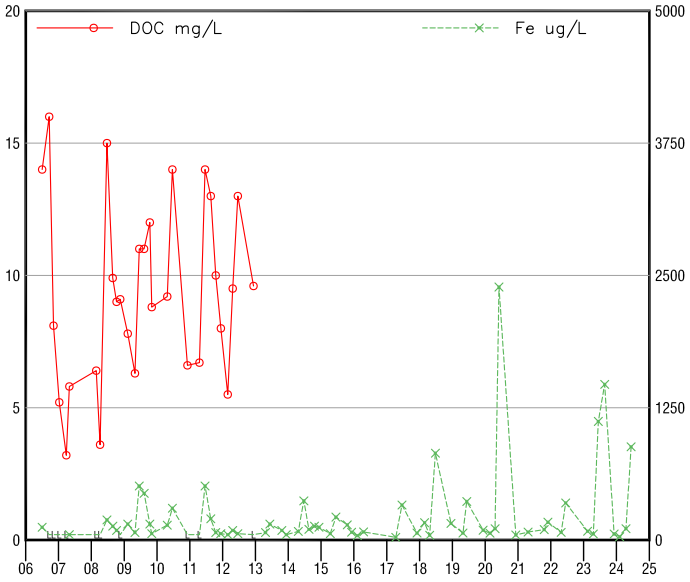
NOTES: 1) NMF - No measurable flow.
2) Frozen - Unable to measure flow due to frozen conditions.
3) Dry - Dry conditions, no sample obtained.

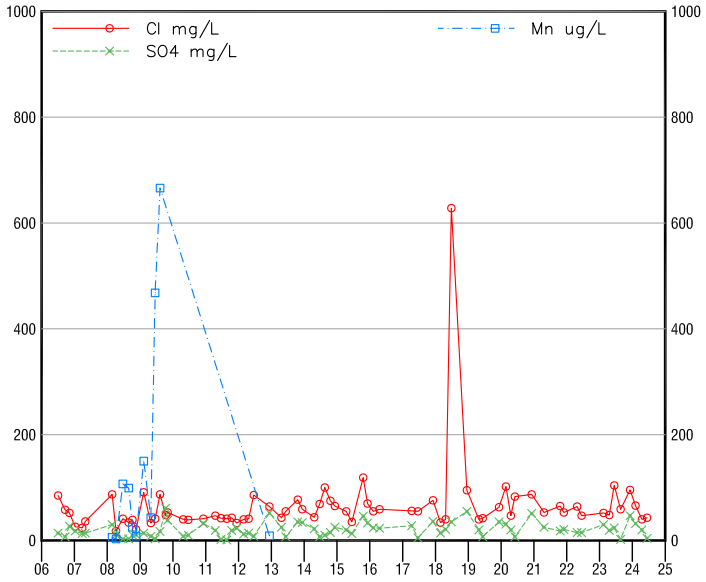
Table H.2
NFA Stormwater Management Pond Sampling
Peterborough County/City Waste Management Facility - 2024 Monitoring Program

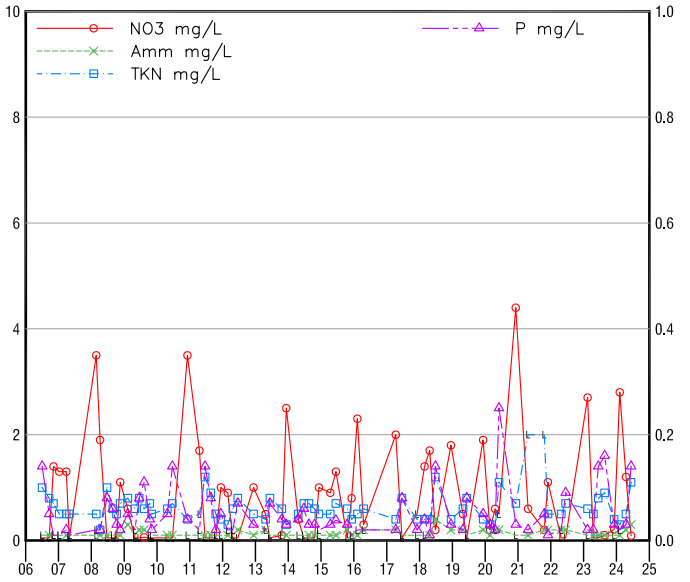
AREA	SAMPLING LOCATIONS	EVENT DATE	SAMPLED	COMMENTS
NFA STORMWATER MANAGEMENT POND	INLET	3-Apr-2024	Sampled	SW inlet had low to very low but consistent flow - water was very turbid and light brown, the NW inlet had moderate and consistent flow - water was very turbid and light brown, and the north inlet had moderate and consistent flow - water was moderately turbid and light brown. Inlet composite sample characteristics: turbid to very turbid, light brown, with a slight sediment or refuse like odour and no sheen.
	OUTLET	10-Jan-2024	Sampled	Melting snow and ice cover on pond contributing to pond level in addition to significant snow/rainfall. Some storm water may be bypassing over ice to the outlet structure as has been seen in past winter sampling events. The snow/rain event on 2024-01-09 at ~ 17:40 with the bulk of precipitation falling prior to midnight but continuing until 2:00 am 2024-01-10 at a lower intensity. Sample taken from storm pond outlet, which had high flows. Sample quality: light yellow colouring, minimal turbidity, slight sediment or refuse like odour, no sheen detected.
		3-Apr-2024	Sampled	Sampling event was initiated by a significant rain which started at ~ 10 pm 2024-04-02 and continued to the time of sampling and beyond. Very slightly turbid with a light brown tinge but very few if any larger suspended solids (very fine particulates influencing colour slightly), no odour or sheen. Flow was moderate and consistent from pipe and rip rock discharge area had some standing water and a few pieces of litter. Right at the pipe outlet the water had slight foaming due to the discharge velocity but this is less than seen historically.
		6-Jun-2024	NMS	Storm pond checked several times the morning of 2024-06-06 - observation prompted by rain event. Storm pond water was trickling over top of outflow pipe - not enough volume or flow for representative storm sample.
		14-Jun-2024	NMS	Storm pond checked after previous evenings storm event. Rain fall appeared to be greater in the north end of Peterborough based on these totals. No storm outflow at this time and likely none overnight - no pooled water in rip rock discharge area.
		17-Jun-2024	Sampled	Storm pond sampled after early morning thunderstorm which resulted in a large amount of rain in a couple of hours across the City. Flow from outlet pipe to rip rock area was low but consistent and there was some water pooling under rip rock. There was also very slight foaming in the pooled water at the discharge pipe. Very little turbidity, almost clear with a very slight light brown cloudiness, slight bacterial or septic like odour, no sheen. 1 or 2 small vegetative suspended solids in sample.
		10-Jul-2024	Sampled	Sampling event initiated by a storm event starting 2024-07-10 from approximately 6 am and finishing at Approx 11:30 am. Outflow volume from the pipe to the rip rock discharge area was moderate and consistent. There was slight foaming in the rip rocks at the pipe outlet due to water velocity and the presence of some standing water. There was some litter (film plastic bag) observed here at the time of sampling. Clear light brown-yellow liquid, very few visible suspended solids, moderate odour of decaying organics, no sheen.
		9-Aug-2024	Dry	Sample event initiated by heavy early morning rainfall. Pond water level ~10-12 cm below outlet level.
		12-Aug-2024	Dry	Sample event initiated by weekend rain events. Pond water level ~7-10cm below outlet level.
		19-Aug-2024	Dry	Sample event initiated by weekend rain events. Pond water level ~15cm below outlet level.
		30-Aug-2024	Dry	Storm pond checked by ADS at end of month. No flow, no recent rain events. Pond water level ~30 cm below outlet level.
		31-Aug-2024	Dry	Sample event initiated by overnight rain event. Pond water level ~25 cm below outlet level.

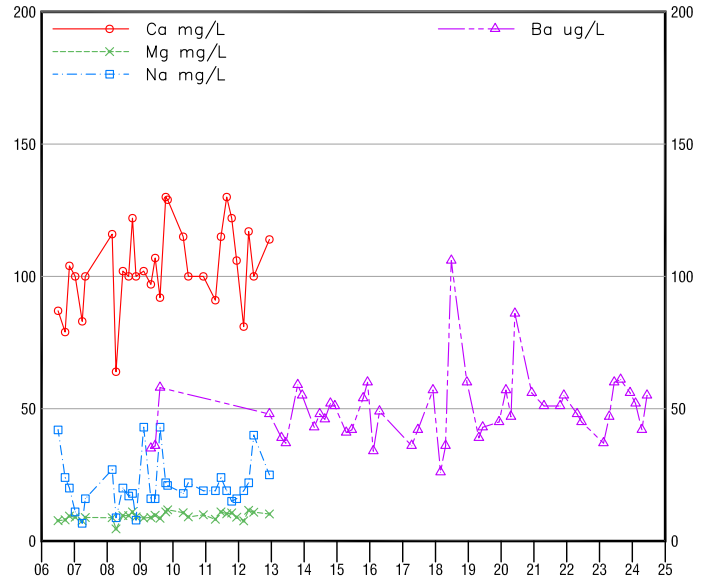
NOTES: 1) NMS - No measurable sample
2) Dry - Dry conditions, no sample obtained.
3) Precipitation data obtained from Environment Canada, Peterborough Airport Station Data.











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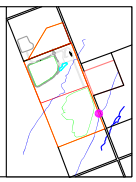
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW1

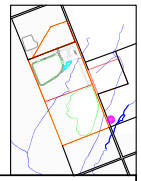
Surface Water

CA008825 11 Mar 25	wsp	H24001

SW1

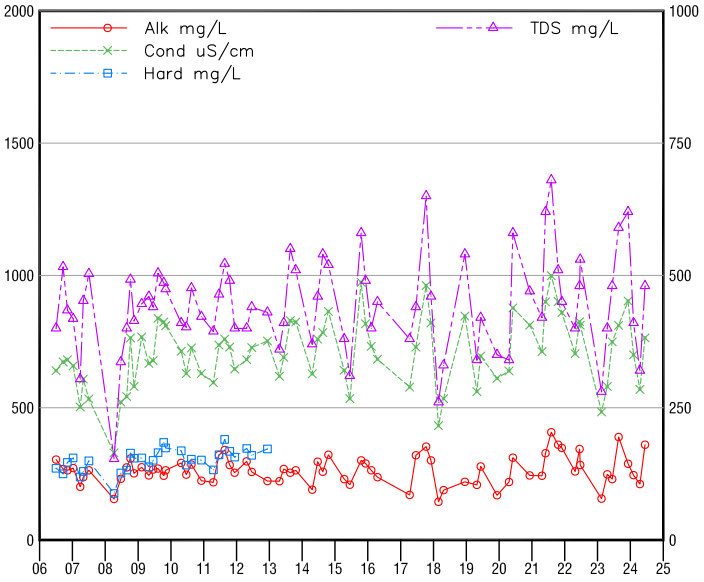
Surface Water

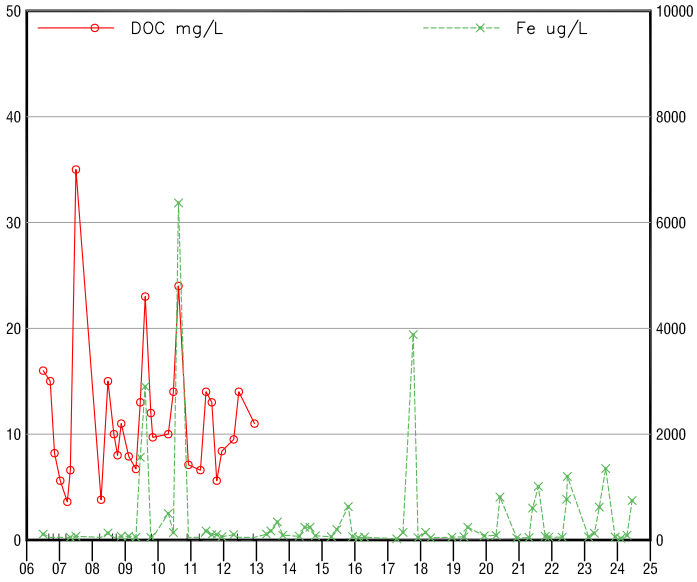
Surface Water Station

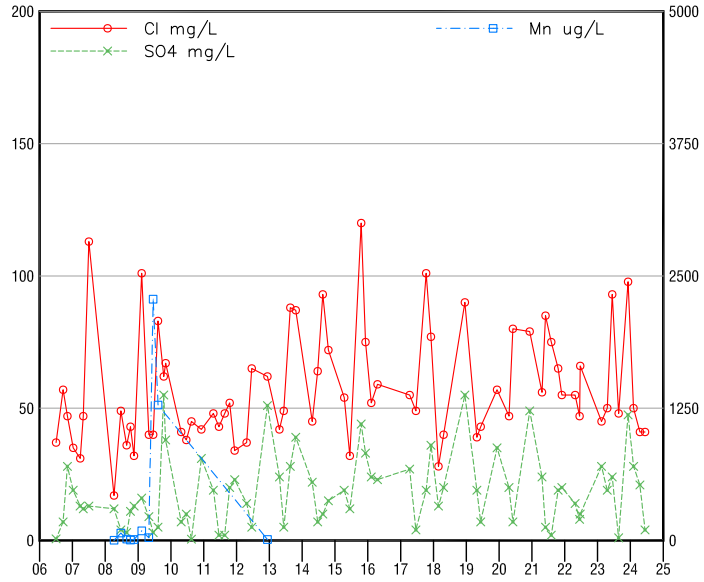


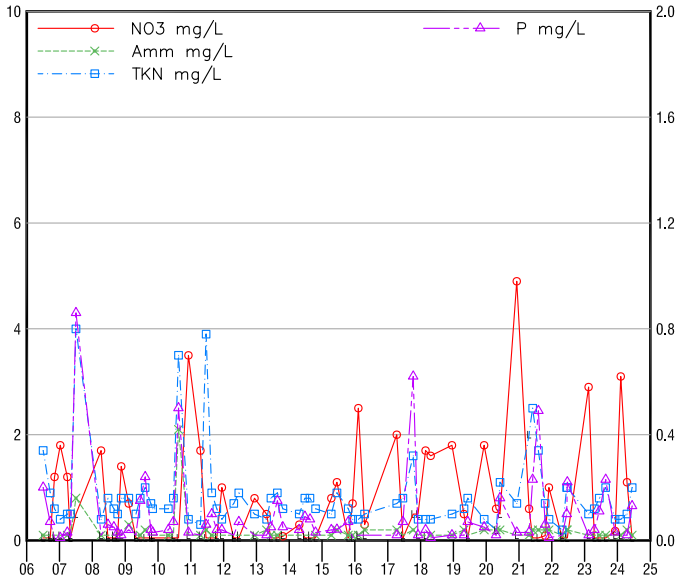
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
07-Dec-15	101138	280	820		7.8	70	33					<0.01	<10	0.4	0.8	<0.05	0.1	490
09-Feb-16	102270	262	739		7.7	55	24					<0.02	<10	0.5	2.3	<0.05	0.1	420
18-Apr-16	103681	243	690		8.0	59	23					<0.02	<10	0.6	0.3	<0.05	0.2	430
11-Apr-17	112229	169	580		7.9	56	28					0.02	<10	0.4	2.0	0.09	0.2	390
19-Jun-17	114017	323	741		7.9	55	5					**0.08**	40	0.8	<0.05	<0.05	<0.1	450
04-Dec-17	118406	302	823		7.8	76	36					0.02	20	0.4	<0.5	<0.5	<0.1	450
26-Feb-18	120265	142	448		7.6	34	14					**0.04**	40	0.4	1.4	<0.5	<0.1	270
23-Apr-18	121806	188	536		7.9	40	21					0.01	20	0.4	1.7	<0.5	0.1	340
26-Jun-18	123548	356	2740		7.6	628	35					**0.14**	20	1.2	0.2	<0.05	0.4	1800
17-Dec-18	128542	225	863		7.7	95	55					0.03	30	0.4	1.8	<0.05	0.2	540
29-Apr-19	131388	192	550		7.9	40	20					0.02	20	0.6	0.5	<0.5	0.2	330
10-Jun-19	132371	276	687		7.9	42	7					**0.08**	40	0.8	<0.05	<0.05	<0.1	420
10-Dec-19	137312	171	625		7.9	63	35					**0.05**	40	0.4	1.9	<0.05	0.2	360
24-Feb-20	139020	241	865		7.5	102	31					0.03	30	0.3	0.2	<0.05	0.1	500
20-Apr-20	140343	219	639		7.9	47	20					0.02	30	<0.2	0.6	<0.5	0.2	360
03-Jun-20	141371	313	878		7.8	83	7					**0.25**	60	1.1	<0.5	<0.5	0.2	570
07-Dec-20	146260	244	832		7.9	87	51					0.03	30	0.7	4.4	<0.5	<0.1	500
22-Apr-21	149434	246	715		7.9	53	25					0.02	20	<2	0.6	<0.05	0.1	420
19-Oct-21	154705	356	900		7.9	65	18					**0.05**	30	<2	0.2	1.03	0.2	570
30-Nov-21	155943	346	822		7.9	53	21					0.01	<10	0.5	1.1	<0.05	0.2	490
26-Apr-22	160114	259	736		7.8	64	15					<0.02	20	0.5	<0.05	<0.05	0.2	430
15-Jun-22	161595	260	673		8.0	47	15					**0.09**	40	0.7	<0.05	<0.05	0.2	420
14-Feb-23	167979	157	509		7.7	52	30					0.02	20	0.6	2.7	<0.05	<0.1	270
19-Apr-23	169760	238	547		7.7	48	19					0.02	30	0.5	<0.05	<0.05	0.1	460
13-Jun-23	171325	247	808		7.7	104	24					**0.14**	40	0.8	<0.05	<0.05	0.1	540
23-Aug-23	173431	392	848		7.8	59	2					**0.16**	40	0.9	0.1	<0.05	0.1	620
06-Dec-23	2023A060	284	903		7.6	95.6	47					0.03	<10	0.4	0.21	<0.05	<0.1	640
06-Feb-24	178222	243	747		7.6	66	32					<0.02	30	0.3	2.8	<0.05	0.1	470
16-Apr-24	180155	214	569		7.4	40	20					0.03	30	0.5	1.2	<0.05	0.2	350
12-Jun-24	181859	374	759		7.3	43	4					**0.14**	40	1.1	0.09	<0.05	0.3	500
TOTAL SAMPLES		72	72	30	64	72	72	30	30	30	30	72	72	72	72	72	72	72
AVERAGE 2024		277	692		7.4	50	19					0.057	33	0.6	1.4	<0.05	0.2	440

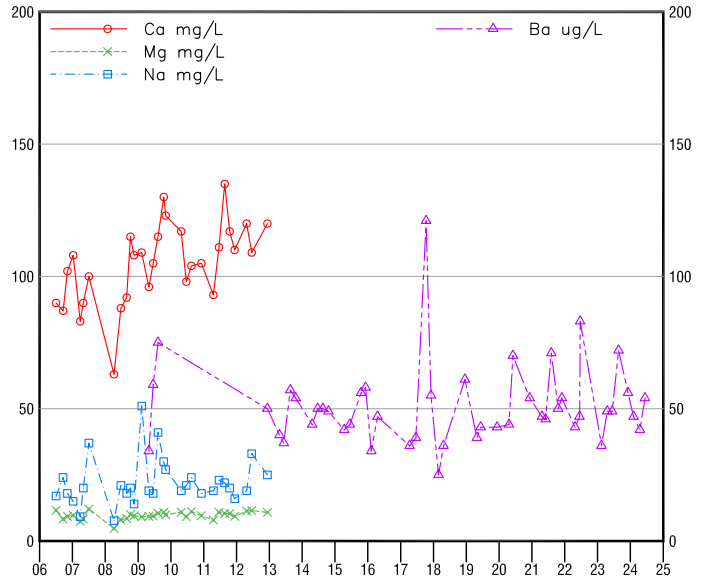
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











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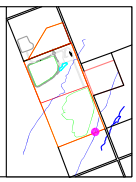


CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW2

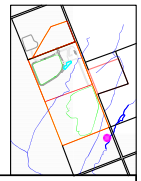
Surface Water

CA008825 11 Mar 25	wsp	H24002

SW2

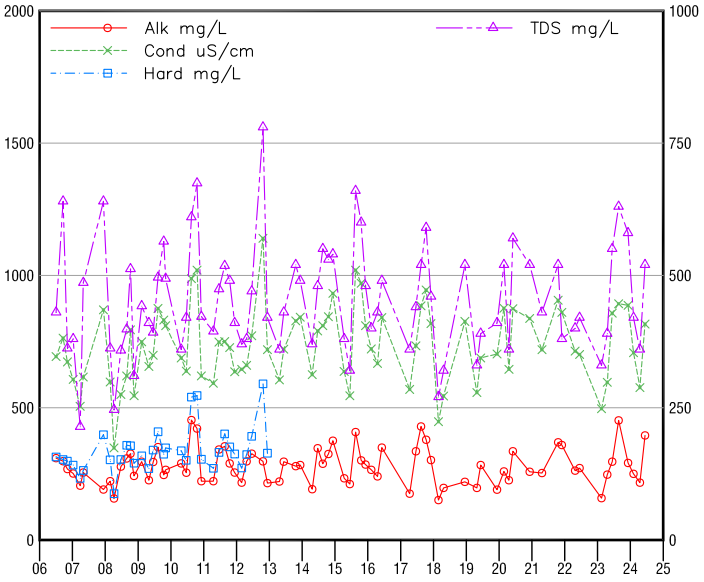
Surface Water

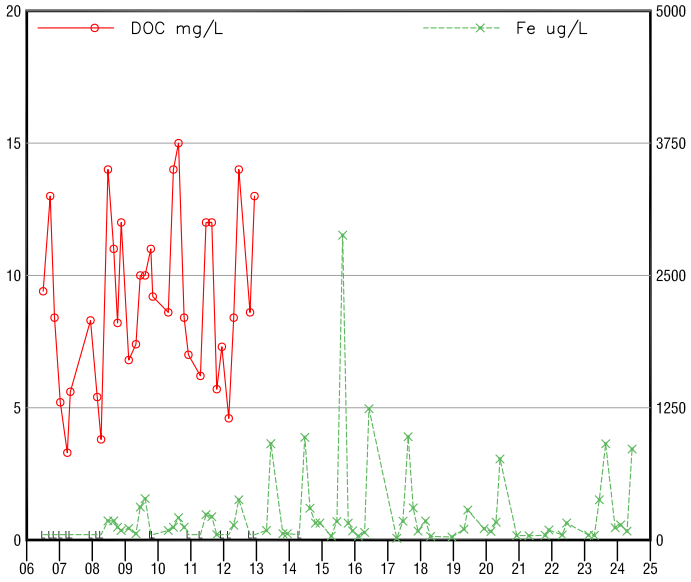
Surface Water Station

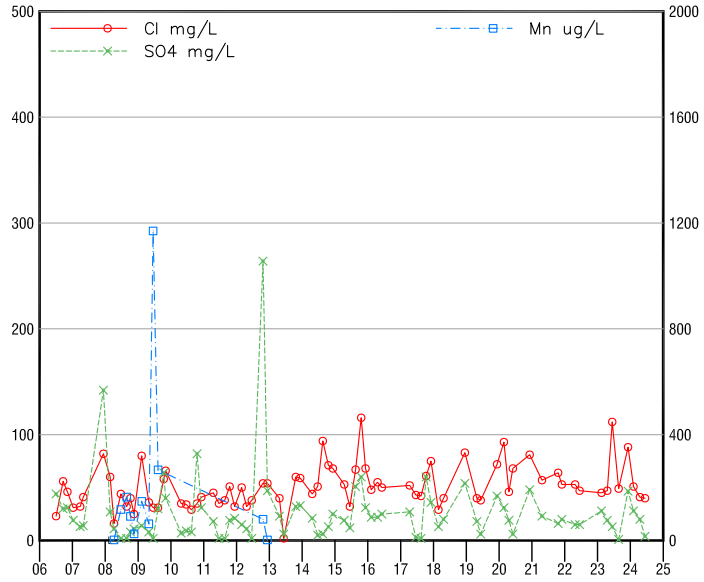


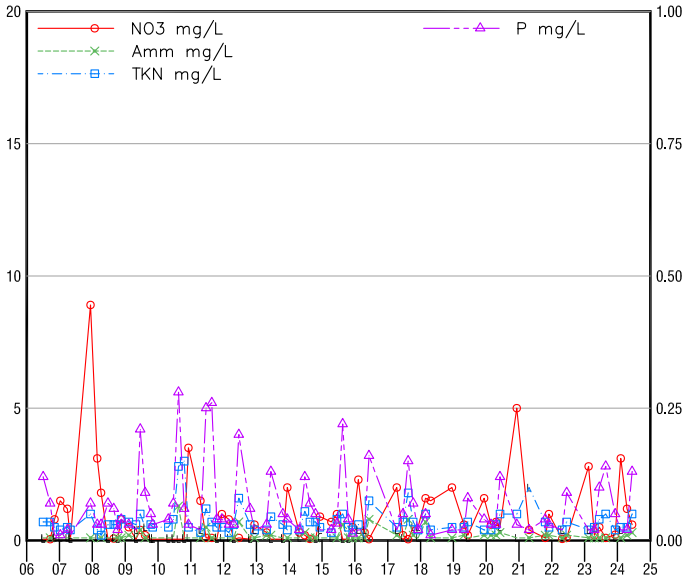
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
18-Apr-16	103682	237	683		8.0	59	23					<0.02	<10	0.5	0.3	0.06	0.2	450
11-Apr-17	112230	170	578		8.1	55	27					0.02	<10	0.7	2.0	0.08	0.2	380
19-Jun-17	114018	320	729		7.9	49	4					**0.07**	40	0.8	<0.05	<0.05	<0.1	440
11-Oct-17	117020	353	962		7.3	101	19					**0.62**	100	1.6	<0.5	<0.5	0.2	650
04-Dec-17	118407	301	820		7.9	77	36					0.02	40	0.4	<0.5	<0.5	<0.1	460
26-Feb-18	120266	144	432		7.6	28	13					**0.04**	50	0.4	1.7	<0.5	<0.1	260
23-Apr-18	121807	188	534		7.9	40	20					0.01	30	0.4	1.6	<0.5	0.1	330
17-Dec-18	128543	220	846		7.8	90	55					0.02	30	0.5	1.8	<0.05	0.1	540
29-Apr-19	131389	208	561		8.0	39	19					0.02	<10	0.6	0.5	<0.5	0.2	340
10-Jun-19	132372	278	695		8.0	43	7					**0.07**	30	0.8	<0.05	<0.05	<0.1	420
10-Dec-19	137313	169	611		7.9	57	35					**0.05**	30	0.4	1.8	<0.05	0.2	350
20-Apr-20	140344	219	639		8.0	47	20					0.02	20	<0.2	0.6	<0.5	0.2	340
03-Jun-20	141372	311	877		7.7	80	7					**0.16**	40	1.1	<0.5	<0.5	0.2	580
07-Dec-20	146261	244	812		7.9	79	49					0.03	50	0.7	4.9	<0.5	<0.1	470
22-Apr-21	149435	243	712		8.1	56	24					0.03	30	<2	0.6	<0.05	0.1	420
01-Jun-21	150493	328	900		7.5	85	5					**0.23**	50	2.5	<0.05	<0.05	0.2	620
04-Aug-21	152211	407	999		7.6	75	2					**0.49**	80	1.7	<0.05	<0.05	0.2	680
19-Oct-21	154706	360	901		7.8	65	19					**0.06**	20	0.7	0.09	<0.05	0.2	510
30-Nov-21	155944	348	859		7.9	55	20					0.01	<10	0.4	1.0	<0.05	0.2	450
26-Apr-22	160115	259	704		7.8	55	14					<0.02	20	0.2	<0.05	<0.05	0.1	400
15-Jun-22	161596	344	825		7.6	47	8					**0.1**	60	1	<0.05	<0.05	0.2	480
22-Jun-22	161825	283	812		7.6	66	10					**0.22**	50	1	<0.05	<0.05	0.2	530
14-Feb-23	167980	156	484		7.8	45	28					0.02	20	0.5	2.9	<0.05	<0.1	280
19-Apr-23	169761	248	580		7.8	50	19					**0.04**	40	0.6	<0.05	<0.05	<0.1	400
13-Jun-23	171327	230	749		7.6	93	24					**0.11**	50	0.8	<0.05	<0.05	0.1	480
23-Aug-23	173432	389	811		7.6	48	1					**0.23**	40	1	<0.05	<0.05	0.1	590
06-Dec-23	2023A061	288	903		7.7	97.8	47.5					0.03	<10	0.4	0.18	<0.05	<0.1	620
06-Feb-24	178224	245	700		7.6	50	28					<0.02	20	0.4	3.1	<0.05	0.1	410
16-Apr-24	180156	211	569		7.5	41	21					0.02	30	0.5	1.1	<0.05	0.2	320
12-Jun-24	181860	360	764		7.3	41	4					**0.13**	30	1	<0.05	<0.05	0.1	480
TOTAL SAMPLES		73	73	30	65	73	73	30	30	30	30	73	73	73	73	73	73	73
AVERAGE 2024		272	678		7.5	44	18					0.050	27	1	1.4	<0.05	0.1	403

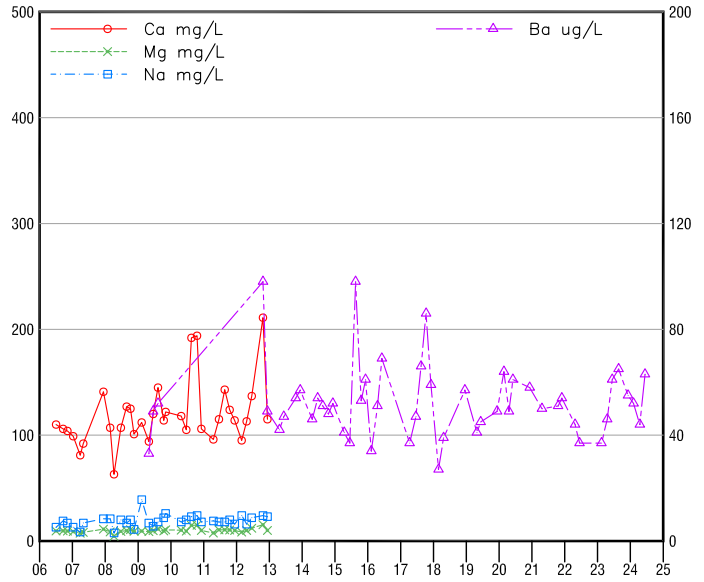
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



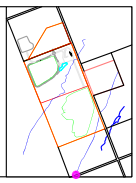








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW3

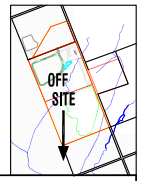
Surface Water

CA008825 11 Mar 25	wsp	H24003

SW3

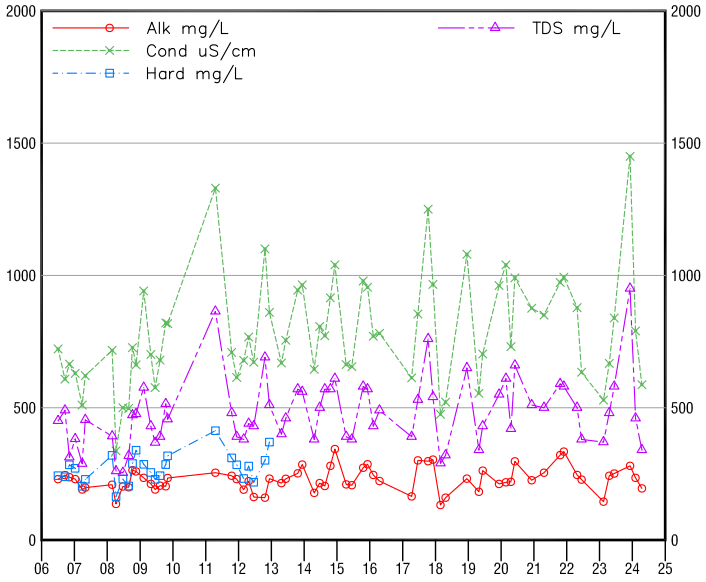
Surface Water

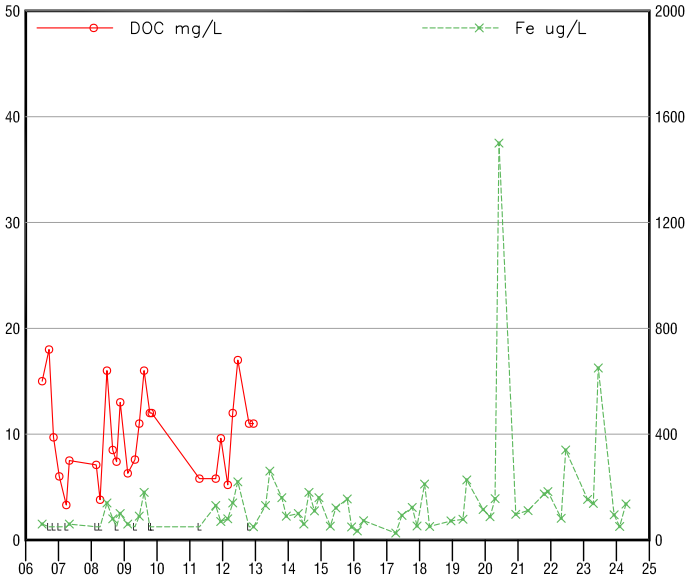
Surface Water Station

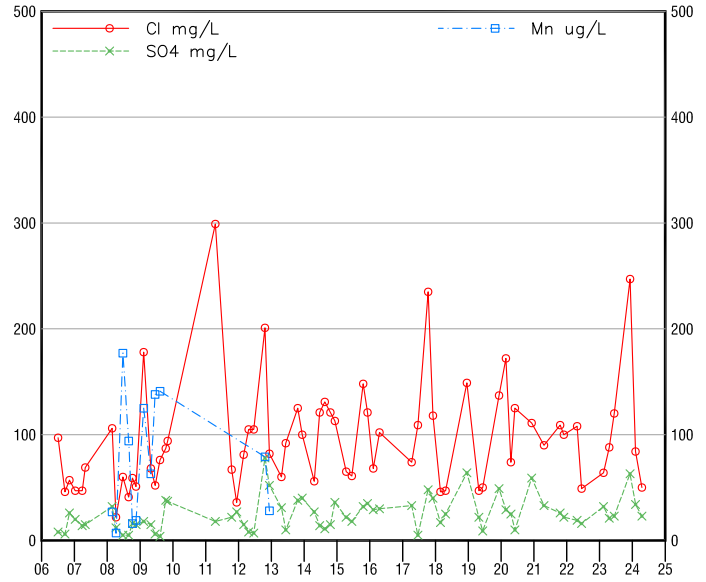


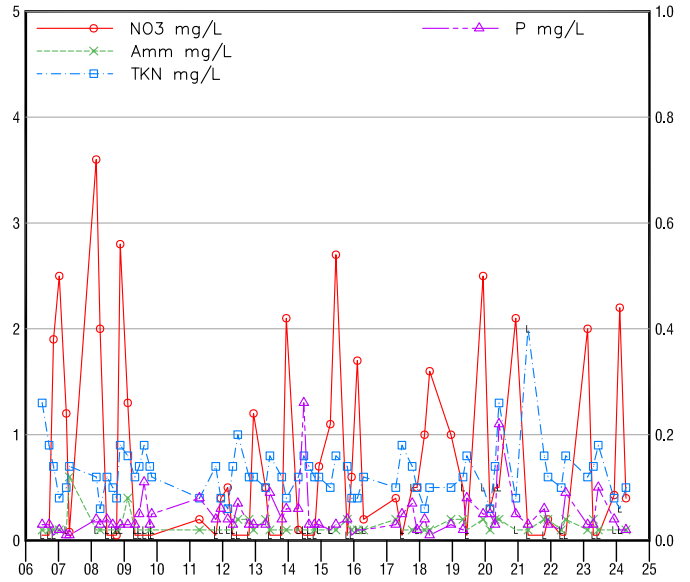
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
18-Apr-16	103683	240	667		8.2	55	22					<0.02	40	<0.1	0.3	<0.05	0.1	430
06-Jun-16	104763	349	841		7.7	50	25					**0.16**	<10	1.5	0.05	<0.05	0.8	490
11-Apr-17	112231	175	569		8.2	52	27					<0.02	<10	0.5	2.0	<0.05	0.2	360
19-Jun-17	114019	335	734		8.0	43	3					**0.05**	30	0.7	0.2	<0.05	<0.1	440
16-Aug-17	115562	429	885		7.9	42	2					**0.15**	70	1.8	0.05	<0.05	0.8	520
11-Oct-17	117021	379	945		7.5	61	60					**0.07**	30	0.7	<0.5	<0.5	0.2	590
04-Dec-17	118408	302	818		8.0	75	36					0.02	20	0.4	<0.5	<0.5	<0.1	460
26-Feb-18	120267	151	447		7.6	29	13					**0.05**	40	1	1.6	<0.5	0.7	270
23-Apr-18	121808	197	544		8.1	40	20					0.01	10	0.4	1.5	<0.5	0.1	320
17-Dec-18	128544	220	826		7.8	83	54					0.02	40	0.5	2.0	<0.05	0.1	520
29-Apr-19	131390	197	557		8.2	40	18					0.02	20	0.5	0.6	<0.5	0.2	330
10-Jun-19	132373	283	688		8.1	38	6					**0.08**	60	0.7	0.2	<0.05	<0.1	390
10-Dec-19	137314	190	703		8.0	72	42					**0.04**	50	0.4	1.6	<0.05	0.2	410
24-Feb-20	139022	259	876		7.5	93	31					0.03	40	0.4	0.6	<0.05	0.2	520
20-Apr-20	140346	226	645		8.1	46	19					0.03	20	0.6	0.7	<0.5	0.2	360
03-Jun-20	141374	335	874		8.2	68	6					**0.12**	40	1	<0.5	<0.5	0.3	570
07-Dec-20	146262	258	837		7.9	81	48					0.03	40	1	5.0	2.53	<0.1	520
22-Apr-21	149436	253	719		8.2	57	23					0.02	30	<2	0.4	<0.05	0.1	430
19-Oct-21	154707	369	906		8.1	64	16					**0.04**	20	0.7	0.1	<0.05	0.2	520
30-Nov-21	155945	359	860		8.0	53	20					0.03	<10	0.5	1.0	<0.05	0.2	380
26-Apr-22	160116	262	714		8.1	53	15					<0.02	20	0.4	0.06	<0.05	0.1	400
15-Jun-22	161597	272	701		8.1	47	15					**0.09**	30	0.7	0.1	<0.05	0.2	420
14-Feb-23	167981	158	496		7.8	45	28					<0.02	20	0.4	2.8	<0.05	0.1	330
19-Apr-23	169762	247	596		8.0	47	19					0.02	30	0.5	0.2	<0.05	0.1	390
13-Jun-23	171326	296	857		7.8	112	13					**0.1**	40	0.8	0.5	<0.05	0.1	550
23-Aug-23	173433	452	893		7.9	49	1					**0.14**	50	1	0.1	<0.05	0.1	630
06-Dec-23	2023A062	291	887		7.8	88.1	46.6					**0.05**	20	0.4	0.22	<0.05	<0.1	580
06-Feb-24	178223	250	708		7.6	51	28					<0.02	20	0.5	3.1	<0.05	0.1	420
16-Apr-24	180157	217	576		7.6	41	20					0.02	20	0.5	1.2	<0.05	0.2	360
12-Jun-24	181861	395	816		7.6	40	4					**0.13**	70	1	0.6	0.06	0.3	520
TOTAL SAMPLES		79	79	34	70	79	79	34	34	34	34	79	79	79	79	79	79	79
AVERAGE 2024		287	700		7.6	44	17					0.050	37	1	1.6	<0.05	0.2	433

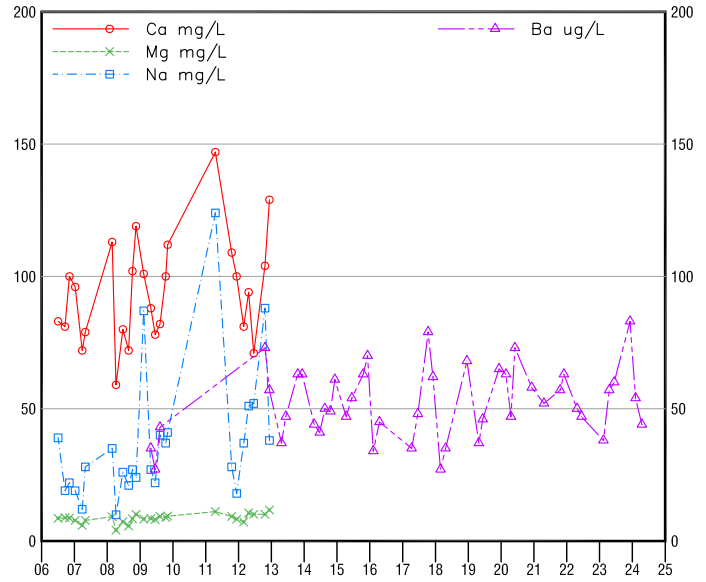
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**











L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted

CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW17

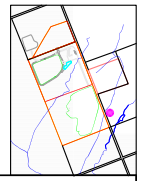
Surface Water

CA008825 11 Mar 25	wsp	H24004

SW17

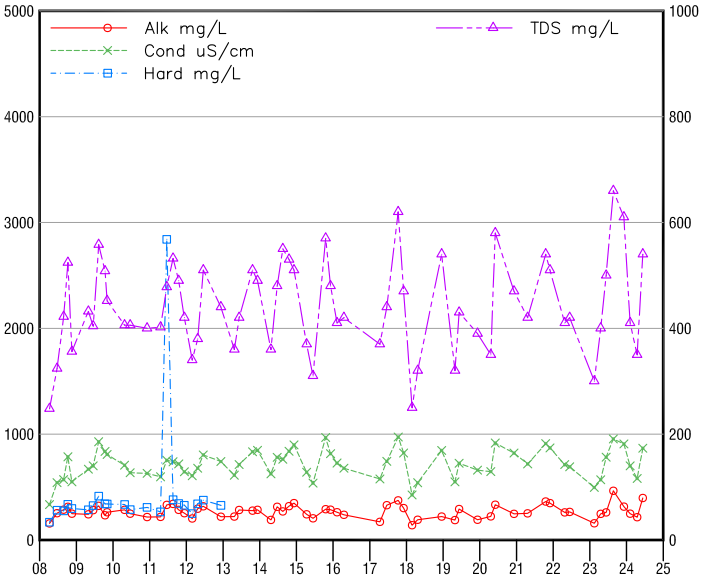
Surface Water

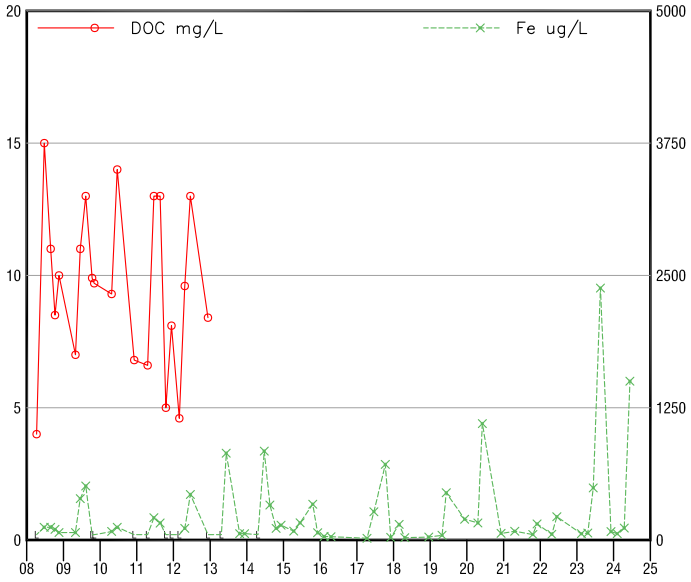
Surface Water Station

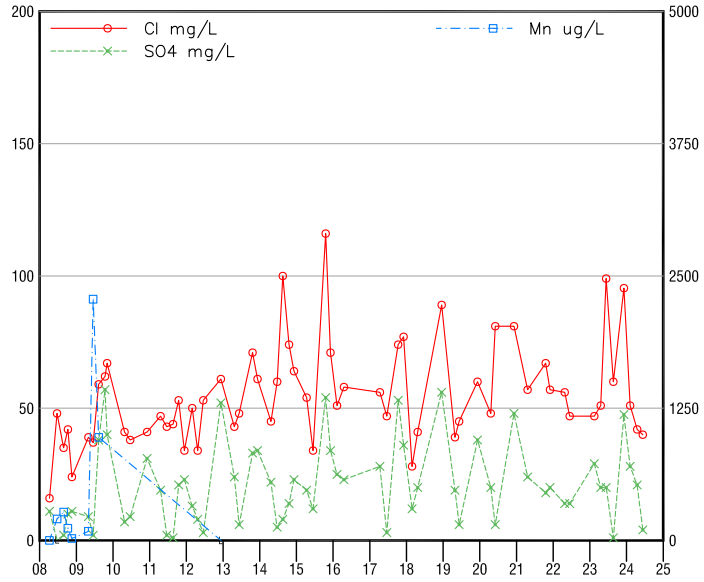


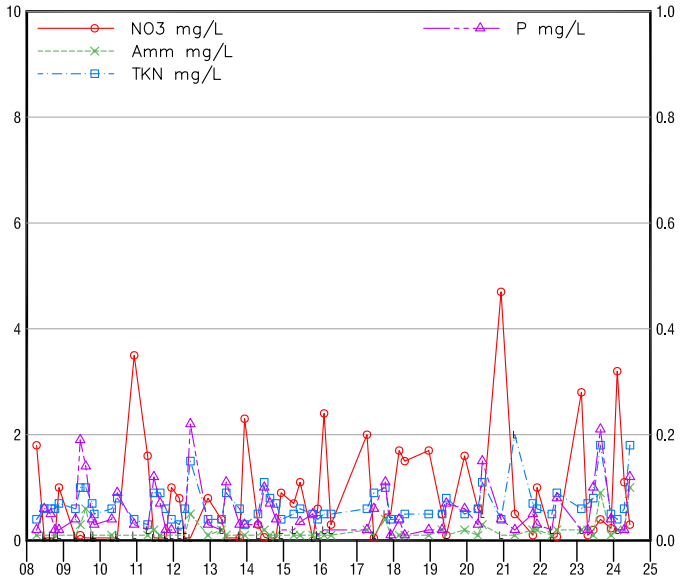
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
15-Jun-15	97645	207	655		7.9	61	18					0.03	30	0.8	2.7	0.20	0.1	380
19-Oct-15	100242	273	979		8.1	148	32					**0.04**	40	0.7	<0.05	<0.05	0.2	580
07-Dec-15	101141	286	955		7.9	121	35					<0.01	<10	0.4	0.6	<0.05	0.1	570
09-Feb-16	102273	246	770		7.8	68	29					<0.02	<10	0.4	1.7	<0.05	0.1	430
18-Apr-16	103684	223	781		8.0	102	30					<0.02	<10	0.6	0.2	<0.05	0.1	490
11-Apr-17	112232	165	613		8.1	74	33					0.03	<10	0.5	0.4	<0.05	0.2	390
19-Jun-17	114021	301	854		7.9	109	5					**0.05**	40	0.9	<0.05	<0.05	<0.1	530
11-Oct-17	117022	298	1250		7.6	235	48					**0.07**	30	0.7	<0.5	<0.5	0.1	760
04-Dec-17	118409	304	966		7.9	118	40					0.02	20	0.5	0.5	<0.5	<0.1	540
26-Feb-18	120268	132	475		7.5	46	17					**0.04**	40	0.3	1.0	<0.5	0.1	290
23-Apr-18	121809	160	521		7.9	47	25					0.01	30	0.5	1.6	<0.5	0.1	320
17-Dec-18	128545	232	1080		7.8	149	64					0.03	50	0.5	1.0	<0.05	0.2	650
29-Apr-19	131392	182	554		8.0	47	22					0.02	20	0.6	<0.5	<0.5	0.2	340
10-Jun-19	132375	262	703		7.8	50	9					**0.08**	30	0.8	<0.05	<0.05	<0.1	430
10-Dec-19	137315	212	962		7.8	137	49					**0.05**	40	<0.5	2.5	<0.05	0.2	550
24-Feb-20	139024	218	1040		7.5	172	29					**0.05**	40	0.3	0.3	<0.05	0.1	610
20-Apr-20	140347	220	731		7.9	74	25					0.03	30	0.7	<0.5	<0.5	0.2	420
03-Jun-20	141375	297	991		7.8	125	10					**0.22**	70	1.3	<0.5	<0.5	0.2	660
07-Dec-20	146263	226	876		7.9	111	59					**0.05**	30	0.4	2.1	<0.5	<0.1	510
22-Apr-21	149437	254	850		7.9	90	33					0.03	40	<2	<0.05	<0.05	0.1	500
19-Oct-21	154708	321	973		7.8	109	26					**0.06**	30	0.8	<0.05	<0.05	0.2	590
30-Nov-21	155946	334	993		7.8	100	22					0.03	<10	0.6	0.2	<0.05	0.2	580
26-Apr-22	160117	246	878		7.8	108	19					<0.02	20	0.5	<0.05	<0.05	0.1	500
15-Jun-22	161598	228	634		7.9	49	16					**0.09**	40	0.8	<0.05	<0.05	0.2	380
14-Feb-23	167982	145	529		7.7	64	32					0.03	20	0.6	2.0	<0.05	0.1	370
19-Apr-23	169763	243	667		7.8	88	21					0.03	40	0.7	<0.05	<0.05	0.2	480
13-Jun-23	171324	251	839		7.6	120	23					**0.1**	40	0.9	<0.05	<0.05	0.1	580
06-Dec-23	2023A063	280	1450		7.6	247	63					**0.04**	<10	0.4	0.43	<0.05	<0.1	950
06-Feb-24	178220	235	790		7.5	84	34					<0.02	20	<0.3	2.2	<0.05	<0.1	460
16-Apr-24	180158	195	587		7.4	50	23					0.02	30	0.5	0.4	<0.05	0.1	340
TOTAL SAMPLES		66	66	26	58	66	66	26	26	26	26	66	66	66	66	66	66	66
AVERAGE 2024		215	689		7.5	67	29					<0.02	25	<0.3	1.3	<0.05	<0.1	400

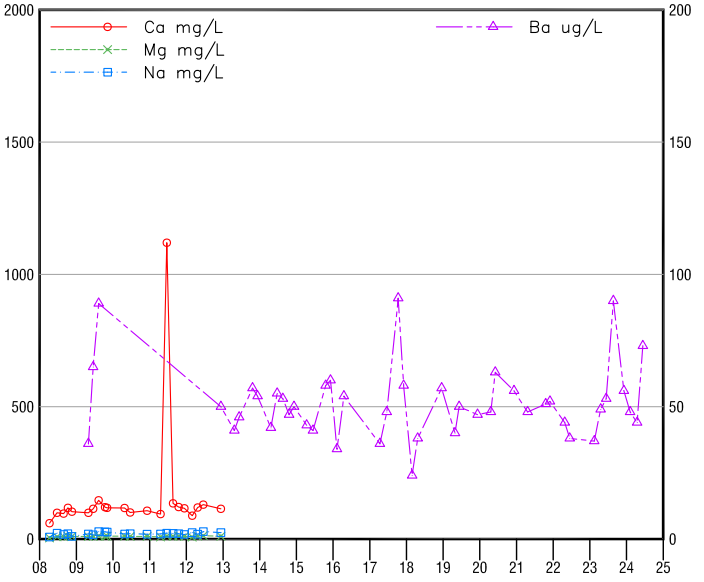
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



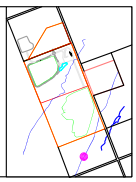








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW18

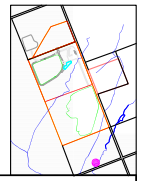
Surface Water

CA008825 11 Mar 25	wsp	H24005

SW18

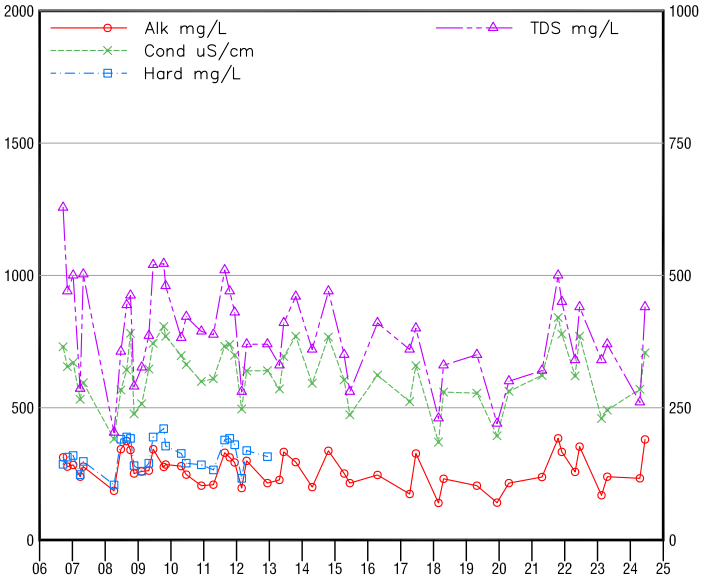
Surface Water

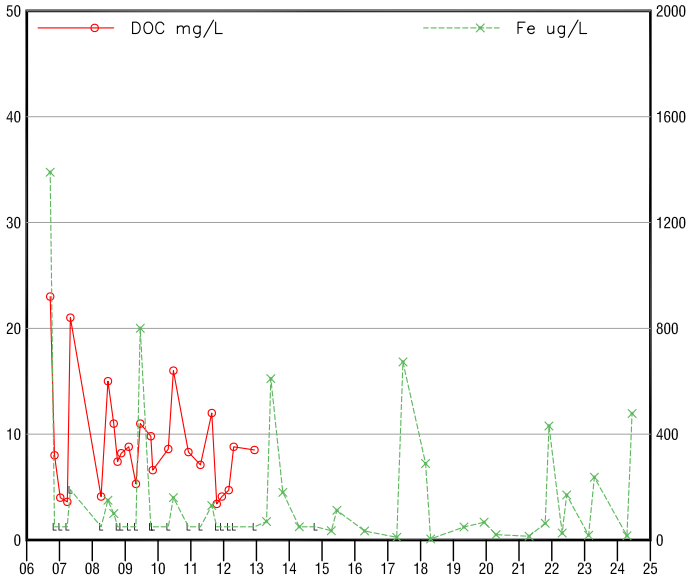
Surface Water Station

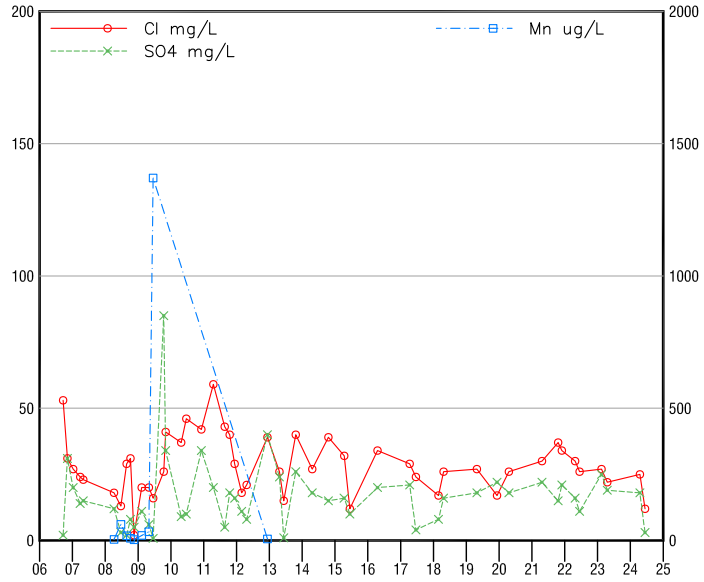


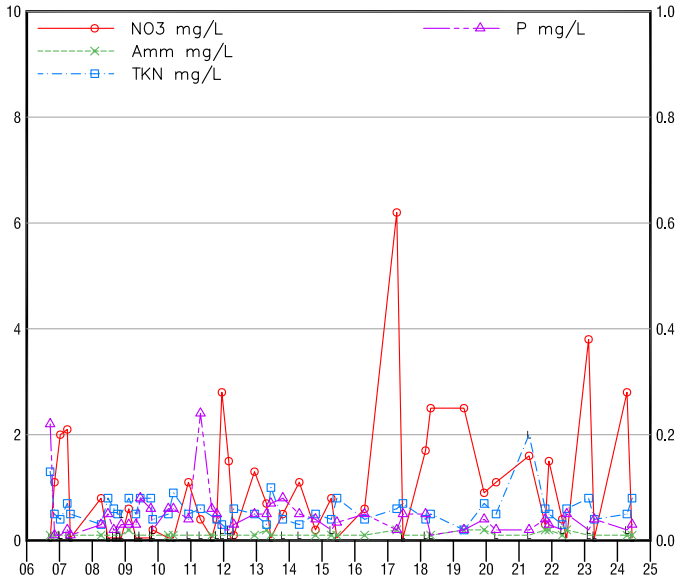
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
19-Oct-15	100243	291	968		7.8	116	54					**0.05**	20	0.5	<0.05	<0.05	0.1	570
07-Dec-15	101142	286	815		7.9	71	34					<0.01	<10	0.4	0.6	<0.05	0.1	480
09-Feb-16	102274	262	727		7.8	51	25					<0.02	<10	0.5	2.4	<0.05	0.1	410
18-Apr-16	103686	238	678		8.0	58	23					<0.02	<10	0.5	0.3	<0.05	0.1	420
11-Apr-17	112233	172	577		8.1	56	28					0.02	<10	0.6	2.0	0.07	0.2	370
19-Jun-17	114022	328	743		7.9	47	3					**0.06**	50	0.9	0.05	<0.05	<0.1	440
11-Oct-17	117023	374	973		7.6	74	53					**0.11**	50	1	<0.5	<0.5	0.4	620
04-Dec-17	118410	301	822		8.0	77	36					0.01	20	0.4	<0.5	<0.5	<0.1	470
26-Feb-18	120269	140	426		7.6	28	12					**0.04**	30	0.4	1.7	<0.5	0.1	250
23-Apr-18	121810	191	541		8.1	41	20					0.01	30	0.5	1.5	<0.5	0.1	320
17-Dec-18	128546	222	846		7.8	89	56					0.02	50	0.5	1.7	<0.05	0.1	540
29-Apr-19	131393	188	550		8.1	39	19					0.02	20	0.5	0.5	<0.5	0.2	320
10-Jun-19	132376	293	725		8.0	45	6					**0.07**	20	0.8	0.1	<0.05	<0.1	430
10-Dec-19	137316	191	660		7.9	60	38					**0.06**	40	0.5	1.6	<0.05	0.2	390
20-Apr-20	140348	223	646		8.1	48	20					0.03	20	0.6	0.6	<0.5	0.1	350
03-Jun-20	141376	333	916		7.9	81	6					**0.15**	40	1.1	<0.5	<0.5	0.3	580
07-Dec-20	146264	247	821		7.9	81	48					**0.04**	20	0.4	4.7	<0.5	<0.1	470
22-Apr-21	149438	252	718		8.1	57	24					0.02	30	<2	0.5	<0.05	0.1	420
19-Oct-21	154709	363	911		7.9	67	18					**0.05**	30	0.7	0.1	<0.05	0.2	540
30-Nov-21	155947	348	870		8.0	57	20					0.03	<10	0.6	1.0	<0.05	0.2	510
26-Apr-22	160118	260	712		7.9	56	14					<0.02	30	0.5	<0.05	<0.05	0.1	410
15-Jun-22	161599	265	692		8.0	47	14					**0.08**	40	0.9	0.07	<0.05	0.2	420
14-Feb-23	167983	158	496		7.8	47	29					<0.02	20	0.6	2.8	<0.05	0.2	300
19-Apr-23	169764	247	569		7.9	51	20					0.02	30	0.7	0.1	<0.05	0.2	400
13-Jun-23	171329	260	782		7.7	99	20					**0.1**	40	0.8	0.2	<0.05	0.1	500
23-Aug-23	173435	465	955		7.8	60	1					**0.21**	50	1.8	0.4	0.25	0.9	660
06-Dec-23	2023A064	315	907		7.8	95.4	47.6					**0.04**	<10	0.5	0.23	<0.05	0.1	610
06-Feb-24	178225	248	700		7.6	51	28					<0.02	20	0.4	3.2	<0.05	0.2	410
16-Apr-24	180159	215	581		7.6	42	21					0.02	20	0.6	1.1	<0.05	0.2	350
12-Jun-24	181862	396	867		7.4	40	4					**0.12**	40	1.8	0.3	0.08	1	540
TOTAL SAMPLES		63	63	22	62	63	63	22	22	22	22	63	63	63	63	63	63	63
AVERAGE 2024		286	716		7.5	44	18					0.047	27	0.9	1.5	<0.05	0	433

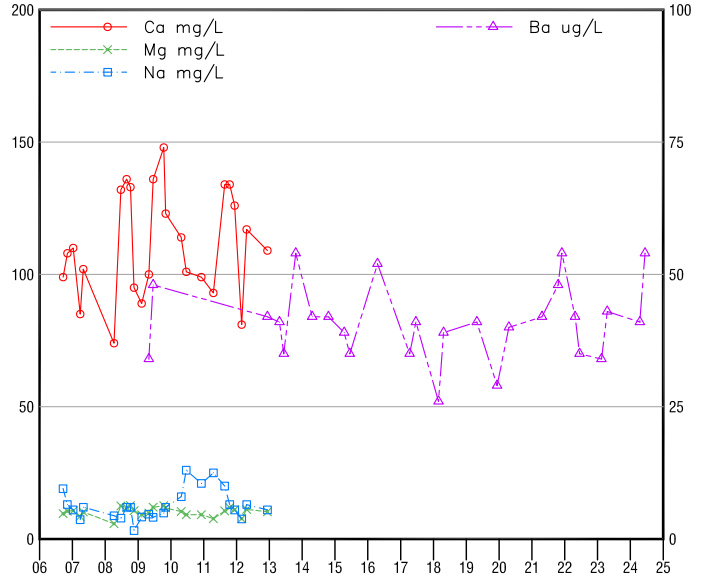
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



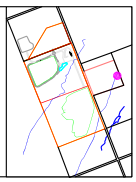








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW19

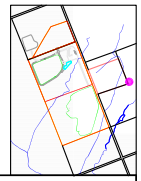
Surface Water

CA008825 11 Mar 25	wsp	H24006

SW19

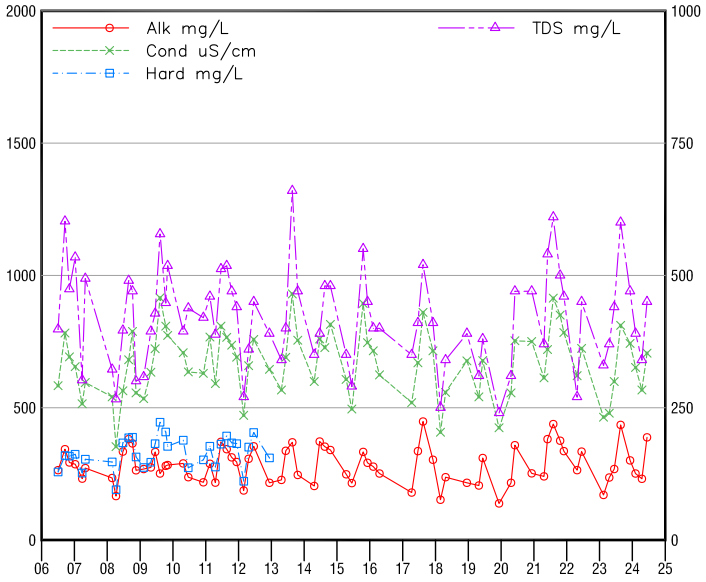
Surface Water

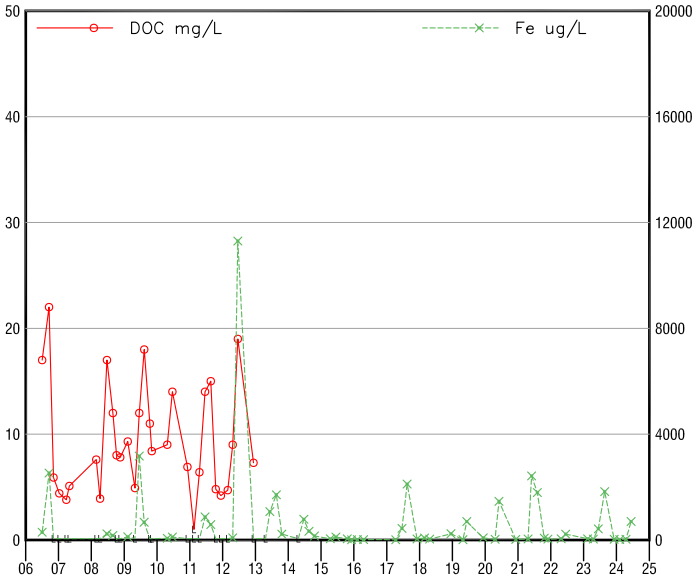
Surface Water Station

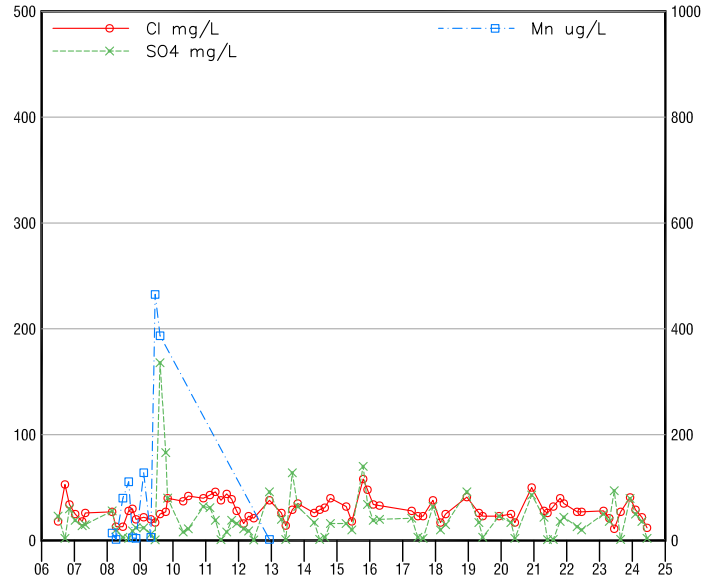


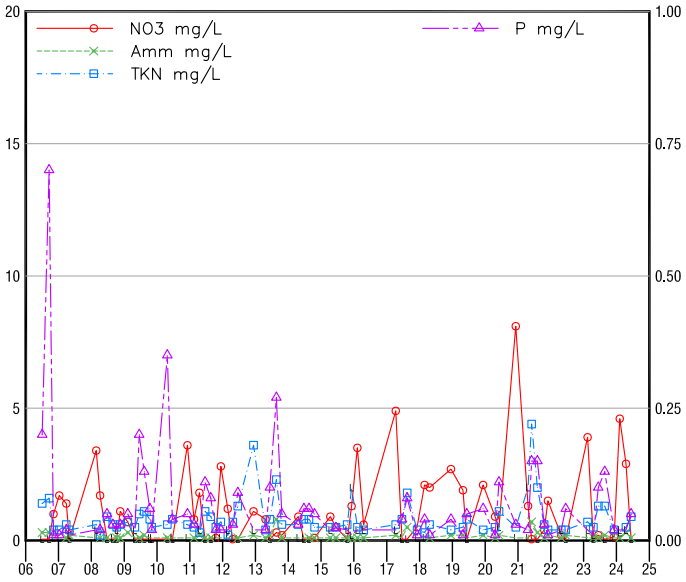
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
22-Aug-11	69849	330	732	378	7.6	43	5	134	10.6	20	1.44	**0.06**	16		<0.05	<0.05	0.1	510
17-Oct-11	70912	312	739	384	7.7	40	18	134	11.9	13	2.75	**0.05**	60	0.4	0.4	<0.05	<0.1	470
12-Dec-11	72058	293	698	360	7.9	29	16	126	11.1	11	2	<0.02	18	0.3	2.8	<0.05	<0.1	430
28-Feb-12	73147	196	495	233	7.7	18	11	81	7.7	7.6	1.96	<0.02	<10	0.2	1.5	<0.05	<0.1	280
23-Apr-12	74129	299	639	338	7.9	21	8	117	11.2	13	1.65	0.03	<10	0.6	0.1	<0.05	<0.1	370
10-Dec-12	79064	215	640	315	7.9	39	40	109	10.3	11	1.71	**0.05**	<10	0.5	1.3	<0.05	0.1	370
23-Apr-13	81817	227	571		7.8	26	24					**0.05**	11.4	0.3	0.7	<0.05	0.2	330
10-Jun-13	82895	333	693		7.5	15	1					**0.07**	80	1	<0.05	<0.05	0.1	410
21-Oct-13	85797	294	770		7.7	40	26					**0.08**	<10	0.4	0.5	<0.05	<0.1	460
22-Apr-14	89166	200	592		7.8	27	18					**0.05**	<10	0.3	1.1	<0.05	<0.1	360
20-Oct-14	93069	337	767		7.9	39	15					**0.04**	<10	0.5	0.2	<0.05	0.1	470
13-Apr-15	96286	251	605		7.9	32	16					<0.02	<10	0.4	0.8	<0.05	0.1	350
15-Jun-15	97647	215	473		8.0	12	10					**0.034**	50	0.8	<0.05	<0.05	0.1	280
18-Apr-16	103687	246	623		7.9	34	20					**0.05**	<10	0.4	0.6	<0.05	0.1	410
11-Apr-17	112234	174	523		8.1	29	21					0.02	<10	0.6	6.2	<0.05	0.2	360
19-Jun-17	114023	327	659		8.0	24	4					**0.05**	10	0.7	<0.05	<0.05	<0.1	400
26-Feb-18	120270	140	370		7.6	17	8					**0.05**	50	0.4	1.7	<0.5	<0.1	230
23-Apr-18	121811	231	559		7.8	26	16					<0.01	30	0.5	2.5	<0.5	0.1	330
29-Apr-19	131394	205	555		7.8	27	18					0.02	40	0.2	2.5	<0.5	0.2	350
10-Dec-19	137317	141	394		7.9	17	22					**0.04**	50	0.7	0.9	<0.05	0.2	220
20-Apr-20	140349	215	562		8.0	26	18					0.02	30	0.5	1.1	<0.5	<0.1	300
22-Apr-21	149439	238	622		8.1	30	22					0.02	20	<2	1.6	<0.05	<0.1	320
19-Oct-21	154710	384	841		7.9	37	15					**0.04**	20	0.6	0.3	<0.05	0.2	500
30-Nov-21	155948	333	778		8.0	34	21					0.03	<10	0.5	1.5	<0.05	0.2	450
26-Apr-22	160119	257	620		7.8	30	16					<0.02	10	0.3	0.4	<0.05	0.1	340
15-Jun-22	161600	353	770		8.0	26	11					**0.05**	20	0.6	<0.05	<0.05	0.2	440
14-Feb-23	167984	169	459		7.9	27	25					<0.02	10	0.8	3.8	<0.05	<0.1	340
19-Apr-23	169765	239	491		7.7	22	19					**0.04**	40	0.4	<0.05	<0.05	<0.1	370
16-Apr-24	180160	233	570		7.4	25	18					<0.02	20	0.5	2.8	<0.05	0.1	260
12-Jun-24	181863	380	707		7.2	12	3					0.03	60	0.8	<0.05	<0.05	0.1	440
TOTAL SAMPLES		49	49	25	43	49	49	25	25	25	25	49	49	48	49	49	49	49
AVERAGE 2024		307	639		7.3	19	11					<0.02	40	0.7	1.4	<0.05	0.1	350

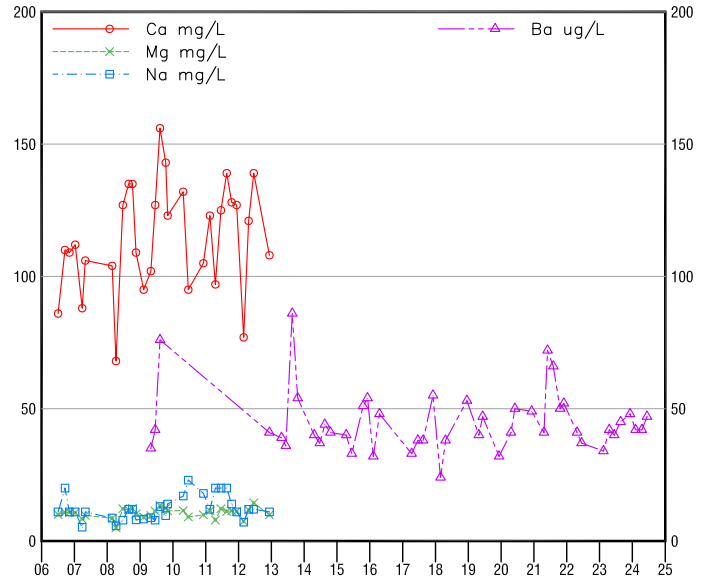
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



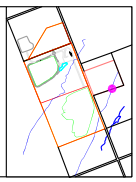








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW20

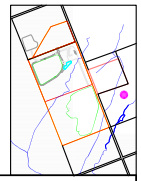
Surface Water

CA008825 11 Mar 25	wsp	H24007

SW20

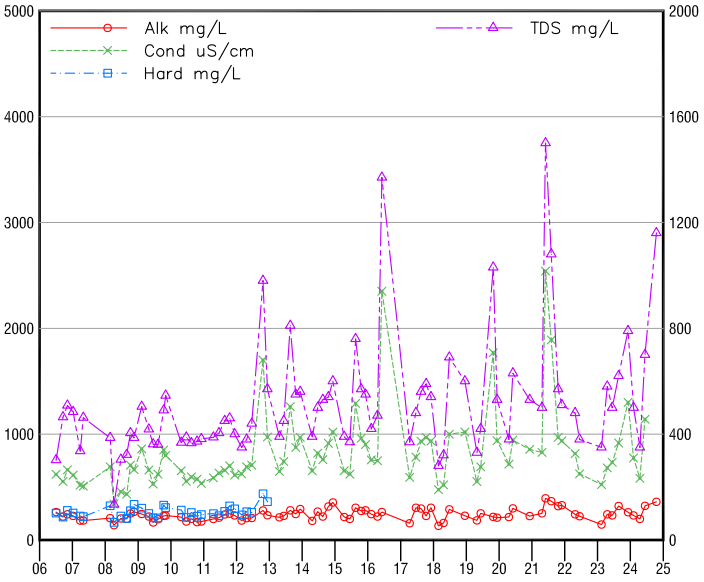
Surface Water

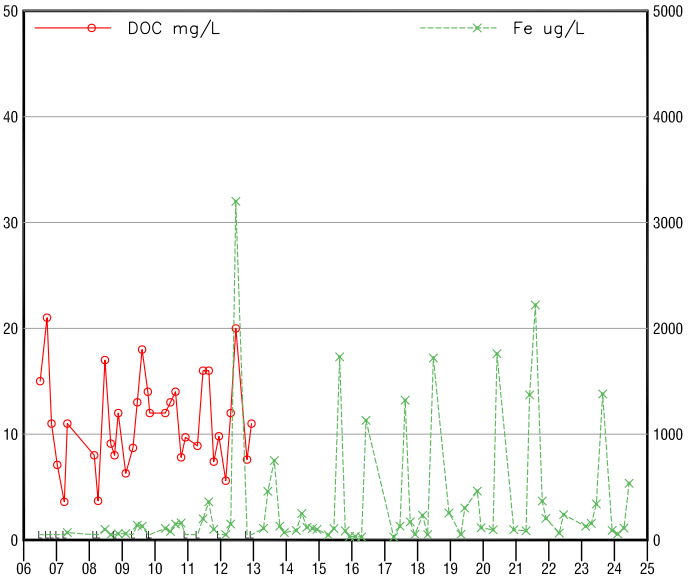
Surface Water Station

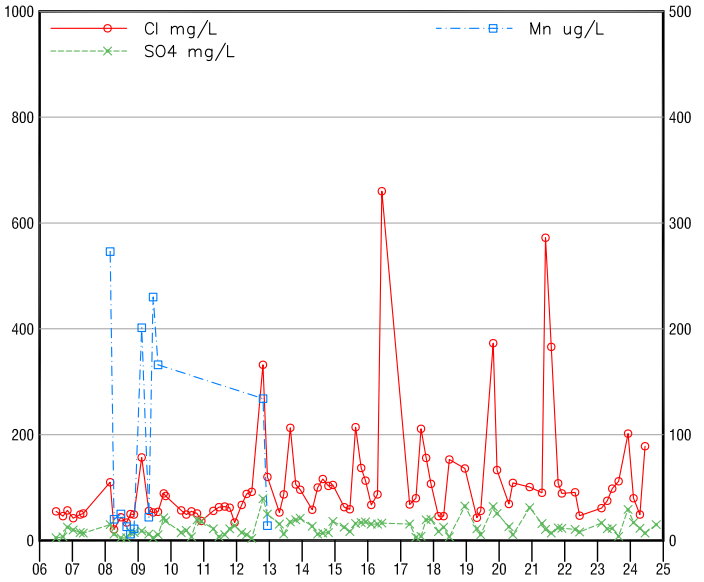


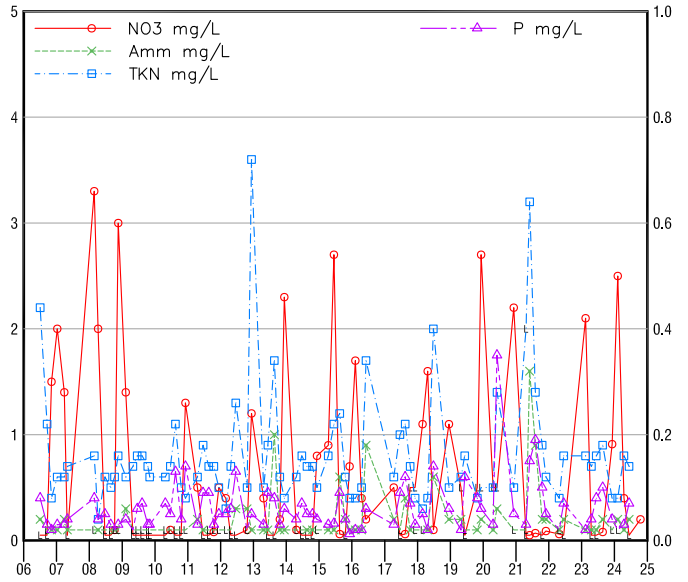
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
09-Feb-16	102276	277	715		7.8	34	19					<0.02	<10	0.5	3.5	<0.05	0.1	400
18-Apr-16	103688	251	624		7.8	33	20					<0.02	<10	0.4	0.6	<0.05	0.1	400
11-Apr-17	112235	179	519		8.0	28	21					<0.02	<10	0.6	4.9	0.06	0.2	350
19-Jun-17	114024	336	670		7.8	23	3					**0.04**	40	0.8	<0.05	<0.05	<0.1	410
16-Aug-17	115566	448	860		7.8	23	2					**0.08**	40	1.8	<0.05	<0.05	0.5	520
04-Dec-17	118412	303	715		7.9	38	32					0.01	<10	0.4	<0.5	<0.5	<0.1	410
26-Feb-18	120271	152	407		7.6	17	10					**0.04**	40	0.3	2.1	<0.5	<0.1	250
23-Apr-18	121812	237	558		7.9	25	15					0.01	10	0.6	2.0	<0.5	0.1	340
17-Dec-18	128548	216	677		7.7	41	46					**0.04**	50	0.4	2.7	<0.05	0.2	390
29-Apr-19	131395	206	541		7.8	26	17					0.01	30	0.5	1.9	<0.5	0.2	310
10-Jun-19	132378	310	678		7.8	23	3					**0.05**	40	0.8	<0.05	<0.05	<0.1	380
10-Dec-19	137318	138	424		8.0	23	23					**0.06**	20	0.4	2.1	<0.05	0.2	240
20-Apr-20	140350	216	556		7.9	25	17					0.01	<10	0.5	0.9	<0.5	0.1	310
03-Jun-20	141378	358	753		7.7	17	2					**0.11**	40	1.1	<0.5	<0.5	0.2	470
07-Dec-20	146266	252	750		8.0	50	43					0.03	30	0.5	8.1	<0.5	<0.1	470
22-Apr-21	149440	240	613		8.1	28	22					0.02	20	<2	1.3	<0.05	<0.1	370
01-Jun-21	150499	381	720		7.9	26	0.7					**0.15**	90	4.4	0.05	<0.05	0.7	540
04-Aug-21	152216	438	914		7.7	32	1					**0.15**	60	2	<0.05	<0.05	0.3	610
19-Oct-21	154711	375	850		7.8	40	18					0.03	20	0.6	0.4	<0.05	0.1	500
30-Nov-21	155949	336	784		8.0	35	22					0.01	470	0.4	1.5	<0.05	0.2	460
26-Apr-22	160120	264	621		7.7	27	13					<0.02	10	0.4	0.2	<0.05	0.1	270
15-Jun-22	161601	334	724		7.9	27	10					**0.06**	20	0.4	<0.05	<0.05	0.2	450
14-Feb-23	167985	170	464		7.8	28	25					<0.02	10	0.7	3.9	<0.05	<0.1	330
19-Apr-23	169766	236	479		7.7	21	18					<0.01	30	0.5	<0.05	<0.05	0.1	370
13-Jun-23	171323	268	599		7.5	11	47					**0.1**	50	1.3	0.2	<0.05	0.1	440
23-Aug-23	173437	435	811		7.7	27	1					**0.13**	40	1.3	<0.05	<0.05	0.2	600
06-Dec-23	2023A065	301	743		7.7	40.7	39.6					0.02	<10	0.4	0.14	<0.05	<0.1	470
06-Feb-24	178217	251	652		7.4	29	25					<0.02	10	<0.3	4.6	<0.05	0.1	390
16-Apr-24	180161	231	567		7.3	22	18					<0.02	20	0.5	2.9	<0.05	0.3	340
12-Jun-24	181864	388	706		7.2	12	2					**0.05**	40	0.9	<0.05	<0.05	0.1	450
TOTAL SAMPLES		73	73	31	65	73	73	31	31	31	31	73	73	73	73	73	73	73
AVERAGE 2024		290	642		7.3	21	15					<0.02	23	0.5	2.5	<0.05	0.2	393

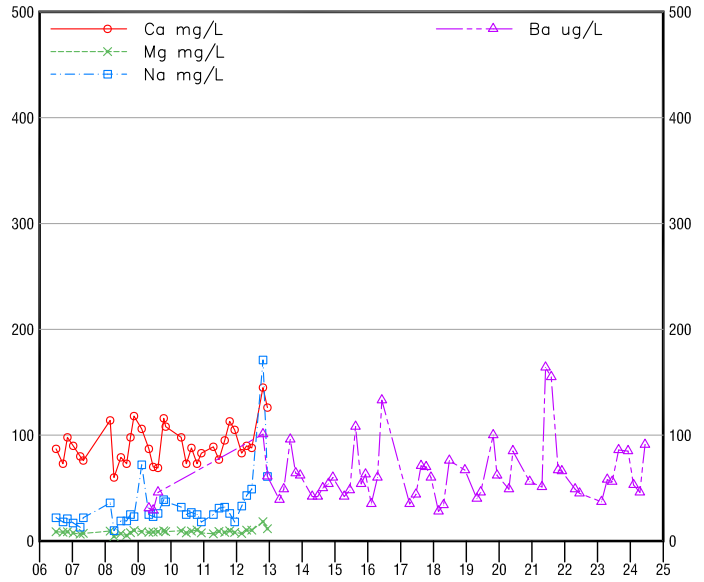
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



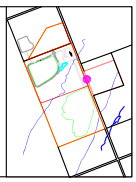








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW21

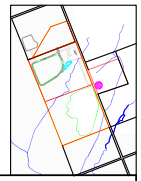
Surface Water

CA008825 11 Mar 25	wsp	H24008

SW21

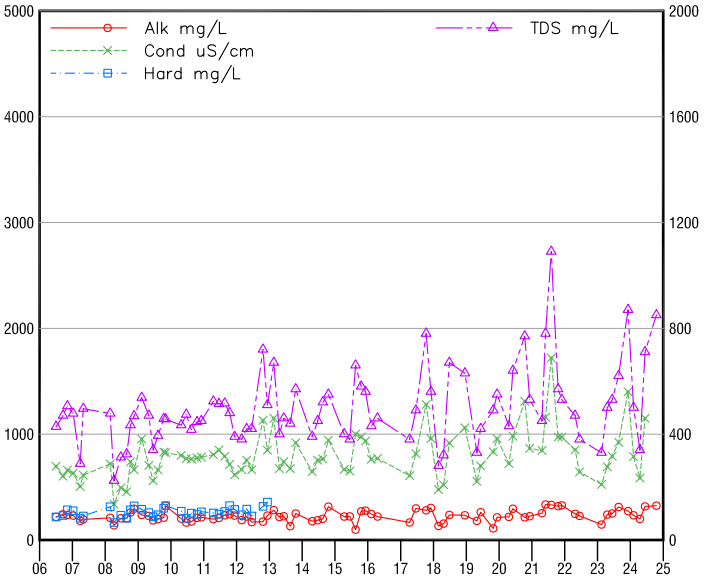
Surface Water

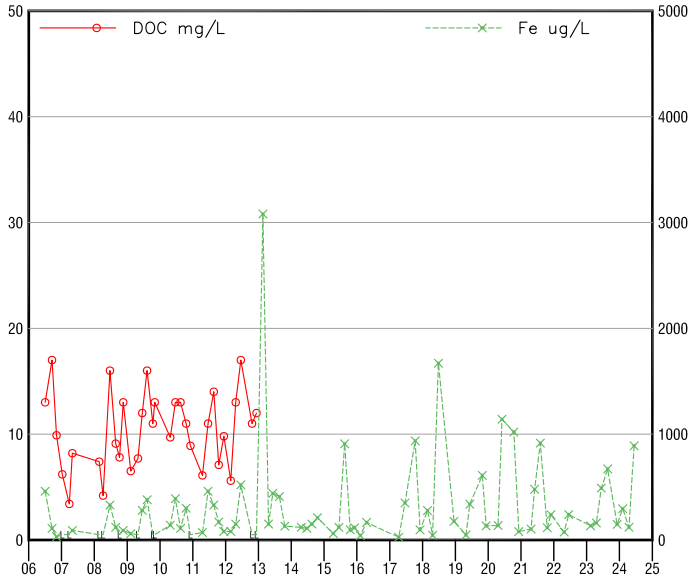
Surface Water Station

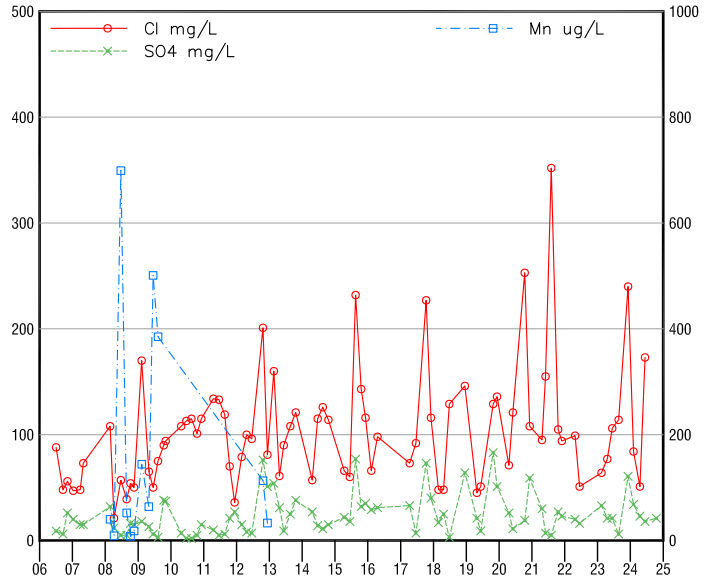


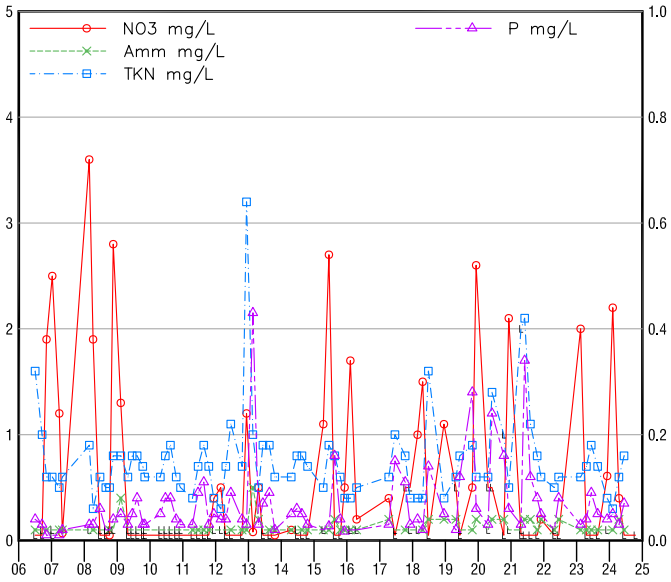
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
16-Aug-17	115567	297	933		8.0	211	8					**0.12**	40	1.1	0.06	<0.05	0.4	560
11-Oct-17	117026	228	969		7.7	156	39					**0.07**	30	0.7	<0.5	<0.5	0.1	590
04-Dec-17	118413	304	935		7.9	107	40					0.03	30	0.4	<0.5	<0.5	<0.1	540
26-Feb-18	120272	134	475		7.5	46	17					**0.05**	30	0.3	1.1	<0.5	<0.1	280
23-Apr-18	121813	161	520		8.0	46	25					0.02	30	0.4	1.6	<0.5	0.1	320
26-Jun-18	123545	289	1000		7.8	153	7					**0.14**	40	2	0.1	<0.05	0.6	690
17-Dec-18	128549	229	1020		7.8	136	65					**0.06**	60	0.5	1.1	<0.05	0.2	600
29-Apr-19	131396	185	552		8.0	43	22					0.02	40	0.6	<0.5	<0.5	0.2	330
10-Jun-19	132379	252	691		7.8	56	11					**0.12**	50	0.8	<0.05	<0.05	<0.1	420
28-Oct-19	136402	218	1770		7.8	373	64					**0.08**	30	0.4	<0.5	<0.5	0.1	1030
10-Dec-19	137319	210	938		7.7	133	51					**0.06**	30	<0.5	2.7	<0.05	0.2	530
20-Apr-20	140351	217	717		7.8	69	26					0.03	50	0.5	<0.5	<0.5	0.1	380
03-Jun-20	141379	298	944		7.9	109	11					**0.35**	70	1.4	<0.5	<0.5	0.3	630
07-Dec-20	146267	226	856		7.8	101	62					**0.05**	30	0.5	2.2	<0.5	<0.1	530
22-Apr-21	149441	252	827		7.9	90	32					0.03	50	<2	<0.05	<0.05	<0.1	500
01-Jun-21	150500	394	2540		7.8	572	21					**0.15**	50	3.2	0.05	<0.05	1.6	1500
04-Aug-21	152217	366	1890		8.0	366	14					**0.19**	70	1.4	0.07	<0.05	0.9	1080
19-Oct-21	154712	319	969		7.7	108	24					**0.1**	40	0.9	<0.05	<0.05	0.2	570
30-Nov-21	155950	328	936		7.8	89	23					**0.05**	20	0.6	0.09	<0.05	0.2	510
26-Apr-22	160121	243	816		7.7	91	21					<0.02	20	0.4	0.06	<0.05	0.1	480
15-Jun-22	161602	224	625		7.8	47	16					**0.07**	40	0.8	<0.05	<0.05	0.2	380
14-Feb-23	167986	145	524		7.6	61	33					0.02	30	0.8	2.1	<0.05	0.1	350
19-Apr-23	169767	243	681		7.7	75	22					**0.04**	50	0.7	<0.05	<0.05	0.1	580
13-Jun-23	171321	232	734		7.6	98	23					**0.08**	40	0.8	<0.05	<0.05	0.1	500
23-Aug-23	173438	321	916		7.8	112	8					**0.1**	40	0.9	0.08	<0.05	0.2	620
06-Dec-23	2023A066	262	1300		7.7	202	58.6					**0.04**	<10	0.4	0.91	<0.05	<0.1	790
06-Feb-24	178216	232	774		7.2	80	34					<0.02	40	0.4	2.5	<0.05	0.2	500
16-Apr-24	180162	199	582		7.3	49	23					0.03	30	0.8	0.4	<0.05	0.1	350
12-Jun-24	181865	323	1140		7.4	178	14					**0.07**	50	0.7	<0.05	<0.05	0.2	700
16-Oct-24	185320	360			7.8		30								0.2	<0.05		1160
TOTAL SAMPLES		83	82	33	75	82	83	33	33	33	33	82	82	82	83	83	82	83
AVERAGE 2024		279	832		7.4	102	25					0.033	40	0.6	0.8	<0.05	0.2	678

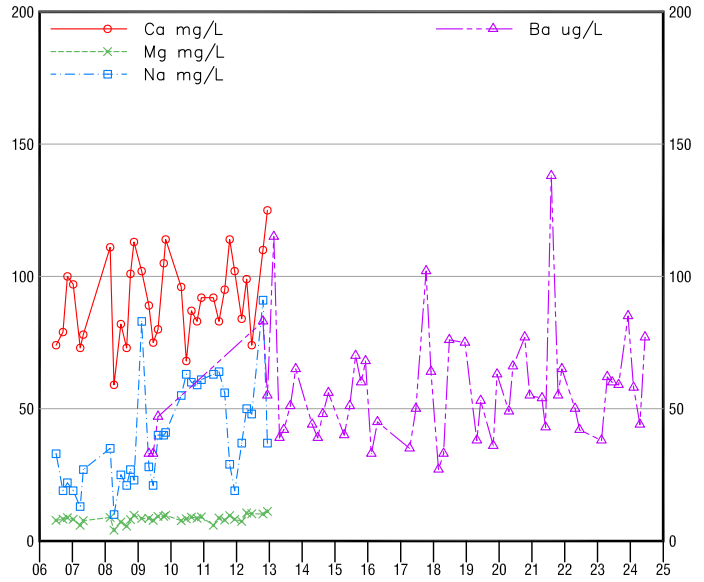
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *Italics* / Exceedance in **Bold**



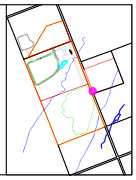








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW23

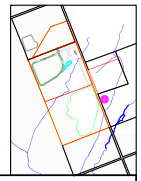
Surface Water

CA008825 11 Mar 25	wsp	H24009

SW23

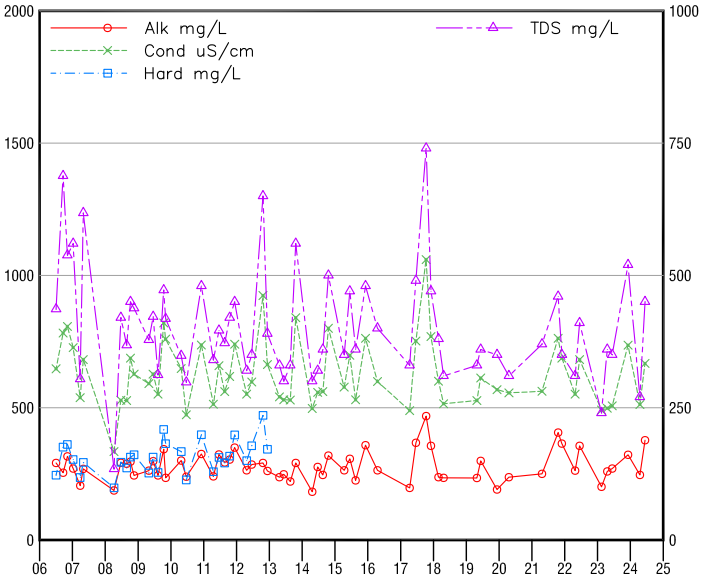
Surface Water

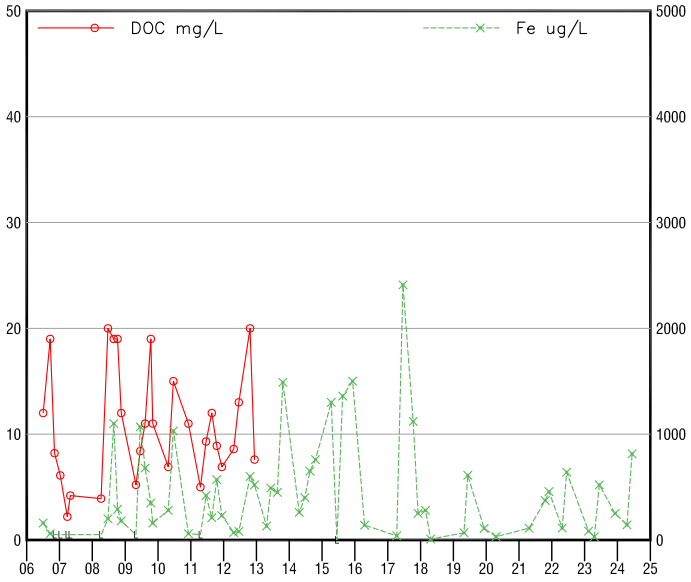
Surface Water Station

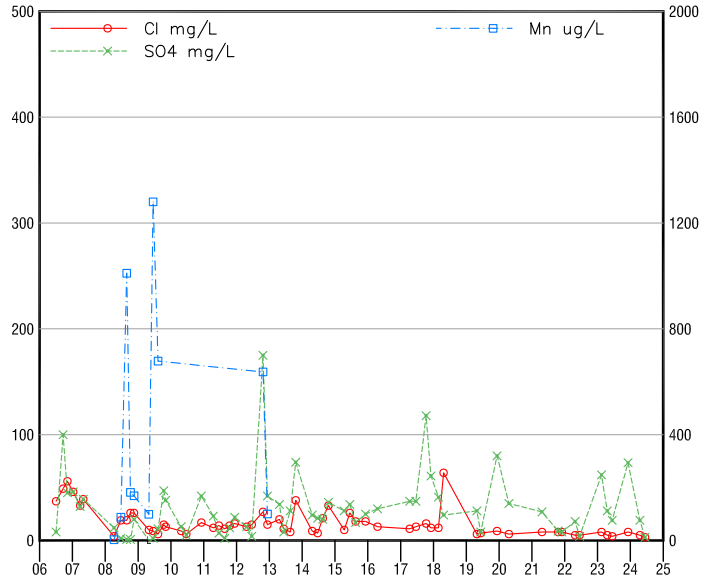


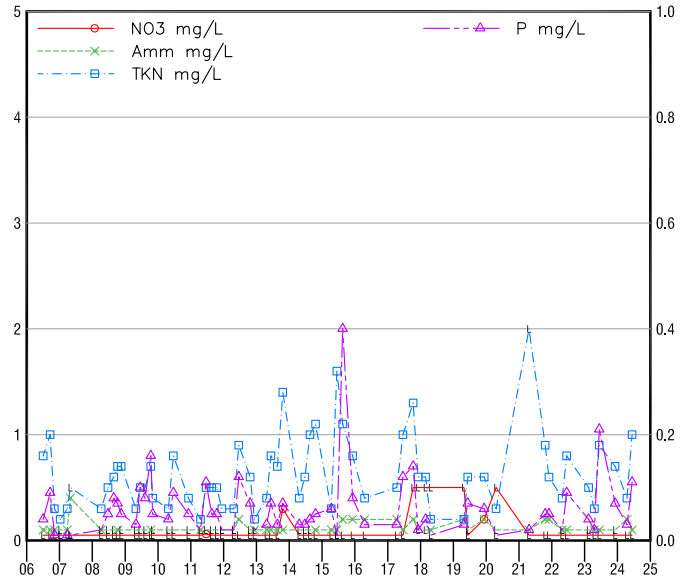
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
11-Oct-17	117027	280	1280		7.4	227	73					**0.11**	50	0.8	<0.5	<0.5	0.1	780
04-Dec-17	118414	303	958		7.8	116	40					0.03	20	0.4	<0.5	<0.5	<0.1	560
26-Feb-18	120273	132	476		7.5	48	17					**0.04**	30	0.4	1.0	<0.5	<0.1	280
23-Apr-18	121814	155	521		8.0	48	25					0.02	<10	0.4	1.5	<0.5	0.1	320
26-Jun-18	123546	237	915		7.2	129	3					**0.14**	70	1.6	<0.05	<0.05	0.2	670
17-Dec-18	128550	233	1060		7.7	146	64					**0.05**	60	0.4	1.1	<0.05	0.2	630
29-Apr-19	131397	181	554		7.9	45	21					0.02	40	0.6	<0.5	<0.5	0.2	330
10-Jun-19	132380	262	700		7.6	51	9					**0.12**	40	0.8	<0.05	<0.05	<0.1	420
28-Oct-19	136403	109	833		7.6	129	83					**0.28**	20	0.9	0.5	<0.5	0.1	490
10-Dec-19	137320	213	958		7.8	136	51					**0.06**	50	0.6	2.6	<0.05	0.2	550
20-Apr-20	140352	218	722		7.9	71	26					0.03	40	0.6	<0.5	<0.5	<0.1	430
03-Jun-20	141380	296	980		7.7	121	11					**0.24**	50	1.4	<0.5	<0.5	0.2	640
13-Oct-20	144911	213	1310		7.2	253	19					**0.16**	70	<1	<0.05	<0.05	0.2	770
07-Dec-20	146268	225	865		7.8	108	59					**0.06**	30	0.5	2.1	<0.5	<0.1	530
22-Apr-21	149442	253	845		8.0	95	30					0.03	50	<2	<0.05	<0.05	<0.1	450
01-Jun-21	150501	335	1160		7.4	155	7					**0.34**	60	2.1	<0.05	<0.05	0.2	780
04-Aug-21	152218	332	1720		7.4	352	5					**0.12**	40	1.1	<0.05	<0.05	0.2	1090
19-Oct-21	154713	320	972		7.8	105	27					**0.08**	40	0.8	<0.05	<0.05	0.1	570
30-Nov-21	155951	327	972		7.8	94	23					**0.05**	30	0.6	0.2	<0.05	0.2	530
26-Apr-22	160122	247	852		7.7	99	20					<0.02	30	0.5	<0.05	<0.05	0.1	470
15-Jun-22	161603	227	643		7.8	51	16					**0.08**	40	0.6	<0.05	<0.05	0.2	380
14-Feb-23	167987	146	525		7.6	64	33					0.03	20	0.6	2.0	<0.05	0.1	330
19-Apr-23	169768	240	691		7.6	77	21					**0.04**	40	0.7	<0.05	<0.05	0.1	500
13-Jun-23	171322	250	791		7.6	106	21					**0.09**	40	0.9	<0.05	<0.05	0.1	530
23-Aug-23	173439	312	923		7.6	114	6					**0.05**	40	0.7	<0.05	<0.05	0.1	620
06-Dec-23	2023A067	273	1400		7.5	240	60.6					**0.04**	10	0.4	0.61	<0.05	<0.1	870
06-Feb-24	178218	233	788		7.3	84	34					**0.05**	40	0.3	2.2	<0.05	0.1	500
16-Apr-24	180163	198	586		7.3	51	23					0.03	30	0.6	0.4	<0.05	0.2	340
12-Jun-24	181866	317	1150		7.1	173	18					**0.07**	40	0.8	<0.05	<0.05	0.1	710
16-Oct-24	185321	324			7.3		21								<0.05	<0.05		850
TOTAL SAMPLES		81	80	33	73	80	81	33	33	33	33	80	80	80	81	81	80	81
AVERAGE 2024		268	841		7.3	103	24					0.050	37	0.6	0.7	<0.05	0.1	600

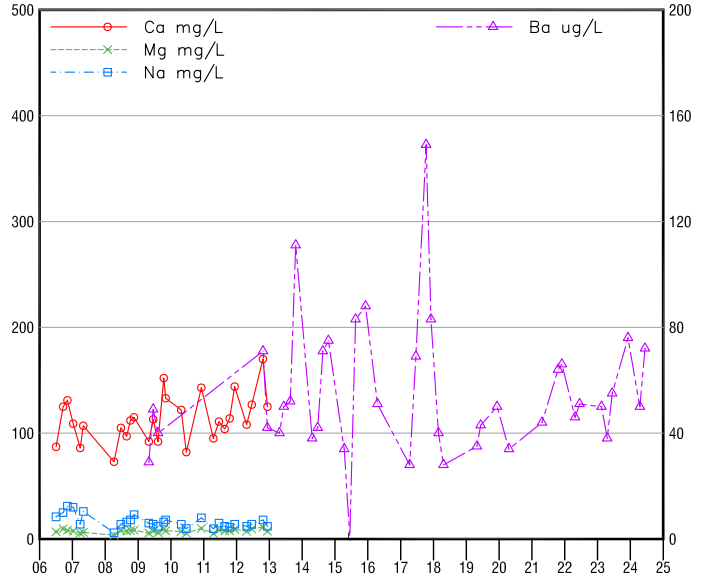
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



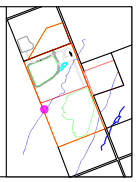








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

SW24

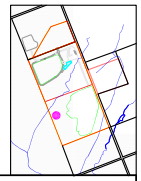
Surface Water

CA008825 11 Mar 25	wsp	H24010

SW24

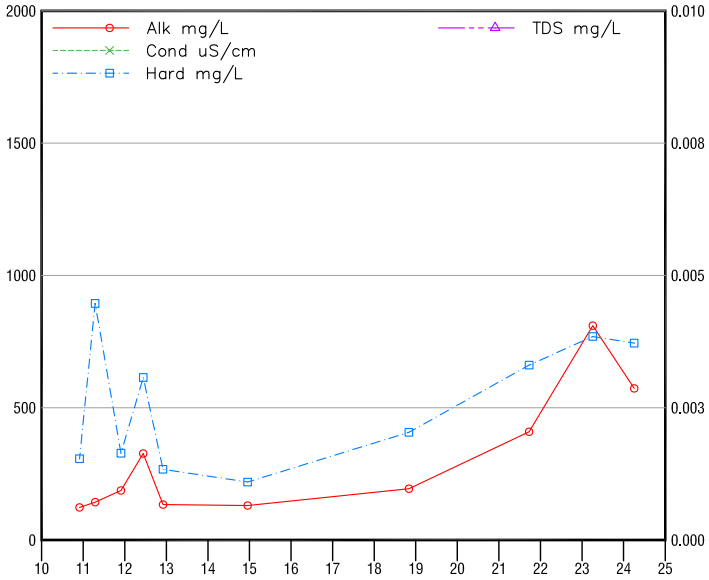
Surface Water

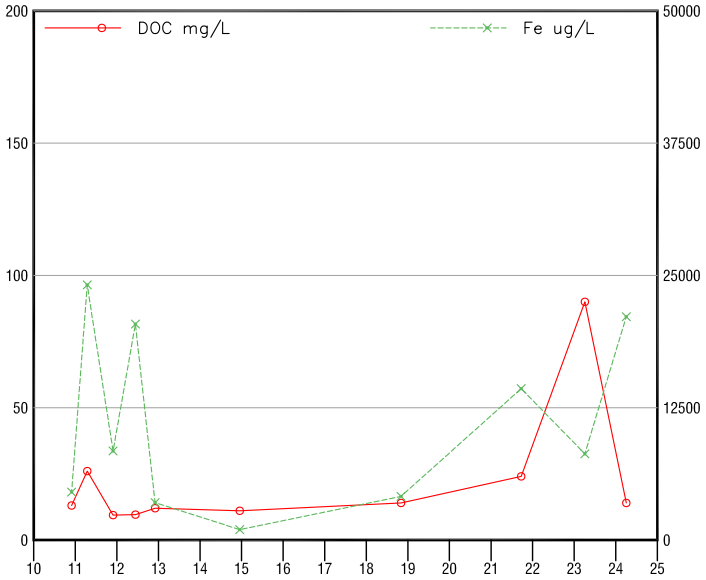
Surface Water Station

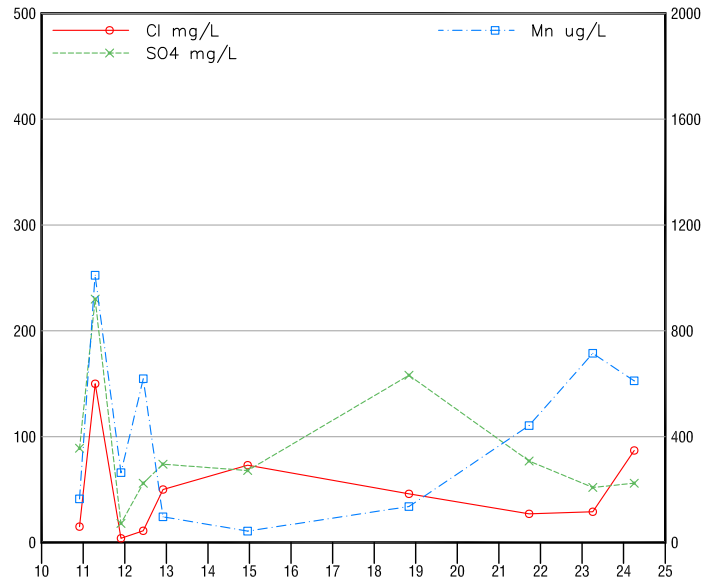


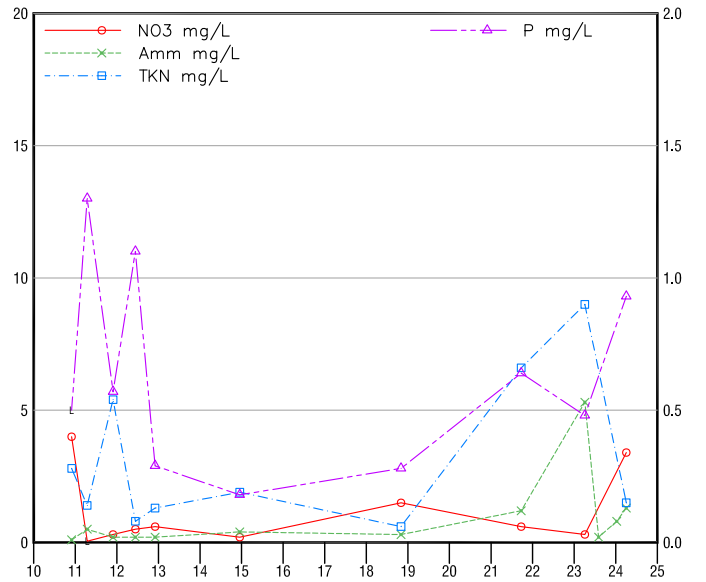
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
22-Apr-14	89170	182	497		7.8	9	24					0.03	<10	0.4	<0.05	<0.05	<0.1	300
23-Jun-14	90583	276	558		7.8	7	21					0.03	30	0.6	<0.05	<0.05	<0.1	320
19-Aug-14	91794	246	561		7.6	21	20					**0.04**	30	1	<0.05	<0.05	<0.1	360
20-Oct-14	93073	319	800		7.8	33	36					**0.05**	50	1.1	<0.05	<0.05	0.1	500
13-Apr-15	96290	263	578		7.6	10	28					**0.06**	10	0.3	<0.05	<0.05	0.1	350
15-Jun-15	97651	307	698		8.1	26	34					<0.01	100	1.6	<0.05	<0.05	0.1	470
18-Aug-15	99012	225	530		7.8	18	17					**0.4**	50	1.1	<0.05	<0.05	0.2	360
07-Dec-15	101147	358	762		7.6	18	25					**0.08**	40	0.8	<0.05	<0.05	0.2	480
18-Apr-16	103691	263	599		8.1	13	30					0.03	<10	0.4	<0.05	<0.05	0.2	400
11-Apr-17	112238	197	489		8.0	11	37					0.03	<10	0.5	<0.05	<0.05	0.2	330
19-Jun-17	114027	367	752		7.6	13	37					**0.12**	60	1	<0.05	<0.05	0.1	490
11-Oct-17	117028	468	1060		7.7	16	118					**0.14**	80	1.3	<0.5	<0.5	0.2	740
04-Dec-17	118415	356	769		7.7	12	61					0.02	40	0.6	<0.5	<0.5	<0.1	470
26-Feb-18	120274	237	600		7.6	12	41					**0.04**	30	0.6	<0.5	<0.5	<0.1	380
23-Apr-18	121815	235	515		7.9	64	24					<0.01	20	0.2	<0.5	<0.5	0.1	310
29-Apr-19	131398	234	527		7.8	6	28					0.03	30	0.2	<0.5	<0.5	0.2	330
10-Jun-19	132381	299	612		7.5	7	8					**0.07**	30	0.6	<0.05	<0.05	<0.1	360
10-Dec-19	137321	191	568		7.8	9	80					**0.06**	50	0.6	0.2	<0.05	0.2	350
20-Apr-20	140353	237	556		7.8	6	35					<0.01	<10	0.3	<0.5	<0.5	<0.1	310
22-Apr-21	149443	250	562		7.9	8	27					0.02	40	<2	<0.05	<0.05	0.1	370
19-Oct-21	154714	406	762		7.9	8	9					**0.05**	60	0.9	<0.05	<0.05	0.2	460
30-Nov-21	155952	364	687		7.8	8	8					**0.05**	40	0.6	<0.05	<0.05	0.2	350
26-Apr-22	160123	262	551		7.8	5	18					<0.02	30	0.4	<0.05	<0.05	0.1	310
15-Jun-22	161604	356	682		8.0	5	4					**0.09**	50	0.8	<0.05	<0.05	0.1	410
14-Feb-23	167988	201	491		7.7	8	62					**0.04**	40	0.5	<0.05	<0.05	<0.1	240
19-Apr-23	169769	259	498		7.7	5	28					0.02	90	0.3	<0.05	<0.05	0.1	360
13-Jun-23	171330	270	507		7.8	4	19					**0.21**	60	0.9	<0.05	<0.05	0.1	350
06-Dec-23	2023A068	322	736		7.3	8	73.5					**0.07**	40	0.7	<0.05	<0.05	<0.1	520
16-Apr-24	180164	246	512		7.3	5	19					0.03	30	0.4	<0.05	<0.05	0.2	270
12-Jun-24	181867	377	667		7.6	3	3					**0.11**	60	1	<0.05	<0.05	0.1	450
TOTAL SAMPLES		62	62	28	55	62	62	28	28	28	28	62	62	62	62	62	62	62
AVERAGE 2024		312	590		7.5	4	11					0.070	45	1	<0.05	<0.05	0.2	360

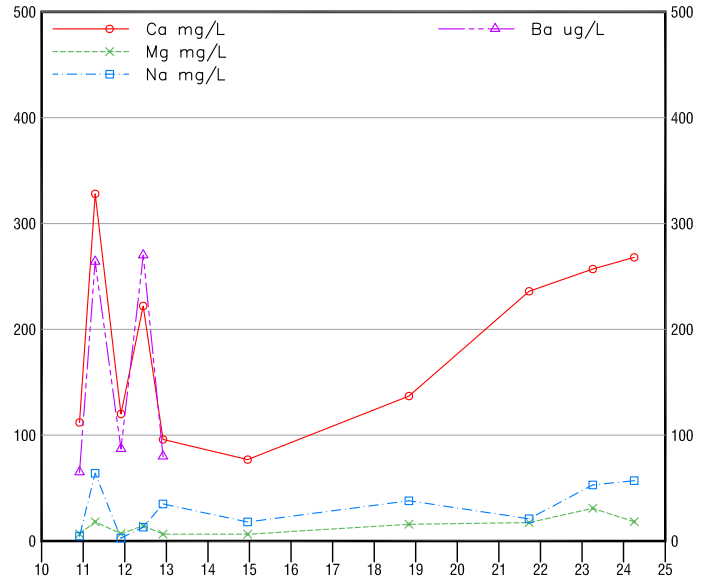
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



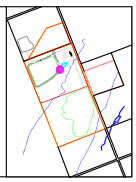








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

NFA SWMP IN

Storm Water

CA008825 11 Mar 25	wsp	H24012

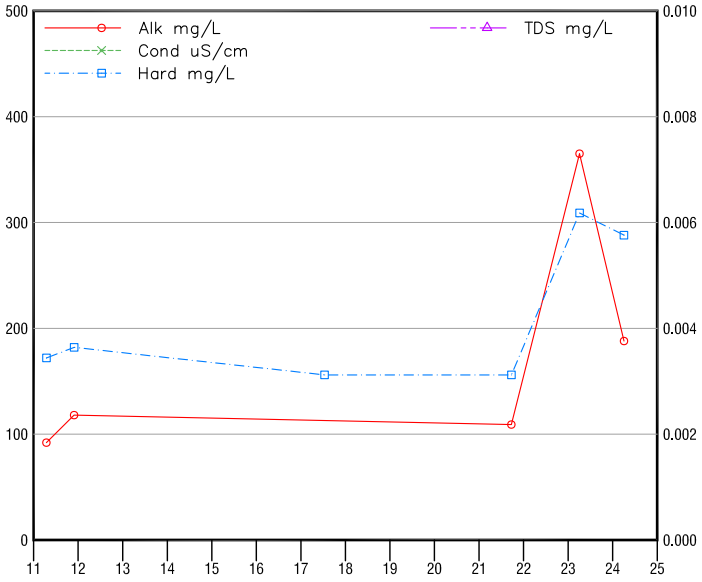
NFA SWMP IN

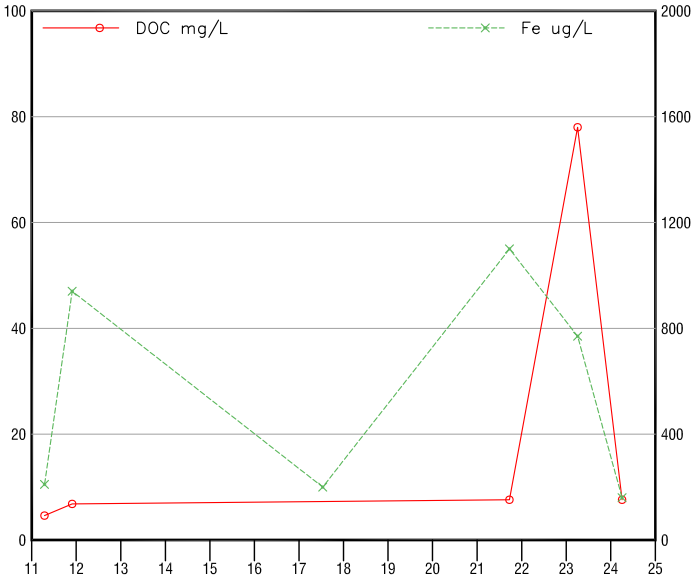
Storm Water

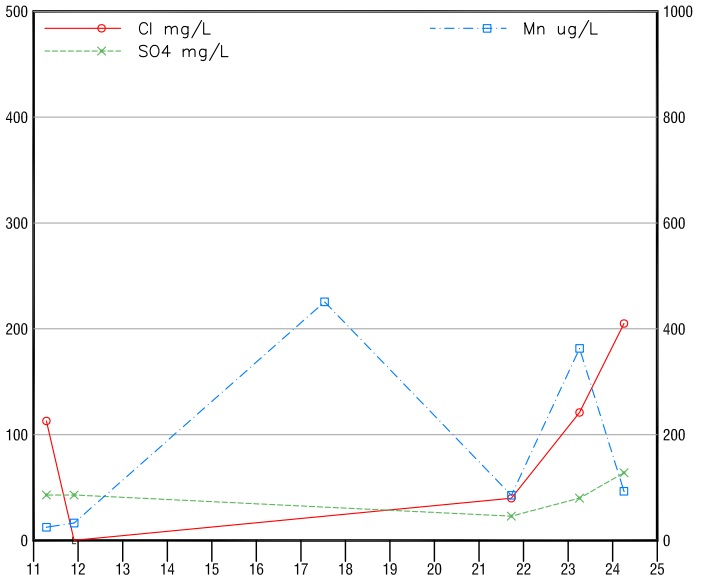
Storm Water Management

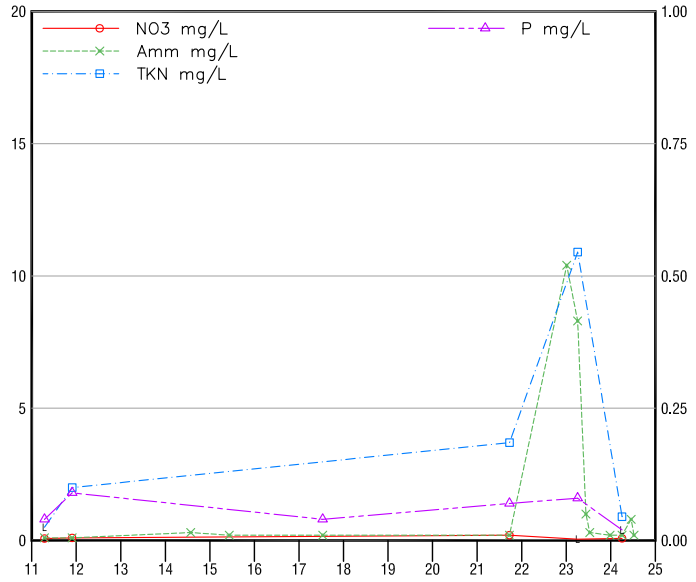
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
30-Nov-10	65422	123		307	7.8	15	89	112	6.7	4.7	3.66	<0.5	65	2.8	4.0	<0.05	0.1	
16-Apr-11	67508	143		894	7.8	150	230	328	18.1	64	9.68	**1.3**	293	1.4	<0.05	0.13	0.5	
29-Nov-11	71767	187		328	8.1	4	18	120	6.9	2.7	7.14	**0.57**	<20	5.4	0.3	<0.05	0.2	
12-Jun-12	74974	327		614		11	56	222	14.4	13	9.42	**1.1**	70	0.8	0.5	<0.05	0.2	
02-Dec-12	78888	134		267	7.8	50	74	96	6.5	35	10.3	**0.29**	20	1.3	0.6	<0.05	0.2	
16-Dec-14	94176	130		219		73	68	77	6.4	18	<0.5	**0.18**	<10	1.9	0.2	<0.05	0.4	
02-Nov-18	127680	194		407	8.2	46	158	137	15.8	38	13.4	**0.28**	80	0.6	1.5	<0.05	0.3	
23-Sep-21	153982	409		661	8.0	27	77	236	17.4	21	16.3	**0.64**	160	6.6	0.6	<0.05	1.2	
05-Apr-23	169417	810		769	8.0	29	52	257	30.9	53	15.8	**0.48**	320	9	0.3	0.06	5.3	
04-Aug-23	172906				7.6												0.2	
10-Jan-24	177543				7.8												0.8	
03-Apr-24	179781	573		744	7.6	87	56	268	18.2	57	10.6	**0.93**	140	1.5	3.4	<0.05	1.3	
TOTAL SAMPLES		10	0	10	10	10	10	10	10	10	10	10	10	10	10	10	12	0
AVERAGE 2024					7.7												1.1	

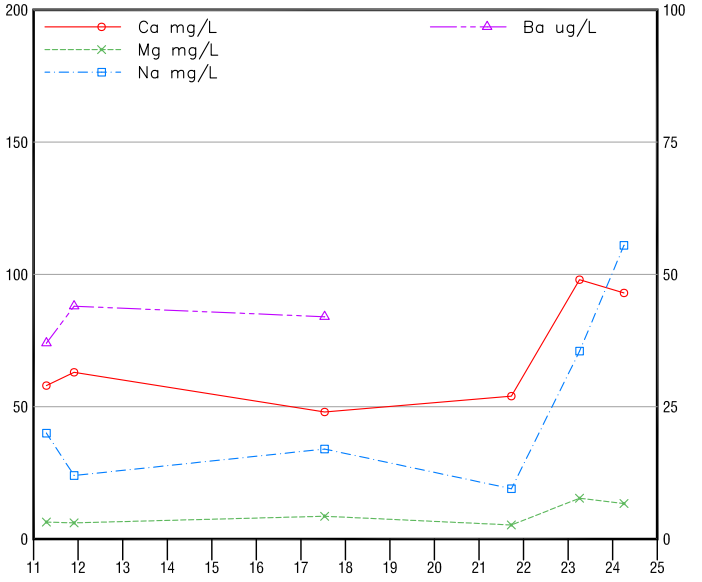
all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**



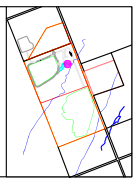








L	Concentration Reported Less Than
G	Concentration Reported Greater Than
A	Concentration Determined Anomalous
	Anomaly Not Plotted



CITY OF PETERBOROUGH

BENSFORT LANDFILL & ORGANICS FACILITY

NFA SWMP OUT

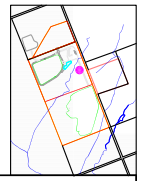
Storm Water

CA008825 11 Mar 25	wsp	H24013

NFA SWMP OUT

Storm Water

Storm Water Management



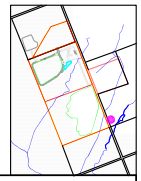
DATE	SAMPLE #	Alk	Cond uS/cm	Hard	pH units	Cl	SO4	Ca	Mg	Na	K	P	COD	TKN	NO3	NO2	Amm	TDS
	PWQO											0.03						
16-Apr-11	67509	92		172	8.1	113	43	58	6.4	40	3.1	**0.04**	<10	<0.5	0.07	<0.05	0.1	
29-Nov-11	71766	118		182	8.0	<0.1	43	63	6.1	24	3.54	**0.09**	<20	2	0.1	<0.05	0.1	
28-Jul-14	91294				8.1												0.3	
09-Jun-15	97526																0.2	
14-Jul-17	114671			156	7.8			48	8.6	34	12.2	**0.04**					0.2	
23-Sep-21	153983	109		156	7.9	40	23	54	5.3	19	5.4	**0.07**	20	3.7	0.2	<0.05	0.2	
05-Jan-23	167045				7.3												10.4	
05-Apr-23	169418	365		309	7.6	121	40	98	15.4	71	10.9	**0.08**	260	10.9	<0.05	<0.05	8.3	
12-Jun-23	171310				7.5												1	
13-Jul-23	172272				7.6												0.3	
27-Dec-23	2023A071				7.8												0.2	
03-Apr-24	179782	188		288	7.3	205	64	93	13.4	111	7.6	<0.02	20	0.9	0.08	<0.05	0.2	
17-Jun-24	182014				7.4												0.8	
10-Jul-24	182617				7.3												0.2	
TOTAL SAMPLES		5	0	6	13	5	5	6	6	6	6	6	5	5	5	5	14	0
AVERAGE 2024					7.3												0.4	

all Concentrations mg/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW1

Surface Water

Surface Water Station



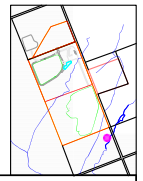
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
07-Dec-15	101138		60		14.9	<0.1	<0.5	0.7	73	<0.5			<1					6.4
09-Feb-16	102270		34		9.7	<0.1	<0.5	0.5	41	<0.5			<1					2.4
18-Apr-16	103681		49		16.1	<0.1	<0.5	0.5	76	<0.5			<1					1.4
11-Apr-17	112229		36		14.7	<0.1	<0.5	1.2	25	<0.5			<1					1.9
19-Jun-17	114017		42		31.2	<0.1	<0.5	0.7	**330**	<0.5			<1					2.5
04-Dec-17	118406		57		15.9	<0.1	<0.5	1	65	<0.5			<1					0.6
26-Feb-18	120265		26		9.8	<0.1	<0.5	1.2	163	<0.5			<1					2.6
23-Apr-18	121806		36		12.9	<0.1	<0.5	0.9	45	<0.5			<1					<0.5
26-Jun-18	123548		106		27.4	<0.1	<0.5	0.9	**820**	<0.5			<1					<0.5
17-Dec-18	128542		60		15.6	<0.1	<0.5	1.9	156	<0.5			<1					1.9
29-Apr-19	131388		39		18.4	<0.1	<0.5	1.5	65	<0.5			1					4.1
10-Jun-19	132371		43		23.6	<0.1	0.5	0.7	**364**	<0.5			**2**					3.8
10-Dec-19	137312		45		14.7	<0.1	<0.5	1.8	92	<0.5			<1					4
24-Feb-20	139020		57		12	<0.1	<0.5	<0.5	64	<0.5			<1					<0.5
20-Apr-20	140343		47		12.9	<0.1	<0.5	1.2	107	<0.5			<1					4.3
03-Jun-20	141371		86		31.9	<0.1	1.9	2	**2390**	0.9			<1					10
07-Dec-20	146260		56		16.5	<0.1	<0.5	3	47	<0.5			**2**					1.8
22-Apr-21	149434		51		16.7	<0.1	<0.5	1.4	75	<0.5			<1					4.4
19-Oct-21	154705		51		17	<0.1	<0.5	4.4	98	<0.5			1					2.2
30-Nov-21	155943		55		11.3	<0.1	0.5	0.8	168	<0.5			<1					1.9
26-Apr-22	160114		48		20.6	<0.1	<0.5	1.9	71	<0.5			<1					2.1
15-Jun-22	161595		45		30	<1	<1	<5	**350**	<10			<1					<10
14-Feb-23	167979		37		11.7	<0.1	<0.5	1.7	82	<0.5			<1					3.5
19-Apr-23	169760		47		17	<0.1	<0.5	1.3	57	<0.5			<1					<5
13-Jun-23	171325		60		43	<0.1	0.6	1.2	**1120**	<0.5			<1					17
23-Aug-23	173431		61		24	<0.1	0.6	<0.5	**1470**	<0.5			<1					<5
06-Dec-23	2023A060		56		12	<0.1	<0.5	<0.5	56	<0.5			<1					<5
06-Feb-24	178222		52		12	<0.1	<0.5	0.9	30	<0.5			<1					<5
16-Apr-24	180155		42		24	<0.1	<0.5	1.1	107	<0.5			<1					<5
12-Jun-24	181859		55		19	<0.1	<0.5	0.6	**880**	<0.5			<1					<5
TOTAL SAMPLES		3	46	3	46	46	46	46	72	46	11	3	72	3	3	3	3	46
AVERAGE 2024			50		18	<0.1	<0.5	0.9	339	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW2

Surface Water

Surface Water Station



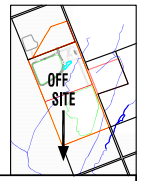
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
18-Apr-16	103682		47		18.8	<0.1	<0.5	0.6	54	<0.5			<1					1.8
11-Apr-17	112230		36		14.5	<0.1	<0.5	1.3	21	<0.5			<1					1.8
19-Jun-17	114018		39		29.8	<0.1	<0.5	0.6	144	<0.5			<1					2.1
11-Oct-17	117020		121		26.6	<0.1	<0.5	0.5	**3880**	<0.5			**14**					4.4
04-Dec-17	118407		55		15	<0.1	<0.5	0.9	44	<0.5			<1					1.6
26-Feb-18	120266		25		8.4	<0.1	<0.5	1.1	143	<0.5			<1					1.4
23-Apr-18	121807		36		12.3	<0.1	<0.5	0.9	40	<0.5			<1					<0.5
17-Dec-18	128543		61		14.4	<0.1	<0.5	2.2	53	<0.5			<1					2.5
29-Apr-19	131389		39		18.1	<0.1	<0.5	1	60	<0.5			1					5.1
10-Jun-19	132372		43		24.6	<0.1	<0.5	0.6	241	<0.5			**2**					3
10-Dec-19	137313		43		13.7	<0.1	<0.5	1.8	78	<0.5			<1					3.6
20-Apr-20	140344		44		12.5	<0.1	<0.5	1.3	86	<0.5			<1					2.9
03-Jun-20	141372		70		34.8	<0.1	<0.5	0.8	**810**	<0.5			<1					0.8
07-Dec-20	146261		54		13.9	<0.1	<0.5	0.9	38	<0.5			**2**					<0.5
22-Apr-21	149435		47		16.5	<0.1	<0.5	1	45	<0.5			**2**					1.6
01-Jun-21	150493		46		20.5	<0.1	<0.5	0.6	**604**	<0.5			1					1.3
04-Aug-21	152211		71		31.4	<0.1	<0.5	0.5	**1010**	<0.5			**2**					2.8
19-Oct-21	154706		50		16.5	<0.1	<0.5	0.7	67	<0.5			1					3.4
30-Nov-21	155944		54		11.5	<0.1	<0.5	0.7	55	<0.5			1					0.9
26-Apr-22	160115		43		17	<0.1	<0.5	0.9	52	<0.5			<1					1.2
15-Jun-22	161596		47		30	<1	<1	<5	**770**	<10			<1					<10
22-Jun-22	161825		83		20	<1	<1	<5	**1200**	<10			1					<10
14-Feb-23	167980		36		9.1	<0.1	<0.5	1.2	59	<0.5			<1					2.3
19-Apr-23	169761		49		18	<0.1	<0.5	1.5	128	<0.5			<1					<5
13-Jun-23	171327		49		40	<0.1	<0.5	2.7	**620**	<0.5			<1					<5
23-Aug-23	173432		72		15	<0.1	<0.5	<0.5	**1350**	<0.5			1					<5
06-Dec-23	2023A061		56		12	<0.1	<0.5	<0.5	55	<0.5			<1					<5
06-Feb-24	178224		47		10	<0.1	<0.5	0.9	32	<0.5			<1					<5
16-Apr-24	180156		42		20	<0.1	<0.5	1	89	<0.5			<1					<5
12-Jun-24	181860		54		20	<0.1	<0.5	<0.5	**745**	<0.5			<1					<5
TOTAL SAMPLES		3	47	3	47	47	47	47	73	47	10	3	73	3	3	3	3	47
AVERAGE 2024			48		17	<0.1	<0.5	1	289	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW3

Surface Water

Surface Water Station



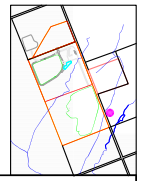
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
18-Apr-16	103683		51		19.6	<0.1	<0.5	0.7	71	<0.5			**2**					1.2
06-Jun-16	104763		69		22.3	<0.1	1.1	1.1	**1240**	<0.5			<1					2.5
11-Apr-17	112231		37		14.8	<0.1	<0.5	1.2	15	<0.5			<1					1.1
19-Jun-17	114019		47		29.8	<0.1	<0.5	0.7	177	<0.5			<1					2
16-Aug-17	115562		66		20.6	<0.1	0.6	0.8	**976**	<0.5			<1					3.6
11-Oct-17	117021		86		28.3	0.1	<0.5	**113**	**303**	**6.6**			1					**70.3**
04-Dec-17	118408		59		14.9	<0.1	<0.5	1.1	84	<0.5			<1					0.7
26-Feb-18	120267		27		17	<0.1	<0.5	1.3	179	<0.5			<1					0.8
23-Apr-18	121808		39		14.3	<0.1	<0.5	1	34	<0.5			<1					<0.5
17-Dec-18	128544		57		13.9	<0.1	<0.5	1.6	28	<0.5			1					1.5
29-Apr-19	131390		41		22.1	<0.1	<0.5	1	102	<0.5			1					5.2
10-Jun-19	132373		45		27.7	<0.1	0.5	0.8	283	<0.5			1					3.3
10-Dec-19	137314		49		17.1	<0.1	<0.5	1.9	107	<0.5			<1					2.2
24-Feb-20	139022		64		18.8	<0.1	<0.5	<0.5	80	<0.5			<1					<0.5
20-Apr-20	140346		49		13.9	<0.1	<0.5	2.1	168	<0.5			<1					3
03-Jun-20	141374		61		26.4	<0.1	0.6	1.4	**766**	<0.5			<1					2.8
07-Dec-20	146262		58		17.9	<0.1	<0.5	1	42	<0.5			**2**					<0.5
22-Apr-21	149436		50		17.9	<0.1	<0.5	1.1	40	<0.5			**2**					1.2
19-Oct-21	154707		51		18.5	<0.1	<0.5	0.9	44	<0.5			**2**					<0.5
30-Nov-21	155945		54		15.2	<0.1	<0.5	0.7	94	<0.5			1					1.7
26-Apr-22	160116		44		19	<0.1	<0.5	0.9	48	<0.5			<1					2.2
15-Jun-22	161597		37		30	<1	<1	<5	160	<10			<1					<10
14-Feb-23	167981		37		11.3	<0.1	<0.5	1.3	46	<0.5			<1					1.7
19-Apr-23	169762		46		24	<0.1	<0.5	1.2	43	<0.5			<1					<5
13-Jun-23	171326		61		42	<0.1	<0.5	1	**380**	<0.5			<1					<5
23-Aug-23	173433		65		26	<0.1	<0.5	<0.5	**909**	<0.5			<1					<5
06-Dec-23	2023A062		55		16	<0.1	<0.5	<0.5	116	<0.5			<1					<5
06-Feb-24	178223		52		15	<0.1	<0.5	1.3	142	<0.5			<1					17
16-Apr-24	180157		44		24	<0.1	<0.5	1.1	83	<0.5			<1					<5
12-Jun-24	181861		63		31	<0.1	0.7	1	**859**	<0.5			<1					<5
TOTAL SAMPLES		3	50	3	50	50	50	50	79	50	12	3	79	3	3	3	3	50
AVERAGE 2024			53		23	<0.1	<0.5	1.1	361	<0.5			<1					6

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW17

Surface Water

Surface Water Station



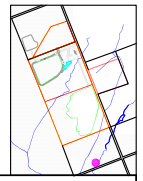
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
15-Jun-15	97645		54		32.9	<0.1	<0.5	0.9	121	<0.5			<1					9.2
19-Oct-15	100242		63		36.6	<0.1	<0.5	0.7	155	<0.5			<1					7.9
07-Dec-15	101141		70		22.9	<0.1	<0.5	0.5	49	<0.5			<1					8.1
09-Feb-16	102273		34		12.7	<0.1	<0.5	<0.5	34	<0.5			<1					3.1
18-Apr-16	103684		45		28.4	<0.1	<0.5	<0.5	73	<0.5			<1					2.8
11-Apr-17	112232		35		16	<0.1	<0.5	1	26	<0.5			<1					3.6
19-Jun-17	114021		48		58.3	<0.1	<0.5	<0.5	93	<0.5			<1					2.8
11-Oct-17	117022		79		32.6	<0.1	<0.5	0.8	123	<0.5			<1					3.6
04-Dec-17	118409		62		25	<0.1	<0.5	0.6	53	<0.5			<1					1.6
26-Feb-18	120268		27		12	<0.1	<0.5	1.3	211	<0.5			<1					14.3
23-Apr-18	121809		35		15.6	<0.1	<0.5	1.2	51	<0.5			<1					1.3
17-Dec-18	128545		68		27.5	<0.1	<0.5	1.4	72	<0.5			<1					3.7
29-Apr-19	131392		37		25.1	<0.1	<0.5	2.9	78	<0.5			1					5
10-Jun-19	132375		46		29.8	<0.1	<0.5	<0.5	227	<0.5			**2**					3
10-Dec-19	137315		65		36	<0.1	<0.5	1.8	115	<0.5			<1					9.4
24-Feb-20	139024		63		17.7	<0.1	<0.5	<0.5	88	<0.5			<1					5.4
20-Apr-20	140347		47		18.6	<0.1	<0.5	1.2	156	<0.5			<1					4.1
03-Jun-20	141375		73		46.3	<0.1	<0.5	0.5	**1500**	<0.5			<1					2.5
07-Dec-20	146263		58		25.7	<0.1	<0.5	0.7	97	<0.5			**2**					2.7
22-Apr-21	149437		52		26.7	<0.1	<0.5	0.8	111	<0.5			**2**					2.9
19-Oct-21	154708		57		21.4	<0.1	<0.5	<0.5	174	<0.5			**2**					<0.5
30-Nov-21	155946		63		17.3	<0.1	<0.5	0.5	183	<0.5			**2**					5.1
26-Apr-22	160117		50		26.3	<0.1	<0.5	0.7	82	<0.5			<1					1.4
15-Jun-22	161598		47		30	<1	<1	<5	**340**	<10			<1					<10
14-Feb-23	167982		38		15	<0.1	<0.5	1.1	153	<0.5			<1					4.2
19-Apr-23	169763		57		27	<0.1	<0.5	0.7	138	<0.5			<1					<5
13-Jun-23	171324		60		42	<0.1	<0.5	0.6	**650**	<0.5			<1					<5
06-Dec-23	2023A063		83		25	<0.1	<0.5	<0.5	95	<0.5			<1					8
06-Feb-24	178220		54		15	<0.1	<0.5	0.9	51	<0.5			<1					<5
16-Apr-24	180158		44		24	<0.1	<0.5	1	136	<0.5			<1					<5
TOTAL SAMPLES		3	45	3	45	45	45	45	66	45	12	3	66	3	3	3	3	45
AVERAGE 2024			49		20	<0.1	<0.5	1	94	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW18

Surface Water

Surface Water Station



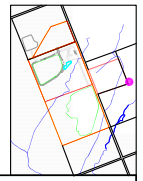
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
19-Oct-15	100243		58		17.5	<0.1	<0.5	0.9	**338**	<0.5			<1					8.2
07-Dec-15	101142		60		14.2	<0.1	<0.5	0.8	68	<0.5			<1					7.4
09-Feb-16	102274		34		7.8	<0.1	<0.5	2.7	33	<0.5			1					3.3
18-Apr-16	103686		54		21.7	<0.1	<0.5	0.6	31	<0.5			**2**					1.6
11-Apr-17	112233		36		14.7	<0.1	<0.5	1.2	16	<0.5			<1					1.6
19-Jun-17	114022		48		32.9	<0.1	<0.5	1.1	267	<0.5			<1					2.8
11-Oct-17	117023		91		22.1	<0.1	0.7	2	**714**	0.6			**2**					7.6
04-Dec-17	118410		58		15.2	<0.1	<0.5	0.9	24	<0.5			<1					0.7
26-Feb-18	120269		24		8.3	<0.1	<0.5	1.3	147	<0.5			<1					0.9
23-Apr-18	121810		38		13.9	<0.1	<0.5	0.9	21	<0.5			<1					<0.5
17-Dec-18	128546		57		14.8	<0.1	<0.5	2.3	28	<0.5			<1					1.9
29-Apr-19	131393		40		18.2	<0.1	<0.5	0.9	44	<0.5			<1					2.7
10-Jun-19	132376		50		29.8	<0.1	<0.5	0.7	**446**	<0.5			**3**					3.6
10-Dec-19	137316		47		24.7	<0.1	<0.5	2.1	196	<0.5			<1					3.7
20-Apr-20	140348		48		15.1	<0.1	<0.5	1.5	161	<0.5			<1					2.5
03-Jun-20	141376		63		35.3	<0.1	0.6	1.1	**1100**	<0.5			<1					3.3
07-Dec-20	146264		56		15	<0.1	<0.5	0.9	62	<0.5			**2**					1.4
22-Apr-21	149438		48		17.8	<0.1	<0.5	1.1	82	<0.5			1					1.3
19-Oct-21	154709		51		17.8	<0.1	<0.5	0.7	52	<0.5			1					<0.5
30-Nov-21	155947		52		14.8	<0.1	<0.5	0.7	152	<0.5			**2**					0.9
26-Apr-22	160118		44		16.7	<0.1	<0.5	1.2	54	<0.5			<1					1.6
15-Jun-22	161599		38		20	<1	<1	<5	220	<10			<1					<10
14-Feb-23	167983		37		9.4	<0.1	<0.5	1.4	59	<0.5			<1					3
19-Apr-23	169764		49		24	<0.1	<0.5	1.2	65	<0.5			<1					<5
13-Jun-23	171329		53		47	<0.1	<0.5	0.9	**492**	<0.5			<1					<5
23-Aug-23	173435		90		50	<0.1	1.2	1	**2380**	1.9			<1					9
06-Dec-23	2023A064		56		14	<0.1	<0.5	<0.5	79	<0.5			<1					<5
06-Feb-24	178225		48		9	<0.1	<0.5	0.9	60	<0.5			<1					<5
16-Apr-24	180159		44		20	<0.1	<0.5	1	113	<0.5			<1					<5
12-Jun-24	181862		73		40	<0.1	<0.5	0.7	**1500**	<0.5			<1					<5
TOTAL SAMPLES		3	45	3	45	45	45	45	63	45	9	3	63	3	3	3	3	45
AVERAGE 2024			55		23	<0.1	<0.5	1	558	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW19

Surface Water

Surface Water Station



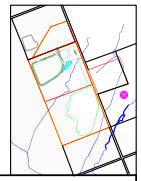
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
17-Oct-11	70912								<50				1					
12-Dec-11	72058								<50				<1					
28-Feb-12	73147								<50				<1					
23-Apr-12	74129								<50				**2**					
10-Dec-12	79064		42		<20	<1	<2	<5	<50	<10	6		<1					<10
23-Apr-13	81817		41		<20	<1	<2	<5	70	<10			<1					<10
10-Jun-13	82895		35		<20	<1	<2	<5	**610**	**10**			<1					<10
21-Oct-13	85797		54		<30	<1	<2	<5	180	<20			<1					<30
22-Apr-14	89166		42		<30	<1	<2	<5	50	<10			<1					<30
20-Oct-14	93069		42		<30	<1	<2	<5	<50	<10			<1					<30
13-Apr-15	96286		39		9.1	<0.1	<0.5	0.6	35	<0.5			<1					4.9
15-Jun-15	97647		35		22.5	<0.1	<0.5	5	112	<0.5			<1					11.5
07-Dec-15	101143												<1					
18-Apr-16	103687		52		13.2	<0.1	<0.5	0.7	34	<0.5			<1					2
11-Apr-17	112234		35		7.2	<0.1	<0.5	1.4	10	<0.5			<1					1.2
19-Jun-17	114023		41		19.1	<0.1	<0.5	1	**673**	<0.5			<1					3.2
26-Feb-18	120270		26		5	<0.1	<0.5	1.4	289	<0.5			<1					1.4
23-Apr-18	121811		39		5.5	<0.1	<0.5	0.7	4	<0.5			<1					<0.5
29-Apr-19	131394		41		11.1	<0.1	<0.5	1	49	<0.5			1					3.2
10-Dec-19	137317		29		4.3	<0.1	<0.5	2	67	<0.5			<1					3.2
20-Apr-20	140349		40		7.4	<0.1	<0.5	1.2	20	<0.5			<1					0.7
22-Apr-21	149439		42		7	<0.1	<0.5	0.9	14	<0.5			1					0.7
19-Oct-21	154710		48		9.1	<0.1	<0.5	1	63	<0.5			<1					<0.5
30-Nov-21	155948		54		8.3	<0.1	0.5	1.3	**431**	<0.5			<1					2.4
26-Apr-22	160119		42		10	<0.1	<0.5	3	26	<0.5			<1					0.5
15-Jun-22	161600		35		<20	<1	<1	<5	170	<10			<1					<10
14-Feb-23	167984		34		2.7	<0.1	<0.5	1	18	<0.5			<1					1.2
19-Apr-23	169765		43		9	<0.1	<0.5	1.7	237	<0.5			<1					<5
16-Apr-24	180160		41		9	<0.1	<0.5	1	16	<0.5			<1					<5
12-Jun-24	181863		54		14	<0.1	<0.5	1	**478**	<0.5			<1					<5
TOTAL SAMPLES		2	27	2	27	27	27	27	49	27	9	2	50	2	2	2	2	27
AVERAGE 2024			48		12	<0.1	<0.5	1	247	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW20

Surface Water

Surface Water Station



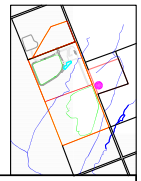
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
09-Feb-16	102276		32		5.8	<0.1	<0.5	0.6	16	<0.5			<1					1
18-Apr-16	103688		48		12.1	<0.1	<0.5	0.5	14	<0.5			1					1.8
11-Apr-17	112235		33		7.1	<0.1	<0.5	1.4	10	<0.5			<1					0.9
19-Jun-17	114024		38		17.9	<0.1	<0.5	<0.5	**435**	<0.5			<1					1.6
16-Aug-17	115566		38		14.1	<0.1	<0.5	<0.5	**2110**	<0.5			<1					2.5
04-Dec-17	118412		55		8	<0.1	<0.5	1.2	38	<0.5			<1					0.6
26-Feb-18	120271		24		4.9	<0.1	<0.5	0.9	72	<0.5			<1					<0.5
23-Apr-18	121812		38		6.1	<0.1	<0.5	0.8	31	<0.5			<1					<0.5
17-Dec-18	128548		53		6.4	<0.1	0.5	2.5	235	<0.5			<1					2.4
29-Apr-19	131395		40		10	<0.1	<0.5	1	11	<0.5			<1					1.7
10-Jun-19	132378		47		14.8	<0.1	<0.5	0.6	**696**	<0.5			**2**					1.8
10-Dec-19	137318		32		4.6	<0.1	<0.5	1.4	78	<0.5			<1					1.9
20-Apr-20	140350		41		6	<0.1	<0.5	2.2	28	<0.5			<1					2.8
03-Jun-20	141378		50		13	<0.1	<0.5	1.4	**1460**	<0.5			1					<0.5
07-Dec-20	146266		49		5	<0.1	<0.5	0.8	22	<0.5			**6**					<0.5
22-Apr-21	149440		41		6.5	<0.1	<0.5	1.1	36	<0.5			**2**					0.6
01-Jun-21	150499		72		10.5	<0.1	1.1	1.7	**2420**	0.6			<1					6.5
04-Aug-21	152216		66		15	<0.1	<0.5	1.1	**1790**	<0.5			**2**					1.9
19-Oct-21	154711		50		10.8	<0.1	<0.5	0.9	66	<0.5			<1					<0.5
30-Nov-21	155949		52		9	<0.1	<0.5	0.8	31	<0.5			<1					1
26-Apr-22	160120		41		10.1	<0.1	<0.5	1.4	42	<0.5			<1					0.8
15-Jun-22	161601		37		<20	<1	<1	<5	220	<10			<1					10
14-Feb-23	167985		34		3	<0.1	<0.5	2.4	47	<0.5			<1					2.3
19-Apr-23	169766		42		9	<0.1	<0.5	1.6	33	<0.5			<1					<5
13-Jun-23	171323		40		22	<0.1	0.6	3.4	**420**	<0.5			<1					<5
23-Aug-23	173437		45		13	<0.1	<0.5	<0.5	**1830**	<0.5			<1					<5
06-Dec-23	2023A065		48		7	<0.1	<0.5	<0.5	28	<0.5			<1					<5
06-Feb-24	178217		42		6	<0.1	<0.5	0.9	14	<0.5			<1					<5
16-Apr-24	180161		42		9	<0.1	<0.5	1	27	<0.5			<1					<5
12-Jun-24	181864		47		13	<0.1	<0.5	0.6	**699**	<0.5			<1					<5
TOTAL SAMPLES		3	46	3	46	46	46	46	73	46	11	3	73	3	3	3	3	46
AVERAGE 2024			44		9	<0.1	<0.5	1	247	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW21

Surface Water

Surface Water Station



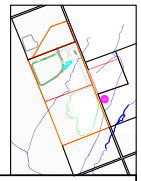
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
19-Jun-17	114025		44		57.8	<0.1	<0.5	<0.5	131	<0.5			<1					2.6
16-Aug-17	115567		71		35.7	<0.1	<0.5	0.6	**1320**	<0.5			<1					8
11-Oct-17	117026		70		39.8	<0.1	<0.5	0.9	171	<0.5			<1					6.1
04-Dec-17	118413		60		23.9	<0.1	<0.5	0.5	53	<0.5			<1					2.2
26-Feb-18	120272		28		11.8	<0.1	<0.5	1.1	233	<0.5			<1					15
23-Apr-18	121813		34		15.4	<0.1	<0.5	1	51	<0.5			<1					2.6
26-Jun-18	123545		76		24.1	<0.1	0.5	0.8	**1720**	<0.5			<1					8.6
17-Dec-18	128549		67		28.6	<0.1	0.6	1.3	255	<0.5			<1					8.3
29-Apr-19	131396		40		26.6	<0.1	<0.5	0.8	54	<0.5			**2**					4.5
10-Jun-19	132379		46		29.5	<0.1	<0.5	0.5	**301**	<0.5			**2**					3.8
28-Oct-19	136402		100		15.5	<0.1	0.7	2.3	**462**	<0.5			<1					11.4
10-Dec-19	137319		62		29.5	<0.1	<0.5	1.5	115	<0.5			<1					10.9
20-Apr-20	140351		49		19.1	<0.1	<0.5	1.2	96	<0.5			<1					5.1
03-Jun-20	141379		85		41.6	<0.1	0.8	0.9	**1760**	<0.5			1					8.3
07-Dec-20	146267		56		25.7	<0.1	<0.5	0.6	97	<0.5			1					5.9
22-Apr-21	149441		51		24	<0.1	<0.5	0.6	87	<0.5			1					2.8
01-Jun-21	150500		164		20.2	<0.1	1.3	1.6	**1370**	0.9			<1					19.1
04-Aug-21	152217		155		30.9	<0.1	2.1	1.9	**2220**	1.3			1					**29.8**
19-Oct-21	154712		67		20.7	<0.1	<0.5	0.8	**368**	<0.5			**2**					1.6
30-Nov-21	155950		66		16.9	<0.1	<0.5	**10.1**	204	0.8			<1					18.9
26-Apr-22	160121		49		21	<0.1	<0.5	0.9	66	<0.5			<1					1.4
15-Jun-22	161602		45		30	<1	<1	<5	240	<10			<1					<10
14-Feb-23	167986		37		15.1	<0.1	<0.5	1.1	129	<0.5			<1					6.3
19-Apr-23	169767		58		28	<0.1	<0.5	0.7	156	<0.5			<1					<5
13-Jun-23	171321		56		41	<0.1	<0.5	0.5	**340**	<0.5			<1					<5
23-Aug-23	173438		86		34	<0.1	<0.5	<0.5	**1380**	<0.5			<1					<5
06-Dec-23	2023A066		85		22	<0.1	<0.5	<0.5	90	<0.5			<1					<5
06-Feb-24	178216		53		16	<0.1	<0.5	0.9	56	<0.5			<1					<5
16-Apr-24	180162		46		26	<0.1	<0.5	1.1	113	<0.5			<1					<5
12-Jun-24	181865		91		28	<0.1	<0.5	1	**536**	<0.5			<1					<5
TOTAL SAMPLES		3	54	3	54	54	54	54	82	54	12	3	82	3	3	3	3	54
AVERAGE 2024			63		23	<0.1	<0.5	1.0	235	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW23

Surface Water

Surface Water Station



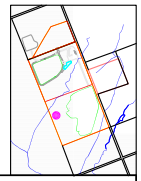
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
19-Jun-17	114026		50		57.2	<0.1	<0.5	<0.5	**350**	<0.5			<1					2.8
11-Oct-17	117027		102		35.1	<0.1	<0.5	0.5	**936**	<0.5			1					2.3
04-Dec-17	118414		64		26.1	<0.1	<0.5	0.7	96	<0.5			<1					1.6
26-Feb-18	120273		27		12.1	<0.1	<0.5	2.2	278	<0.5			<1					5.8
23-Apr-18	121814		33		15	<0.1	<0.5	1	44	<0.5			<1					0.9
26-Jun-18	123546		76		14.3	<0.1	0.5	0.7	**1670**	<0.5			**12**					<0.5
17-Dec-18	128550		75		28.3	<0.1	<0.5	2.1	176	<0.5			<1					6.8
29-Apr-19	131397		38		25	<0.1	<0.5	1.2	48	<0.5			<1					5.6
10-Jun-19	132380		53		30	<0.1	<0.5	<0.5	**338**	<0.5			**2**					2.9
28-Oct-19	136403		36		24.5	<0.1	1	3.5	**610**	0.8			<1					9.1
10-Dec-19	137320		63		33.4	<0.1	<0.5	2	133	<0.5			<1					10.6
20-Apr-20	140352		49		15.5	<0.1	<0.5	1.7	136	<0.5			<1					6.1
03-Jun-20	141380		66		47.3	<0.1	<0.5	<0.5	**1140**	<0.5			<1					2.5
13-Oct-20	144911		77		38.7	<0.1	0.8	1.6	**1020**	<0.5			1					5.9
07-Dec-20	146268		55		24.9	<0.1	<0.5	<0.5	79	<0.5			1					2.3
22-Apr-21	149442		54		26.4	<0.1	<0.5	0.6	103	<0.5			1					3
01-Jun-21	150501		43		31.5	<0.1	<0.5	<0.5	**479**	<0.5			<1					0.9
04-Aug-21	152218		138		42.8	<0.1	<0.5	<0.5	**915**	<0.5			**2**					10.3
19-Oct-21	154713		55		20	<0.1	<0.5	<0.5	116	<0.5			<1					<0.5
30-Nov-21	155951		65		17.7	<0.1	<0.5	1	239	<0.5			<1					10.3
26-Apr-22	160122		50		24.5	<0.1	<0.5	0.6	74	<0.5			<1					1.1
15-Jun-22	161603		42		30	<1	<1	<5	240	<10			<1					<10
14-Feb-23	167987		38		15.6	<0.1	<0.5	2.4	134	<0.5			<1					4.4
19-Apr-23	169768		62		29	<0.1	<0.5	0.7	161	<0.5			<1					<5
13-Jun-23	171322		60		36	<0.1	<0.5	0.5	**490**	<0.5			<1					5
23-Aug-23	173439		59		33	<0.1	<0.5	<0.5	**671**	<0.5			<1					<5
06-Dec-23	2023A067		85		23	<0.1	<0.5	<0.5	147	<0.5			<1					<5
06-Feb-24	178218		58		15	<0.1	<0.5	1.2	295	<0.5			<1					11
16-Apr-24	180163		44		24	<0.1	<0.5	1.1	120	<0.5			<1					<5
12-Jun-24	181866		77		35	<0.1	<0.5	<0.5	**890**	<0.5			<1					<5
TOTAL SAMPLES		3	52	3	52	52	52	52	80	52	12	3	80	3	3	3	3	52
AVERAGE 2024			60		25	<0.1	<0.5	0.8	435	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

SW24

Surface Water

Surface Water Station



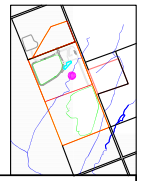
DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
22-Apr-14	89170		38		<30	<1	<2	<5	260	<10			<1					<30
23-Jun-14	90583		42		<30	**2**	<2	<5	**400**	<10			<1					<30
19-Aug-14	91794		71		40	<1	<2	<5	**650**	<10			<1					<30
20-Oct-14	93073		75		30	<1	<2	<5	**760**	<10			<1					<30
13-Apr-15	96290		34		9.8	<0.1	<0.5	<0.5	**1300**	<0.5			<1					6.4
15-Jun-15	97651		<1		<1	<0.1	<0.5	<0.5	<1	<0.5			**2**					<0.5
18-Aug-15	99012		83		58.8	<0.1	<0.5	0.9	**1360**	<0.5			**5**					5.9
07-Dec-15	101147		88		18.8	<0.1	<0.5	1	**1500**	<0.5			<1					7.8
18-Apr-16	103691		51		25.5	<0.1	<0.5	0.7	140	<0.5			1					1.4
11-Apr-17	112238		28		11.4	<0.1	<0.5	0.8	39	<0.5			<1					0.8
19-Jun-17	114027		69		45	<0.1	<0.5	<0.5	**2410**	<0.5			<1					2.2
11-Oct-17	117028		149		40.6	<0.1	<0.5	1.4	**1120**	<0.5			1					4.1
04-Dec-17	118415		83		17.1	<0.1	<0.5	0.9	252	<0.5			<1					2
26-Feb-18	120274		40		17.4	<0.1	<0.5	2.1	280	<0.5			<1					2.6
23-Apr-18	121815		28		6.1	<0.1	<0.5	0.5	8	<0.5			<1					<0.5
29-Apr-19	131398		35		9.8	<0.1	<0.5	0.5	68	<0.5			<1					2.9
10-Jun-19	132381		43		18.1	<0.1	<0.5	<0.5	**611**	<0.5			1					3.5
10-Dec-19	137321		50		25.6	<0.1	<0.5	2.1	109	<0.5			<1					5.4
20-Apr-20	140353		34		6.3	<0.1	<0.5	0.8	32	<0.5			<1					1.1
22-Apr-21	149443		44		14.4	<0.1	<0.5	0.6	111	<0.5			<1					1.2
19-Oct-21	154714		64		19	<0.1	<0.5	0.6	**373**	<0.5			<1					<0.5
30-Nov-21	155952		66		12.4	<0.1	0.9	0.5	**457**	<0.5			1					8.7
26-Apr-22	160123		46		13.9	<0.1	<0.5	0.6	113	<0.5			<1					0.7
15-Jun-22	161604		51		30	<1	<1	<5	**640**	<10			**4**					<10
14-Feb-23	167988		50		16.5	<0.1	<0.5	1.3	83	<0.5			<1					4.1
19-Apr-23	169769		38		11	<0.1	<0.5	0.6	31	<0.5			<1					<5
13-Jun-23	171330		55		31	<0.1	<0.5	1	**521**	<0.5			<1					7
06-Dec-23	2023A068		76		22	<0.1	<0.5	<0.5	251	<0.5			<1					<5
16-Apr-24	180164		50		14	<0.1	<0.5	0.6	143	<0.5			<1					<5
12-Jun-24	181867		72		23	<0.1	<0.5	0.5	**814**	<0.5			<1					<5
TOTAL SAMPLES		3	39	3	39	39	39	39	62	39	10	3	62	3	3	3	3	39
AVERAGE 2024			61		19	<0.1	<0.5	0.6	479	<0.5			<1					<5

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

NFA SWMP IN

Storm Water

Storm Water Management



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
30-Nov-10	65422	**4620**	65	<1	40	<1	5	**7**	**4530**	<20	165	<5	**2**	<10	**2**	<5	7	<30
16-Apr-11	67508	**21900**	264	<1	120	<1	27	**36**	**24100**	**30**	1010	<5	**2**	<10	**13**	**31**	37	**120**
29-Nov-11	71767	**8480**	87	<1	<30	<1	9	**15**	**8410**	<20	264	<5	<1	<10	**4**	8	11	**60**
12-Jun-12	74974	**22900**	270	<1	180	**0.7**	25	**35**	**20400**	**24.4**	619	<5	**4**	<10	**13**	21	32	**140**
02-Dec-12	78888	**3480**	80	<0.2	**360**	0.4	4.9	**16.1**	**3530**	**12.6**	97	<5	<1	**3**	**1**	<5	5	**73.2**
16-Dec-14	94176	**1000**			40	<1	<2	**7**	**980**	2.9	43		<1	<10		<5	<2	**50**
02-Nov-18	127680	**5050**			134	<0.1	5.7	**8.4**	**4120**	3.1	136		<1	<0.5		8	7.3	19
23-Sep-21	153982	**11900**			190	0.2	17.3	**20.9**	**14300**	**13.5**	442		**8**	<0.5		15	23.4	**56.3**
05-Apr-23	169417	**6170**			180	<1	9	**11**	**8140**	<10	715		**27**	<10		14	11	**40**
03-Apr-24	179781	**22800**			130	**4**	26	**49**	**21100**	**40**	611		<1	<10		25	38	**210**

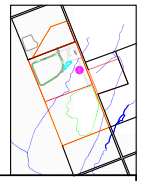
TOTAL SAMPLES	10	5	5	10	10	10	10	10	10	10	5	10	10	5	10	10	10
AVERAGE 2024																	

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

NFA SWMP OUT

Storm Water

Storm Water Management



DATE	SAMPLE #	Al	Ba	Be	B	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Phnl	Ag	Co	Ni	Va	Zn
	PWQO	75		1100	200	0.5		5	300	5		40	1	0.1	0.9	25		20
16-Apr-11	67509	**270**	37	<1	40	<1	<2	<5	210	<20	25	<5	<1	<10	<2	<5	<2	<30
29-Nov-11	71766	**910**	44	<1	<30	<1	<2	<5	**940**	<20	33	<5	<1	<10	<2	<5	<2	<30
14-Jul-17	114671	50	42	<1	180	<1	<2	<5	200	**11.9**	451	<5	**3**	<10	<2	<5	<2	**50**
23-Sep-21	153983	**1210**			50	<0.1	1.8	1.2	**1100**	1.1	85.4		1	<0.5		<2	2.2	4.7
05-Apr-23	169418	**322**			120	<1	2	<5	**770**	<10	363		**52**	<10		5	<2	20
03-Apr-24	179782	28			90	<1	<1	**7**	160	<10	93		<1	<10		<5	<2	<10
TOTAL SAMPLES		6	3	3	6	6	6	6	6	6	6	3	6	6	3	6	6	6
AVERAGE 2024																		

all Concentrations ug/L unless otherwise indicated
Anomalies shown in *italics* / Exceedance in **Bold**

APPENDIX I

Landfill Gas Odour Control System

LANDFILL GAS ODOUR CONTROL SYSTEM DESCRIPTION

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1.0 General 1

1.1 Landfill Gas Collection Field 1

1.2 Landfill Gas Control Facility 3

1.0 General

In March 2000, a Landfill Gas Odour Control System (LFG System) was established on site in the South Fill Area (SFA). In 2015, the LFG system was expanded to include the North Fill Area (NFA). The LFG system was established with the following objectives:

- to actively collect landfill gas (LFG) from the waste to provide odour control; and
- to operate in accordance with Conditions identified in ECA No. A341508.

The major components of the LFG System are the collection field, the gas control facility, and the Landfill Gas Utilization Plant (LGUP). Figure 7.1 shows the current LFG System components and layout.

1.1 Landfill Gas Collection Field

Five LFG wells were initially installed with the SFA LFG System in 2000 along with ten connections to the leachate collection system (LCS). The gas collection field was expanded to 17 LFG extraction wells in 2004 and 22 wells in 2007 to further improve odour control and to replace the collection capacity of eight gas system interconnections[1] to the LCS that were lost as a result of the vertical and horizontal expansion into Cell 1 – West A in 2005. The 2002 and 2007 expansion of the LFG System was also intended to achieve additional emission reductions as part of the City and the County's participation in Environment Canada's Pilot Emission Removals, Reductions and Learning (PERRL) Initiative report for the Site submitted in draft to Environment Canada in February 2008. The PERRL program terminated December 31, 2007.

A new LFG System connection to the LCS was made at the high end clean out HCO5 – 95 in Fall 2005 to increase gas draw from that portion of the LCS. The LFG System connection to the high end of the toe drain, formerly at TD-VC, was re-installed in Fall 2006 with a connection to TD-00-05. A connection from the main header to manhole MH J3 was made in 2007 to provide odour control at this location. Two new LFG valve chambers were installed in the north area of

[1] Connections removed at: VC1-94, VC2-94, VC3-94, VC4-94, VC5-95, VC6-95, VC7-95 and TD-VC.

the SFA in 2008 connecting to MH I1. These connections were made as part of the City's on-going efforts to control odour on the east and north sides of the SFA.

In 2011 24 new gas wells and the associated collection pipe were installed in the SFA.

The SFA LFG collection field is currently comprised of:

- 46 vertical extraction wells in Cell1 South and North; and
- 5 tie-ins to the leachate toe drain MHI1, MHD2, HC05-95, TD-00-05, and MH J3.

The extraction wells and LCS are connected to the LFG System utilizing a network of lateral and header piping. Each of the wells and four of LCS tie-ins are controlled by individual control valves. Monitoring ports are used to ensure that the LFG System is effectively balanced based on the methane and oxygen content of the collected landfill gas. The collection piping is graded so that any condensate forming in the piping is drained into the extraction wells or the existing LCS. Condensate collected at the gas control plant is pumped to the LCS.

Construction of Phase 1 of the LFG System in the NFA was completed in 2015. Phase 1 included installation of horizontal LFG collection pipes within Cell 2. The collection pipes were connected to the existing LCS manholes in Cell 2 to alleviate odour issues originating from the LCS. Horizontal pipes directe collected LFG to the existing LGUP and flare on site. A valve chamber and isolation valves were installed west of Cell 2 to isolate gas collected from the NFA and SFA. A test port was installed at the valve chamber to monitor quality of LFG collected from Cell 2.

Phase 2 of the LFG System in the NFA was completed in February 2018. Phase 2 included the perimeter header pipes around Cells 2 and 3, and 4 vertical LFG extraction wells in Cell 2.

Phase 3 of the LFG system in the NFA was completed in February 2020. Phase 3 included installation of horizontal LFG collection pipes in Cell 3 and three

vertical LFG extraction wells. The horizontal collection pipes and extraction wells were connected to the perimeter header pipes previsouly installed in 2018. During Cell 4 construction, the LFG main header was expanded around the exterior of Cell 4 connecting the south north and south main header completing the installation of the main header within the entire NFA. Approximately 520m of header pipe was installed with eight (8) capped branch saddles for future connections.

Phase 4 of the LFG system in the NFA was completed in July 2024. Phase 4 included installation of nine (9) vertical LFG extraction wells in Cell 2 and Cell 3 including connection of the wells to the perimeter header pipes.

1.2 Landfill Gas Control Facility

The control facility of the LFG System was relocated to the NFA on November 25, 2005 to facilitate the optimization of the SFA capacity. The LFG Control Facility is located in a fenced compound near the NFA. Approximately 600 meters of header pipe connect the Control Facility to the SFA collection field. The Control Facility has the following primary structures:

- blower and associated piping and valving;
- LFG flare stack;
- condensate trap;
- control panel;
- continuous gas analyzer; and
- continuous flow meter.

The controls and monitor for the plant are fully automated and include the following features:

- thermocouple connected to a datalogger and automated temperature controls;
- warning and alarm notification, or shutdown upon occurrence of fault conditions; and
- monitoring of flare operating temperatures and gas flows.

The operation of the flare is governed by thermocouples and the supply of LFG to the flare. A gas analyzer and flow meter were supplementary features installed

for the quantification of emission reductions for the PERLL program. Both instruments are not required for the operation of the LFG System under the ECA.

A blower with a capacity in the range of approximately 14.2 cubic metres per minute (500 cubic feet per minute) applies a vacuum on the LFG collection field. The extracted LFG is transferred through the condensate trap to remove moisture and particulate matter. Condensate is collected in a rigid wall tank in the condensate trap and is pumped out as required by the Owner. The LFG is then directed to the flare stack, which combusts the LFG at a temperature of 875°C with a minimum retention time of 0.75 seconds to ensure a high level of hydrocarbon destruction efficiency and to minimize greenhouse gas emissions.

Poured-in-place concrete pads have been constructed to house the blower, valves, and associated piping. Electrical controls, monitoring instrumentation, and electrical distribution equipment are housed in a weatherproof electrical cabinet, all of which have been now located in the vicinity of the new operations control area in the NFA.

Construction of the LGUP adjacent to the NFA commenced in October 2012 and was completed in July 2013. The LGUP is owned and operated by Peterborough Utilities Group (PUG). In July 2013 the LGUP started to receive landfill gas collected from the SFA and convert it to electricity. The electricity is then fed to the nearby electrical grid.

The perimeter LFG piping in Cell 2 was connected to the existing LGUP and flare on August 17, 2015.

As a result of an unscheduled inspection by the Technical Safety and Standards Association (TSSA) on May 29, 2013 upgrades to the Landfill Gas Control Facility were required. Major upgrades to the facility included replacement of the flare refractory, valves, and burner management system. The upgrades were completed in 2015 to satisfy TSSA requirements. The flare remains operational as a contingency to burn collection gas when the LGUP is not running.

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 29-Jan-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the NFA and SFA during survey.
- Cell 4 landfilling in progress.

Weather: Sunny, 2 degrees C, ~6-inches of snow cover

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	45.8	26.7	5.9	21.6	-0.2	-4.4	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	63.7	32.2	1.7	2.4	-2.7	-2.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	60.6	38.4	0.9	0.1	-5.0	-5.0	40% Closed
GW07-03	59.8	37.9	1.0	1.3	-4.8	-5.0	95% Closed
GW05-00	53.5	35.2	2.4	8.9	-5.0	-5.0	95% Closed
GW04-00	0.0	1.2	22.5	76.3	-4.9	-5.0	95% Closed
LCMV1	4.3	3.6	20.8	71.3	-4.8	-5.0	90% Closed
GW03-00	61.1	37.3	1.3	0.3	-5.1	-5.1	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	8.3	5.9	19.6	66.2	-4.9	-5.0	70% Closed.
GW02-00	62.6	36.1	1.1	0.2	-4.9	-4.9	100% Open
GW01-00	64.6	34.1	1.3	0.0	-4.8	-4.9	20% Closed
LCMV3	67.6	31.3	1.1	0.0	0.1	0.1	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	63.5	36.2	0.3	0.0	0.5	0.1	65% Closed
GW16-03	63.4	35.9	0.7	0.0	0.4	0.1	80% Closed
GW15-03	71.9	27.8	0.3	0.0	6.5	5.1	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced.
LCMV5	64.7	34.8	0.4	0.1	0.4	0.4	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	64.5	35.2	0.2	0.1	0.6	0.5	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	64.4	35.2	0.4	0.0	0.6	0.4	80% Closed
GW12-03	67.6	32.0	0.3	0.1	0.6	0.6	45% Closed
GW11-03	73.6	26.3	0.1	0.0	0.7	0.6	90% Closed
GW23-10	66.2	33.6	0.2	0.0	0.3	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	54.7	34.9	10.1	0.3	4.8	4.8	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	64.9	34.5	0.5	0.1	1.4	0.5	95% Closed.
GW17-10	65.6	34.2	0.2	0.0	23.5	23.5	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	66.5	33.1	0.2	0.2	0.6	0.6	No indicator on valve to determine positioning
GW18-10	66.9	32.4	0.7	0.0	0.6	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	68.3	31.5	0.1	0.1	1.0	1.0	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	67.1	32.9	0.0	0.0	0.8	0.6	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	70.2	29.7	0.1	0.0	0.6	0.5	35% Closed
GW09-03	71.4	28.3	0.3	0.0	0.4	0.4	45% Closed
GW08-03	70.2	29.5	0.3	0.0	0.5	0.4	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.9	34.5	0.3	0.3	0.6	0.6	100% Open
LCMV4	66.7	32.9	0.3	0.1	0.6	0.6	85% Closed
GW20-07	33.7	14.9	11.5	39.9	-0.2	-0.5	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	66.6	33.0	0.4	0.0	-4.4	-4.5	No indicator on valve to determine positioning.
GW21-07	53.8	20.5	6.1	19.6	-4.5	-4.5	90% Closed
GW22-07	65.3	34.2	0.5	0.0	-4.5	-4.5	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	62.4	36.0	1.6	0.0	-4.5	-4.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	65.6	34.1	0.3	0.0	-4.1	-4.3	No indicator on valve to determine positioning
GW06-10	64.7	33.6	0.9	0.8	-4.5	-4.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well is hard to sample.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	66.8	32.7	0.4	0.1	-4.4	-4.5	No indicator on valve to determine positioning
GW08-10	67.2	32.3	0.3	0.2	-4.5	-4.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	68.0	31.8	0.2	0.0	0.7	-1.0	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	66.2	33.5	0.3	0.0	0.5	0.5	No indicator on valve to determine positioning
GW15-10	68.3	31.5	0.2	0.0	0.3	0.3	No indicator on valve to determine positioning
GW12-10	68.0	31.6	0.4	0.0	-4.5	-4.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	67.1	32.3	0.6	0.0	16.2	-4.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	66.1	33.6	0.2	0.1	-4.4	-4.5	No indicator on valve to determine positioning
GW13-10	63.8	35.7	0.4	0.1	18.2	18.2	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	64.2	35.5	0.3	0.0	-4.5	-4.5	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	63.5	35.9	0.5	0.1	-4.3	-4.3	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	63.1	36.4	0.4	0.1	-7.6	-7.6	50% Closed
NGW-2	63.1	36.4	0.3	0.2	-7.6	-7.6	80% Closed
NGW-3	63.6	35.4	1.0	0.0	-7.6	-7.6	95% Closed
NGW-4	62.7	36.8	0.4	0.1	-7.5	-7.6	85% closed
NGW-5	62.8	37	0.2	0.0	-7.6	-7.6	75% Closed
NGW-9	62.4	37.2	0.3	0.1	-7.6	-7.6	75% Closed
NGW-14	62.8	37.1	0.1	0.0	-7.7	-7.7	80% Closed
HC-3	9.9	27.9	2.7	59.5	1.3	-7.4	100% Closed
HC-1	58.3	36.3	0.5	4.9	-4.6	7.8	40% Closed.

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 26-Feb-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating periodically. Flare shutdown while onsite. City had the flare back online later in the day.
- Minimal odours observed onsite in the NFA and SFA during survey.
- Cell 4 landfilling in progress.

Weather: Sunny 4 degrees C, no snow cover, Wind direction from NE

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	46.8	27.8	4.9	20.5	2.1	2.1	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	64.8	34.2	0.5	0.5	2.5	2.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	59.3	38.9	0.7	1.1	2.0	2.0	40% Closed
GW07-03	59.4	38.7	0.9	1.0	2.2	2.2	95% Closed
GW05-00	58.5	38.9	0.6	2.0	2.1	2.1	95% Closed
GW04-00	1.0	2.1	21.7	75.2	1.8	1.8	95% Closed
LCMV1	25.9	16.2	12.7	45.2	1.9	1.7	90% Closed
GW03-00	61.2	37.9	0.3	0.6	2.1	2.1	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	60.9	37.7	0.3	1.1	1.9	2.1	70% Closed.
GW02-00	62.6	36.5	0.6	0.3	2.1	2.1	100% Open
GW01-00	65.0	34.4	0.2	0.4	2.1	2.1	20% Closed
LCMV3	61.1	31.8	2.0	5.1	0.0	0.5	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	62.8	36.0	0.3	0.9	-1.0	-1.0	65% Closed.
GW16-03	61.9	36.4	0.6	1.1	2.1	2.1	80% Closed
GW15-03	70.8	26.4	1.1	1.7	5.6	5.6	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced.
LCMV5	54.9	30.5	3.7	10.9	1.1	1.1	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	61.9	33.4	1.4	3.3	0.7	1.1	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	63.8	35.0	0.5	0.7	1.7	1.7	80% Closed
GW12-03	67.2	31.9	0.5	0.4	1.8	1.8	45% Closed
GW11-03	57.6	23.3	3.0	16.1	2.0	2.1	90% Closed
GW23-10	56.3	33.6	1.7	8.4	0.3	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	62.5	35.8	0.3	1.4	0.1	0.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	61.4	35.5	0.5	2.6	1.0	1.0	95% Closed.
GW17-10	65.5	34.1	0.3	0.1	26.6	26.5	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident. - HDPE pipe cleanout approximately 3m north of well could be heard leaking from gas pressure.
GW20-10	61.3	33.5	0.5	4.7	-0.5	-0.5	No indicator on valve to determine positioning
GW18-10	62.7	30.9	1.5	4.9	-1.1	-1.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	68.4	30.9	0.5	0.2	0.4	0.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	60.7	32.9	0.7	5.7	0.1	-1.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	69.0	29.2	0.4	1.4	-1.3	-1.3	35% Closed
GW09-03	67.9	25.0	1.3	5.8	-1.6	-1.6	45% Closed
GW08-03	68.5	29.4	0.6	1.5	-1.7	-1.7	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.1	34.6	0.4	0.9	0.1	0.1	100% Open
LCMV4	64.7	33.5	0.5	1.3	0.0	0.1	85% Closed
GW20-07	70.2	28.3	0.9	0.6	0.8	0.5	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	64.5	33.8	0.5	1.2	-3.0	-3.0	No indicator on valve to determine positioning.
GW21-07	69.2	27.8	1.0	2.0	-2.8	-2.8	90% Closed
GW22-07	63.2	33.8	0.8	2.2	-3.0	-3.0	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	63.4	36.2	0.3	0.1	-3.1	-3.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	64.9	33.9	0.2	1.0	-2.8	-2.8	No indicator on valve to determine positioning
GW06-10	64.3	34.5	0.5	0.7	-2.8	-2.8	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well is hard to sample.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	66.7	32.3	0.4	0.6	-2.8	-2.8	No indicator on valve to determine positioning
GW08-10	67.4	31.8	0.3	0.5	-1.3	-2.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	69.0	30.2	0.2	0.6	0.2	-2.2	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	57.6	31.2	2.3	8.9	0.2	0.2	No indicator on valve to determine positioning
GW15-10	60.1	33.6	0.6	5.7	1.1	1.1	No indicator on valve to determine positioning
GW12-10	67.2	31.4	0.5	0.9	1.5	1.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	66.9	32.5	0.2	0.4	17.2	1.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	65.2	33.5	0.7	0.6	1.7	1.5	No indicator on valve to determine positioning
GW13-10	63.2	35.6	0.4	0.8	16.3	16.2	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	60.5	37.6	0.3	1.6	2.1	2.1	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	61.5	36.3	0.5	1.7	1.9	1.9	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	62.8	36.0	0.2	1.0	2.6	2.5	50% Closed
NGW-2	61.7	36.2	0.6	1.5	2.5	2.5	80% Closed
NGW-3	62.7	35.8	0.4	1.1	2.3	2.3	95% Closed
NGW-4	61.1	36.9	0.2	1.8	2.5	2.5	85% closed
NGW-5	61.4	37.1	0.1	1.4	2.7	2.5	75% Closed
NGW-9	60.9	37.0	0.8	1.3	2.5	2.5	75% Closed
NGW-14	61.3	37.2	0.2	1.3	2.5	2.5	80% Closed
HC-3	6.7	24.1	6.4	62.8	3.6	2.5	100% Closed
HC-1	60.5	38.2	0.2	1.1	3.7	2.5	40% Closed.

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 25-Mar-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the NFA and SFA during survey.
- Cell 4 landfilling in progress.
- NFA Phase 4 LFG Work in progress.

Weather: Sunny, 5 degrees C, no snow cover, Wind direction from SE

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	46.3	28.2	4.9	20.6	-0.3	-2.0	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	65.1	34.9	0.0	0.0	0.1	0.2	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	59.6	38.8	1.1	0.5	-2.4	-2.5	40% Closed
GW07-03	58.7	39.8	0.7	0.8	-2.1	-2.4	95% Closed
GW05-00	54.6	36.3	1.9	7.2	-2.2	-2.3	95% Closed
GW04-00	15.7	11.9	16.1	56.3	-2.2	-2.2	95% Closed
LCMV1	7.7	5.0	18.9	68.4	-2.2	-2.2	90% Closed
GW03-00	60.4	38.4	0.6	0.6	-2.2	-2.2	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	23.0	15.2	12.3	49.5	-1.1	-2.3	70% Closed.
GW02-00	62.3	37.4	0.1	0.2	-2.2	-2.2	100% Open
GW01-00	64.7	35.0	0.1	0.2	20.8	20.8	20% Closed
LCMV3	60.7	32.0	1.4	5.9	0.0	-0.1	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	63.1	36.7	0.2	0.0	-0.5	-0.5	65% Closed.
GW16-03	53.8	31.3	3.4	11.5	-0.5	-0.5	80% Closed
GW15-03	75.4	24.0	0.5	0.1	6.9	6.9	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced.
LCMV5	20.7	12.3	16.0	51.0	-0.3	-0.3	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	60.7	34.5	0.0	3.3	-0.3	-0.3	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	65.0	35.0	0.0	0.0	-0.3	-0.3	80% Closed
GW12-03	67.5	32.4	0.1	0.0	-0.4	-0.4	45% Closed
GW11-03	56.0	26.7	1.6	15.7	-0.3	-0.3	90% Closed
GW23-10	65.1	34.9	0.0	0.0	0.2	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	63.3	36.7	0.0	0.0	0.1	0.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	64.8	35.2	0.0	0.0	0.2	0.1	95% Closed.
GW17-10	64.9	34.7	0.3	0.1	6.0	6.0	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	65.2	34.7	0.0	0.1	0.3	0.0	No indicator on valve to determine positioning
GW18-10	67.7	31.9	0.4	0.0	-0.4	-0.4	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	68.7	31.3	0.0	0.0	1.0	0.3	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	66.6	33.3	0.1	0.0	0.5	0.3	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	69.8	30.0	0.2	0.0	-0.3	-0.3	35% Closed
GW09-03	69.5	25.7	1.1	3.7	-0.4	-0.4	45% Closed
GW08-03	70.0	29.9	0.1	0.0	-0.3	-0.3	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.8	35.2	0.0	0.0	0.3	0.1	100% Open
LCMV4	65.0	33.6	0.4	1.0	0.2	0.1	85% Closed
GW20-07	71.4	28.5	0.0	0.1	0.0	0.0	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	65.4	34.5	0.1	0.0	-2.3	-2.3	No indicator on valve to determine positioning.
GW21-07	57.4	23.0	4.2	15.4	-2.3	-2.3	90% Closed
GW22-07	65.8	34.1	0.1	0.0	-2.6	-2.6	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	63.0	37.0	0.0	0.0	-2.6	-2.6	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	65.5	34.5	0.0	0.0	-2.6	-2.6	No indicator on valve to determine positioning
GW06-10	64.6	35.2	0.1	0.1	-2.6	-2.6	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well is hard to sample.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	67.0	33.0	0.0	0.0	-2.6	-2.6	No indicator on valve to determine positioning
GW08-10	67.9	32.1	0.0	0.0	-2.6	-2.6	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	68.6	30.7	0.2	0.5	0.3	0.3	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	62.9	37.0	0.1	0.0	0.4	-0.7	No indicator on valve to determine positioning
GW15-10	68.8	31.2	0.0	0.0	-0.7	-0.7	No indicator on valve to determine positioning
GW12-10	67.6	32.3	0.0	0.1	-2.7	-2.7	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	66.8	33.1	0.0	0.1	16.2	-2.6	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	65.7	34.3	0.0	0.0	-2.7	-2.7	No indicator on valve to determine positioning
GW13-10	64.5	35.4	0.0	0.1	-0.9	-0.9	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	60.9	39.1	0.0	0.0	-2.2	-2.2	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	63.3	36.7	0.0	0.0	-2.7	-2.7	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	62.3	37.5	0.2	0.0	-3.0	-3.0	50% Closed
NGW-2	61.9	37.8	0.3	0.0	-3.0	-3.0	80% Closed
NGW-3	61.8	36.8	0.4	1.0	-3.7	-3.7	95% Closed
NGW-4	61.3	38.4	0.3	0.0	-3.6	-3.7	85% closed
NGW-5	61.4	38	0.4	0.2	-3.0	-3.1	75% Closed
NGW-9	60.9	38.8	0.1	0.2	-3.7	-3.7	75% Closed
NGW-14	61.2	36.8	0.8	1.2	-3.0	-3.0	80% Closed
HC-3	5.4	22.8	9.0	62.8	1.5	-2.9	100% Closed
HC-1	56.7	38.8	2.3	2.2	-0.8	-3.1	40% Closed.

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 25-Apr-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey. NFA odours were observed due to Phase 4 LFG works excavating trenches in waste for LFG subheaders.
- Cell 4 landfilling in progress.
- NFA Phase 4 LFG Work in progress.

Weather: Sunny, 9 degrees C, Wind direction from NW

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	53.6	28.6	3.3	14.5	-0.2	-1.0	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	66.9	33.1	0.0	0.0	1.3	1.2	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	61.7	38.0	0.3	0.0	-1.0	-1.0	40% Closed
GW07-03	61.7	38.2	0.1	0.0	-1.1	-1.1	95% Closed
GW05-00	56.2	34.5	2.9	6.4	-1.1	-1.1	95% Closed
GW04-00	39.6	21.3	8.5	30.6	-1.1	-1.1	95% Closed
LCMV1	31.5	17.5	11.6	39.4	-1.1	-1.1	90% Closed
GW03-00	63.2	36.7	0.1	0.0	-1.1	-1.2	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	44.1	25.1	7.3	23.5	-0.6	-1.1	70% Closed.
GW02-00	63.9	36.0	0.1	0.0	-1.1	-1.1	100% Open
GW01-00	66.0	33.9	0.1	0.0	24.0	24.0	20% Closed
LCMV3	60.6	39.1	0.3	0.0	0.0	-0.4	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	60.7	31.6	2.6	5.1	-0.9	-1.0	65% Closed.
GW16-03	65.9	33.6	0.4	0.1	-0.9	-1.0	80% Closed
GW15-03	Flooded	Flooded	Flooded	Flooded	Flooded	Flooded	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Condensate built up in sub-header and flooded monitoring equipment.
LCMV5	12.1	6.8	18.3	62.8	-0.7	-0.7	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	65.9	33.9	0.2	0.0	-0.7	-0.7	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	66.0	33.5	0.5	0.0	-0.7	-0.8	80% Closed
GW12-03	66.8	28.5	2.1	2.6	-0.7	-0.7	45% Closed
GW11-03	58.5	24.0	2.1	15.4	-0.7	-0.7	90% Closed
GW23-10	66.8	33.2	0.0	0.0	0.2	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	64.5	35.5	0.0	0.0	0.1	0.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	65.8	34.1	0.1	0.0	0.1	0.0	95% Closed.
GW17-10	66.0	33.7	0.3	0.0	8.0	8.0	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	67.2	32.6	0.2	0.0	0.2	0.2	No indicator on valve to determine positioning
GW18-10	69.3	29.4	1.3	0.0	-0.8	-0.8	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	69.5	30.4	0.1	0.0	0.7	0.6	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	67.3	32.7	0.0	0.0	0.1	-0.7	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	50.7	21.0	6.4	21.9	-0.7	-0.7	35% Closed
GW09-03	72.5	24.1	1.9	1.5	-0.8	-0.8	45% Closed
GW08-03	71.1	28.6	0.3	0.0	-0.7	-0.7	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	66.2	33.8	0.0	0.0	0.1	0.1	100% Open
LCMV4	66.5	33.4	0.0	0.1	0.1	0.1	85% Closed
GW20-07	72.1	27.9	0.0	0.0	0.5	0.5	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	70.2	29.2	0.1	0.5	-1.0	-1.0	No indicator on valve to determine positioning.
GW21-07	72.3	27.5	0.1	0.1	-1.0	-1.0	90% Closed
GW22-07	67.0	33.0	0.0	0.0	-1.0	-1.0	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	63.5	36.5	0.0	0.0	-1.1	-1.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	66.2	33.8	0.0	0.0	-1.0	-1.0	No indicator on valve to determine positioning
GW06-10	65.7	34.3	0.0	0.0	-1.3	-1.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well is hard to sample.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	67.5	32.5	0.0	0.0	-1.3	-1.3	No indicator on valve to determine positioning
GW08-10	68.7	31.2	0.0	0.1	-1.3	-1.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	71.6	28.4	0.0	0.0	0.2	0.2	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	64.8	35.2	0.0	0.0	0.3	-1.1	No indicator on valve to determine positioning
GW15-10	69.4	30.6	0.0	0.0	-1.0	-1.0	No indicator on valve to determine positioning
GW12-10	68.2	31.8	0.0	0.0	-1.4	-1.4	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	67.3	32.7	0.0	0.0	15.5	-1.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	66.5	33.5	0.0	0.0	-1.3	-1.3	No indicator on valve to determine positioning
GW13-10	64.1	35.9	0.0	0.0	-1.3	-1.3	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	61.9	38.1	0.0	0.0	-0.3	-0.3	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	64.5	35.5	0.0	0.0	-1.5	-1.5	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	63.6	36.4	0.0	0.0	-1.8	-1.8	50% Closed
NGW-2	63.3	36.7	0.0	0.0	-1.7	-1.7	80% Closed
NGW-3	63.9	35.7	0.3	0.1	-1.8	-1.8	95% Closed
NGW-4	62.4	37.3	0.1	0.2	-1.7	-1.7	85% closed
NGW-5	63.2	36.8	0	0.0	-1.8	-1.8	75% Closed
NGW-9	62.4	37.6	0.0	0.0	-1.7	-1.8	75% Closed
NGW-14	57.8	32.4	3.3	6.5	-1.7	-1.7	80% Closed
HC-3	6.6	24.0	7.4	62.0	-3.3	-1.7	100% Closed
HC-1	61.7	38.2	0.1	0.0	-2.0	-2.0	40% Closed.

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 28-May-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey. NFA odours were observed due to Phase 4 LFG works excavating trenches in waste for LFG subheaders.
- Cell 4 landfilling in progress.
- NFA Phase 4 LFG Work in progress. - 5 new wells added to monitoring program in the NFA (NGW-6,7,8,10,11)

Weather: Sunny, 15 degrees C, Wind direction from NW

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	41.4	26.5	5.3	26.8	-0.2	-0.2	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	64.2	35.6	0.2	0.0	2.8	2.8	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	58.7	40.7	0.3	0.3	0.1	0.1	40% Closed
GW07-03	59.1	40.6	0.2	0.1	-0.6	-0.6	95% Closed
GW05-00	60.3	39.0	0.1	0.6	0.2	0.2	95% Closed
GW04-00	52.6	28.4	3.5	15.5	-0.2	-0.2	95% Closed
LCMV1	53.9	30.1	2.5	13.5	0.5	0.5	90% Closed
GW03-00	60.8	39.2	0.0	0.0	0.4	0.4	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	62.5	36.2	1.2	0.1	0.0	0.1	55% Closed.
GW02-00	62.5	37.1	0.2	0.2	0.5	0.5	100% Open
GW01-00	64.5	35.5	0.0	0.0	17.0	2.0	20% Closed
LCMV3	62.2	35.2	0.0	2.6	0.1	0.1	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	62.4	37.6	0.0	0.0	0.5	0.5	65% Closed.
GW16-03	55.8	44.2	0.0	0.0	0.0	0.0	80% Closed
GW15-03	Flooded	Flooded	Flooded	Flooded	Flooded	Flooded	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Condensate built up in sub-header and flooded monitoring equipment.
LCMV5	63.7	36.2	0.0	0.1	0.2	0.5	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	63.8	36.2	0.0	0.0	0.5	0.5	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	63.4	36.6	0.0	0.0	0.5	0.5	80% Closed
GW12-03	67.4	32.6	0.0	0.0	0.5	0.5	45% Closed
GW11-03	61.2	28.0	0.0	10.8	0.6	0.6	90% Closed
GW23-10	63.9	35.9	0.2	0.0	0.1	0.1	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	62.8	36.8	0.0	0.4	0.1	0.1	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	63.5	36.4	0.0	0.1	0.6	0.6	95% Closed.
GW17-10	64.7	35.3	0.0	0.0	13.6	13.6	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	64.0	36.0	0.0	0.0	0.2	0.2	No indicator on valve to determine positioning
GW18-10	66.7	33.3	0.0	0.0	0.7	0.7	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	68.5	31.4	0.1	0.0	0.5	0.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	68.7	31.3	0.0	0.0	0.7	0.7	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	70.0	29.9	0.0	0.1	0.5	0.5	35% Closed
GW09-03	72.6	27.3	0.0	0.1	0.6	0.6	45% Closed
GW08-03	70.5	29.5	0.0	0.0	0.6	0.6	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	65.2	34.8	0.0	0.0	0.2	0.2	100% Open
LCMV4	65.3	34.7	0.0	0.0	0.2	0.2	85% Closed
GW20-07	71.5	28.4	0.0	0.1	0.9	0.9	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	65.4	34.6	0.0	0.0	0.4	0.4	No indicator on valve to determine positioning.
GW21-07	70.8	28.2	0.0	1.0	0.5	0.5	90% Closed
GW22-07	65.1	34.9	0.0	0.0	0.3	0.3	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	62.5	37.2	0.1	0.2	0.3	0.3	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	65.1	34.9	0.0	0.0	0.5	0.5	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well is hard to sample.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	67.0	33.0	0.0	0.0	0.5	0.5	No indicator on valve to determine positioning
GW08-10	67.3	32.5	0.0	0.2	0.5	0.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	71.6	28.2	0.0	0.2	0.3	0.3	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	67.8	32.0	0.1	0.1	0.4	0.4	No indicator on valve to determine positioning
GW15-10	68.1	31.7	0.1	0.1	0.9	1.0	No indicator on valve to determine positioning
GW12-10	67.5	32.5	0.0	0.0	0.3	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	66.3	33.7	0.0	0.0	18.6	0.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	65.6	34.4	0.0	0.0	0.4	0.4	No indicator on valve to determine positioning
GW13-10	62.8	37.1	0.0	0.1	0.0	0.0	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	60.1	39.9	0.0	0.0	1.6	1.6	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	61.1	38.9	0.0	0.0	0.3	0.3	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	62.2	37.8	0.0	0.0	-2.2	-2.2	50% Closed
NGW-2	62.1	37.9	0.0	0.0	-2.5	-2.5	80% Closed
NGW-3	62.6	37.4	0.0	0.0	-2.3	-2.3	95% Closed
NGW-4	61.6	38.1	0.0	0.3	-2.3	-2.3	85% closed
NGW-5	61.2	37.8	0	1.0	-2.3	-2.3	75% Closed
NGW-9	60.9	38.5	0.3	0.3	-2.3	-2.3	75% Closed
NGW-14	60.7	39.3	0.0	0.0	-2.3	-2.3	80% Closed
HC-3	12.4	30.5	0.0	57.1	-0.6	-2.3	100% Closed
HC-1	59.9	39.9	0.0	0.2	-0.9	-2.5	40% Closed
NGW-6	36.9	27.6	5.5	30.0	-1.9	-1.9	60% Closed
NGW-7	59.7	40.3	0.0	0.0	-2.1	-2.2	55% Closed
NGW-8	60.3	39.7	0.0	0.0	-2.3	-2.3	60% Closed
NGW-10	60.0	39.9	0.1	0.0	-1.7	-1.7	60% Closed
NGW-11	48.1	38.9	0.0	13.0	-2.0	-2.0	60% Closed

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 20-Jun-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey.
- Cell 4 landfilling in progress.
- City provided WSP with some rubber caps to replace or place over quick connects on landfill gas wells.

Weather: Sunny, 40 degrees C, minimal breeze to detect wind direction

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	28.8	19.3	6.8	45.1	0.2	0.2	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	62.5	32.3	0.0	5.2	0.4	0.4	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	56.8	36.6	0.0	6.6	0.4	0.4	40% Closed
GW07-03	56.5	36.4	0.0	7.1	0.5	0.5	95% Closed
GW05-00	57.9	35.4	0.0	6.7	0.3	0.3	95% Closed
GW04-00	57.4	35.4	0.0	7.2	0.5	0.5	95% Closed
LCMV1	25.0	16.2	10.7	48.1	0.3	0.3	90% Closed
GW03-00	58.5	34.4	0.0	7.1	0.3	0.3	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	46.0	30.7	3.1	20.2	0.2	0.2	55% Closed.
GW02-00	60.4	32.1	0.3	7.2	0.3	0.3	100% Open
GW01-00	62.9	31.9	0.0	5.2	12.6	12.6	20% Closed
LCMV3	58.8	31.9	0.3	9.0	0.4	0.4	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	60.2	33.7	0.0	6.1	0.4	0.4	65% Closed.
GW16-03	52.3	31.8	1.4	14.5	0.3	0.3	80% Closed
GW15-03	Flooded	Flooded	Flooded	Flooded	Flooded	Flooded	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Condensate built up in sub-header and flooded monitoring equipment.
LCMV5	49.3	28.3	1.6	20.8	0.3	0.0	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	59.9	32.1	0.0	8.0	0.3	0.3	85% Closed

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW13-03	62.5	31.9	0.0	5.6	0.4	0.4	80% Closed
GW12-03	65.5	29.1	0.0	5.4	0.4	0.4	45% Closed
GW11-03	55.0	24.7	1.1	19.2	0.5	0.5	90% Closed
GW23-10	61.9	31.8	0.1	6.2	0.5	0.5	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	60.2	33.8	0.0	6.0	0.7	0.7	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW22-10	61.2	33.0	0.0	5.8	0.5	0.5	95% Closed.
GW17-10	63.1	31.9	0.0	5.0	14.7	14.7	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	64.1	31.2	0.0	4.7	0.5	0.5	No indicator on valve to determine positioning
GW18-10	65.8	30.0	0.0	4.2	0.3	0.3	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	67.9	28.5	0.0	3.6	0.7	0.7	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	65.3	30.4	0.0	4.3	0.6	0.6	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	68.5	29.3	0.0	2.2	0.3	0.3	35% Closed
GW09-03	68.8	29.8	0.0	1.4	0.3	0.3	45% Closed
GW08-03	67.9	30.9	0.0	1.2	0.4	0.4	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	63.2	34.6	0.0	2.2	0.2	0.2	100% Open
LCMV4	63.9	32.1	0.0	4.0	0.2	0.2	85% Closed
GW20-07	68.5	30.2	0.0	1.3	0.5	0.5	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	64.1	32.6	0.0	3.3	0.3	0.3	No indicator on valve to determine positioning.
GW21-07	62.0	22.9	2.1	13.0	0.3	0.3	90% Closed
GW22-07	62.5	32.5	0.0	5.0	0.3	0.3	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	60.5	34.2	0.0	5.3	-0.5	-0.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	63.4	31.7	0.0	4.9	0.3	0.3	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
GW07-10	65.6	29.8	0.1	4.5	0.3	0.3	No indicator on valve to determine positioning
GW08-10	65.7	30.1	0.0	4.2	0.3	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	69.2	26.8	0.0	4.0	0.5	0.5	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	60.5	33.9	0.1	5.5	0.5	0.5	No indicator on valve to determine positioning
GW15-10	67.0	29.3	0.0	3.7	0.8	0.8	No indicator on valve to determine positioning
GW12-10	66.1	29.9	0.1	3.9	0.3	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	65.1	30.8	0.0	4.1	14.8	-0.2	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	64.0	31.0	0.0	5.0	0.3	0.3	No indicator on valve to determine positioning
GW13-10	60.9	33.9	0.0	5.2	-0.1	-1.0	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	58.5	36.4	0.1	5.0	1.3	1.3	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	60.0	35.2	0.1	4.7	0.2	0.2	No indicator on valve to determine positioning.
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow
NGW-1	60.3	34.1	0.2	5.4	-0.9	-0.9	50% Closed
NGW-2	59.5	33.9	0.1	6.5	-0.9	-0.9	80% Closed
NGW-3	60.3	33.7	0.0	6.0	-0.9	-0.9	95% Closed
NGW-4	59.8	34.3	0.0	5.9	-0.8	-0.9	85% closed
NGW-5	60.5	34.5	0	5.0	-0.8	-0.8	75% Closed
NGW-9	58.3	34.9	0.1	6.7	-0.9	-0.9	75% Closed
NGW-14	56.0	33.9	0.7	9.4	-0.9	-0.9	80% Closed
HC-3	11.1	23.2	4.1	61.6	1.1	-0.9	100% Closed
HC-1	57.8	35.7	0.0	6.5	0.6	-0.8	40% Closed
NGW-6	50.2	33.5	0.6	15.7	-0.7	-0.8	60% Closed
NGW-7	58.3	35.7	0.0	6.0	-0.8	-0.8	55% Closed
NGW-8	58.7	35.1	0.0	6.2	-0.9	-0.9	60% Closed
NGW-10	58.6	35.8	0.0	5.6	-0.8	-0.8	60% Closed
NGW-11	52.1	35.5	0.0	12.4	-0.6	-0.6	60% Closed

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 26-Jul-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey.
- Cell 4 landfilling in progress.

Weather: Sunny, 25 degrees C, minimal breeze to detect wind direction

Technician: Nicole Weyrich & Jaclyn Craig

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	22.4	18.3	7.0	52.2	-0.4	0.3	No indicator on valve to determine positioning. One (1) of the four (4) quick connects on wellhead is broken and needs to be repaired. Sample tube on the LFG well is broken and requires repairs.
GW05-10	65.2	32.1	0.1	2.6	1.4	2.5	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW06-03	58.5	36.8	0.1	4.7	0.2	0.2	40% Closed
GW07-03	59.6	36.7	0.0	3.7	0.2	0.1	95% Closed
GW05-00	58.9	35.6	0.1	5.4	0.2	0.2	95% Closed
GW04-00	57.9	36.3	0.0	5.8	0.3	0.2	95% Closed
LCMV1	57.0	29.9	0.9	12.2	0.2	0.2	90% Closed
GW03-00	60.0	34.8	0.0	5.2	0.2	0.2	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	64.1	31.5	0.0	4.4	0.2	0.2	55% Closed.
GW02-00	61.6	33.8	0.0	4.6	0.3	0.3	100% Open
GW01-00	63.4	32.3	0.0	4.3	0.3	0.3	20% Closed
LCMV3	64.7	31.5	0.1	3.7	0.2	0.2	60% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	62.8	33.8	0.0	3.4	0.3	0.3	65% Closed.
GW16-03	60.0	35.7	0.0	4.3	0.3	0.3	80% Closed
GW15-03	59.2	31.1	0.1	4.2	6.1	6.0	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced.
LCMV5	64.0	31.7	0.0	4.3	0.2	0.3	95% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	63.9	32.9	0.0	3.2	0.5	0.4	85% Closed
GW13-03	63.8	31.8	0.0	4.4	0.3	0.3	80% Closed
GW12-03	68.2	29.0	0.0	2.8	0.3	0.3	45% Closed
GW11-03	63.5	27.0	0.0	9.5	-0.6	0.4	90% Closed
GW23-10	64.2	31.7	0.0	4.1	0.2	-	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW24-10	63.1	33.2	0.0	3.7	0.3	1.7	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	62.4	33.6	0.0	4.0	0.6	0.4	95% Closed.
GW17-10	65.7	31.7	0.0	2.6	15.0	14.4	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	64.9	32.1	0.1	2.9	0.4	0.4	No indicator on valve to determine positioning
GW18-10	67.0	30.7	0.0	2.3	0.3	-	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Unable to sample static pressure from the systems side due to quick coupler repairs required.
GW21-10	69.2	27.6	0.0	3.2	0.8	0.7	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	69.5	28.1	0.0	2.4	0.4	0.3	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	68.9	27.4	0.0	3.7	0.3	0.3	35% Closed
GW09-03	72.9	25.3	0.0	1.8	0.3	0.3	45% Closed
GW08-03	71.5	26.7	0.0	1.8	0.3	0.3	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	65.2	31.4	0.0	3.4	0.2	0.3	100% Open
LCMV4	64.9	31.4	0.0	3.7	0.3	0.3	85% Closed
GW20-07	70.6	26.6	0.0	2.8	3.1	2.9	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	64.5	31.9	0.0	3.6	0.3	0.3	No indicator on valve to determine positioning.
GW21-07	71.9	25.2	0.0	2.9	0.3	0.3	90% Closed
GW22-07	63.6	31.9	0.0	4.5	0.3	0.3	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	62.1	34.0	0.0	3.9	0.3	0.3	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	64.6	31.5	0.0	3.9	0.3	0.3	No indicator on valve to determine positioning
GW06-10	65.1	32.3	0.0	2.6	0.1	0.1	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW07-10	67.5	29.4	0.0	3.1	0.3	0.3	No indicator on valve to determine positioning
GW08-10	65.8	29.5	0.0	4.7	0.3	0.2	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	68.9	26.9	0.0	4.2	0.3	0.3	85% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	65.8	29.4	0.0	4.8	0.4	0.4	No indicator on valve to determine positioning
GW15-10	66.5	29.1	0.0	4.4	1.3	1.3	No indicator on valve to determine positioning
GW12-10	66.8	28.8	0.0	4.4	0.4	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	65.8	29.7	0.0	4.5	15.6	0.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	63.8	30.8	0.0	5.4	0.3	0.3	No indicator on valve to determine positioning
GW13-10	61.5	32.9	0.0	5.6	0.3	0.3	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	58.7	35.0	0.0	6.3	1.2	1.2	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	59.8	34.1	0.0	6.1	0.3	0.2	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	59.7	33.1	0.0	7.2	-1.3	-1.3	50% Closed
NGW-2	59.5	33.1	0.1	7.3	-1.4	-1.4	75% Closed
NGW-3	60.2	33.0	0.0	6.8	-1.5	-1.5	95% Closed
NGW-4	59.7	33.4	0.0	6.9	-1.4	-1.4	85% closed
NGW-9	58.4	34.3	0.0	7.3	-1.4	-1.4	75% Closed
NGW-14	58.2	34.0	0.1	7.7	-1.4	-1.4	80% Closed
NGW-25	58.0	34.5	0.0	7.5	-1.4	-1.4	70% Closed
HC-3	9.2	29.4	0.0	61.4	2.6	-1.4	100% Closed
NGW-26	7.1	5.0	18.6	69.3	-1.5	-1.4	60% Closed
NGW-8	58.8	34.5	0.0	6.7	-1.4	-1.4	60% Closed
NGW-7	58.4	34.8	0	6.8	-1.3	-1.3	55% Closed
NGW-6	46.7	31.0	0.7	21.6	-0.8	-1.4	60% Closed
NGW-5	59.2	33.5	0.0	7.3	-1.3	-1.3	70% Closed
NGW-10	58.3	34.9	0.0	6.8	-1.3	-1.3	60% Closed
NGW-11	55.5	35.9	0.0	8.6	-1.0	-1.0	60% Closed
NGW-16	46.9	31.0	1.5	20.6	-0.2	-	80% Closed. Can't reach top port for system pressure
NGW-15	67.1	32.9	0.0	0.0	-1.3	-1.3	80% closed
HC-1	58.2	34.9	0.0	6.9	-2.5	-2.5	40% Closed
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 26-Aug-24

Measurements from Gas Utilization Plant Equipment:

Pressure at Gas Utilization Plant: N/A "H_20

Flow at Gas Utilization Plant: N/A cfm

Temp. at Gas Utilization Plant: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey.
- Cell 4 landfilling in progress.

Weather: Sunny, 28 degrees C, minimal breeze to detect wind direction

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	20.4	18.2	5.9	55.5	-0.6	0.1	No indicator on valve to determine positioning. Quick connect leaking on wellhead.
GW05-10	66.1	31.8	0.2	1.9	2.2	2.3	No indicator on valve to determine positioning
GW06-03	60.5	36.9	0.1	2.5	0.1	0.1	40% Closed
GW07-03	59.5	36.5	0.2	3.8	-0.3	-0.3	95% Closed
GW05-00	60.0	35.5	0.1	4.4	0.1	0.1	95% Closed
GW04-00	58.8	36.8	0.2	4.2	0.1	0.1	95% Closed
LCMV1	58.5	30.0	0.7	10.8	0.1	0.1	90% Closed
GW03-00	61.0	35.3	0.1	3.6	0.1	0.1	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	66.1	31.6	0.1	2.2	0.2	0.1	55% Closed.
GW02-00	62.5	34.2	0.0	3.3	0.1	0.1	100% Open
GW01-00	64.8	32.0	0.1	3.1	0.1	0.1	20% Closed
LCMV3	64.3	31.2	0.1	3.7	0.2	0.2	70% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	62.3	33.0	0.2	4.5	0.1	0.2	65% Closed.
GW16-03	59.2	35.9	0.0	4.9	0.2	0.1	80% Closed
GW15-03	60.1	31.8	0.1	4.4	0.3	0.3	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Condensate built up in sub-header and flooded monitoring equipment.
LCMV5	63.7	31.5	0.1	4.7	0.4	0.2	100% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	64.4	31.7	0.0	3.9	0.2	0.2	85% Closed
GW13-03	63.8	31.6	0.0	4.6	0.2	0.3	80% Closed
GW12-03	67.7	29.1	0.0	3.2	0.3	0.3	45% Closed
GW11-03	65.2	27.6	0.1	7.1	0.3	0.3	90% Closed
GW23-10	64.5	31.2	0.0	4.3	0.1	0.1	No indicator on valve to determine positioning. Quick connect should be replaced.
GW24-10	61.9	33.7	0.0	4.4	0.5	N/A	No indicator on valve to determine positioning. Quick coupler leaking on system side of well.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	63.2	32.1	0.0	4.7	0.3	0.4	100% Closed.
GW17-10	64.9	31.1	0.0	4.0	15.4	15.6	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	63.8	31.9	0.0	4.3	0.4	0.4	No indicator on valve to determine positioning
GW18-10	65.9	30.4	0.0	3.7	0.4	N/A	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	69.6	27.3	0.1	3.0	0.5	0.6	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	68.8	28.2	0.0	3.0	0.4	0.3	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	68.6	27.6	0.0	3.8	0.3	0.3	35% Closed
GW09-03	68.7	25.4	0.0	5.9	0.3	0.3	45% Closed
GW08-03	70.2	25.6	0.0	4.2	0.3	0.3	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.5	31.4	0.0	4.1	0.2	0.3	100% Open
LCMV4	64.3	31.3	0.0	4.4	0.3	0.3	85% Closed
GW20-07	68.7	26.4	0.0	4.9	3.2	2.8	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	64.6	32.1	0.0	3.3	0.3	0.3	No indicator on valve to determine positioning.
GW21-07	71.7	25.2	0.1	3.0	0.3	0.3	90% Closed
GW22-07	62.5	32.6	0.0	4.9	0.3	0.2	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	62.2	34.0	0.0	3.8	0.3	0.3	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	64.8	32.2	0.0	3.0	0.3	0.3	No indicator on valve to determine positioning
GW06-10	63.8	31.5	0.1	4.6	0.3	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled.
GW07-10	67.4	29.5	0.0	3.1	0.4	0.3	No indicator on valve to determine positioning
GW08-10	65.9	29.5	0.1	4.5	-0.1	0.4	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	70.6	25.7	0.1	3.6	0.4	0.3	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	66.9	29.4	0.0	3.7	0.4	0.4	No indicator on valve to determine positioning
GW15-10	67.2	29.4	0.0	3.4	1.1	1.1	No indicator on valve to determine positioning
GW12-10	66.2	28.6	0.0	5.2	0.4	0.3	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	65.6	29.7	0.0	4.7	14.8	0.3	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	64.5	30.2	0.0	5.3	0.3	0.3	No indicator on valve to determine positioning
GW13-10	61.2	33.1	0.0	5.7	0.3	0.3	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	58.5	34.6	0.0	6.9	1.2	1.1	80% Closed. Broken sample port on well . Well adjuster missing wheel.
GW09-10	59.3	34.1	0.0	6.6	0.3	0.2	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	62.6	33.5	0.0	3.9	-2.2	-2.1	50% Closed
NGW-2	59.6	33.2	0.1	7.1	-1.2	-1.2	80% Closed
NGW-3	62.1	33.6	0.0	4.3	0.0	0.0	95% Closed
NGW-4	61.4	33.1	0.1	5.4	-2.4	-2.4	85% closed
NGW-9	59.5	34.0	0.3	6.2	-2.3	-2.3	75% Closed
NGW-14	59.4	34.7	0.0	6.0	-2.5	-2.5	80% Closed
NGW-20	60.0	34.3	0.1	5.6	-2.4	-2.3	55% Closed
HC-3	13.2	31.3	0.1	55.4	4.4	-2.3	100% Closed
NGW-26	28.7	19.0	9.6	42.7	-2.3	-2.4	60% Closed
NGW-8	59.7	34.6	0.0	5.7	-2.2	-2.2	60% Closed
NGW-7	59.3	34.7	0	6.0	-2.1	-2.3	55% Closed
NGW-6	37.7	27.6	1.6	33.1	-1.1	-2.1	60% Closed
NGW-5	56.3	33.4	0.1	10.2	-2.0	-2.1	70% Closed
NGW-10	58.4	34.7	0.1	6.8	-2.1	-2.1	60% Closed
NGW-11	54.4	35.4	0.0	10.2	-1.7	N/A	60% Closed, can't reach top port for system pressure
NGW-16	49.3	33.2	0.0	17.5	-0.4	N/A	80% Closer, can't reach top port for system pressure
NGW-15	60.4	33.9	0.0	5.8	-2.1	-2.0	80% closed
HC-1	58.6	34.6	0.0	6.8	-3.3	-1.9	40% Closed
NFA Perimeter LFG System	-	-	-	-	-	-	No Flow

Notes:
1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 19-Sep-24

Measurements from Gas Utilization Plant (GUP) Equipment OR Flare:

Pressure at GUP OR Flare: N/A "H_20

Flow at GUP OR Flare: N/A cfm

Temp. at GUP OR Flare: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA during survey.
- Cell 4 landfilling in progress.
- Annual CCTV in NFA during LFG monitoring event.

Weather: EG: Sunny, 26 degrees C, minimal breeze to detect wind direction

Field Tech: T. Wright

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant /Flare	-	-	-	-	-	-	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	20.6	20.2	4.1	55.1	-0.2	-0.1	No indicator on valve to determine positioning. Quick connect leaking on wellhead.
GW05-10	61.8	33.3	0.0	4.9	0.8	2.0	No indicator on valve to determine positioning
GW06-03	57.5	40.1	0.0	2.4	-0.2	-0.1	40% Closed
GW07-03	57.6	39.6	0.0	2.8	-0.2	-0.2	95% Closed
GW05-00	55.0	37.4	0.9	6.7	-0.2	-0.2	95% Closed
GW04-00	54.7	39.9	0.4	5.0	-0.2	-0.2	80% Closed
LCMV1	29.1	20.3	9.3	41.3	-0.2	-0.1	60% Closed
GW03-00	59.9	39.0	0.0	1.1	-0.3	-0.2	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	49.6	35.4	2.3	12.7	-0.2	-0.1	40% Closed.
GW02-00	61.3	38.1	0.0	0.6	-0.2	-0.2	100% Open
GW01-00	64.1	35.2	0.0	0.7	-0.2	-0.2	20% Closed
LCMV3	59.3	39.2	0	1.5	-0.2	-0.18	40% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	61.0	36.3	0.2	2.5	-0.1	-0.1	65% Closed.
GW16-03	53.7	37.6	1.3	7.4	-0.1	-0.1	80% Closed
GW15-03	60.1	37.0	0.2	2.7	6.0	N/A	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Condensate built up in sub-header and flooded monitoring equipment. Could not get cap off of for system pressure
LCMV5	55.7	31.1	1.5	11.7	-0.1	0.0	100% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	62.0	34.2	0.0	3.8	-0.1	0.0	85% Closed
GW13-03	64.8	34.7	0.0	0.5	-0.1	0.0	80% Closed
GW12-03	67.8	32.0	0.0	0.2	0.0	0.0	45% Closed
GW11-03	69.1	29.2	0.0	1.7	0.0	0.2	90% Closed
GW23-10	64.3	34.3	0.0	1.4	0.2	0.1	No indicator on valve to determine positioning.
GW24-10	59.9	36.7	0.1	3.3	0.5	0.2	No indicator on valve to determine positioning. Quick coupler leaking on system side of well. Wild Parsnip growing.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	60.8	36.2	0.0	3.0	0.2	N/A	100% Closed. Wild Parsnip growing everywhere surrounding area. Couldn't reach top for system pressure
GW17-10	63.5	34.1	0.0	2.4	15.3	15.3	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	62.4	34.9	0.0	2.7	0.2	0.1	No indicator on valve to determine positioning
GW18-10	64.8	32.8	0.0	2.4	0.0	0.0	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	67.8	29.5	0.2	2.5	0.6	0.6	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	65.7	31.0	0.0	3.3	0.3	0.0	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	68.2	29.3	0.1	2.4	0.0	0.0	35% Closed
GW09-03	70.4	27.1	0.1	2.4	-0.1	-0.1	45% Closed
GW08-03	69.9	27.2	0.2	2.7	-0.1	-0.1	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.2	34.1	0.0	1.7	-0.1	-0.1	100% Open
LCMV4	62.5	35.0	0.1	2.4	0.1	0.0	85% Closed
GW20-07	67.1	29.3	0.2	3.4	1.6	1.6	80% Closed. All three (3) rubber sample port caps should be replaced.
GW02-10	61.7	33.6	0.0	4.7	-0.1	-0.1	No indicator on valve to determine positioning.
GW21-07	71.1	26.8	0.0	2.1	-0.1	-0.1	90% Closed
GW22-07	63.7	33.8	0.0	2.5	-0.1	-0.1	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	59.2	35.6	0.8	4.4	-0.1	-0.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	64.3	35.3	0.0	0.4	-0.1	-0.1	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled. Well too high to reach.
GW07-10	67.2	32.6	0.0	0.2	-0.1	-0.1	No indicator on valve to determine positioning
GW08-10	64.3	32.4	0.5	2.8	-0.1	-0.1	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	69.3	30.3	0.0	0.4	0.0	0.0	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	63.6	36.4	0.0	0.0	0.2	0.1	No indicator on valve to determine positioning
GW15-10	66.7	33.3	0.0	0.0	0.0	0.1	No indicator on valve to determine positioning
GW12-10	67.7	32.3	0.0	0.0	-0.1	-0.1	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	67.0	32.9	0.0	0.1	18.6	-0.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	65.9	34.1	0.0	0.0	-0.1	-0.1	No indicator on valve to determine positioning
GW13-10	63.9	36.0	0.0	0.1	-0.1	-0.1	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	61.3	38.7	0.0	0.0	-0.1	N/A	80% Closed. Broken sample port on well . Well adjuster missing wheel. Couldn't reach top for system pressure
GW09-10	59.5	34.6	0.0	5.9	0.1	0.1	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	59.0	35.0	0.1	5.9	-1.2	-1.2	50% Closed
NGW-2	60.4	36.3	0.0	3.3	-1.3	-1.2	80% Closed
NGW-3	61.0	36.3	0.5	2.2	-1.3	-1.3	80% Closed
NGW-4	52.9	33.4	2.3	11.4	-1.4	-1.3	70% closed
NGW-9	60.4	37.7	0.0	1.9	-1.3	-1.3	60% Closed
NGW-14	51.9	34	2.7	11.4	-1.34	-1.32	70% Closed
NGW-20	3.5	2.8	19.8	73.9	-1.4	-1.4	50% Closed. Background reading on LFG concentrations.
HC-3	33.5	31.7	2.5	32.3	-1.4	-1.4	60% Closed
NGW-26	28.5	21.8	9.0	40.7	-1.3	-1.3	50% Closed
NGW-8	57.8	37.4	0.2	4.6	-1.3	-1.3	60% Closed
NGW-7	58.4	37.6	0.1	3.9	-1.2	-1.2	60% Closed
NGW-6	48.8	34.9	0.7	15.6	-0.6	-0.6	60% Closed
NGW-5	60.3	37.0	0.1	2.6	-1.2	-1.1	70% Closed
NGW-10	59.4	38.4	0.0	2.2	-1.1	-1.1	60% Closed
NGW-11	57.1	39.5	0.2	3.2	-0.8	N/A	60% Closed. Can't reach top for system pressure
NGW-16	49.7	37.3	0.2	12.8	-0.5	N/A	75% Closed. Can't reach top port for system pressure
NGW-15	60.5	37.7	0.0	1.8	-1.1	-1.1	70% Closed
HC-1	59.8	38.4	0.0	1.8	0.1	-1.0	40% Closed. Condensate observed in wellhead prior to sampling.
NFA Perimeter LFG System	-	-	-	-	-	-	No Gas Flow

Notes:
1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 18-Oct-24

Measurements from Gas Utilization Plant (GUP) Equipment OR Flare:

Pressure at GUP OR Flare: 4 "H_20

Flow at GUP OR Flare: ~220 cfm

Temp. at GUP OR Flare: 936 degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA and NFA during survey.
- Cell 4 landfilling in progress.

Weather: Sunny, 7 degrees C, minimal breeze to detect wind direction

Field Tech: T. Wright

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant / Flare	51.4	33.7	1.3	13.6	N/A	-5.3	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	38.5	28.9	0.9	31.7	0.8	0.3	No indicator on valve to determine positioning. Quick connect leaking on wellhead.
GW05-10	65.5	34.2	0.3	0.0	2.1	2.0	No indicator on valve to determine positioning
GW06-03	59.4	40.2	0.4	0.0	0.3	0.2	40% Closed
GW07-03	60.0	39.7	0.3	0.0	0.3	0.2	95% Closed
GW05-00	60.5	39.5	0.0	0.0	0.2	0.2	95% Closed
GW04-00	58.6	41.3	0.0	0.1	0.3	0.2	80% Closed
LCMV1	60.0	37.4	1.0	1.6	0.3	0.3	60% Closed
GW03-00	60.3	39.1	0.5	0.1	0.2	0.2	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	59.6	39.8	0.6	0.0	0.2	0.2	40% Closed.
GW02-00	61.9	38.0	0.0	0.1	0.2	0.2	100% Open
GW01-00	64.5	35.2	0.3	0.0	0.3	0.3	20% Closed
LCMV3	64.6	35.4	0	0.0	0.1	0.1	40% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	61.8	36.1	2.1	0.0	0.3	0.3	65% Closed.
GW16-03	60.0	39.6	0.4	0.0	0.3	0.3	80% Closed
GW15-03	61.1	38.9	0.0	0.0	3.3	-	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Could not get cap off of for system pressure side.
LCMV5	65.9	34.1	0.0	0.0	0.3	0.2	100% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	65.0	35.0	0.0	0.0	0.4	0.3	85% Closed
GW13-03	64.6	35.4	0.0	0.0	0.4	0.3	80% Closed
GW12-03	64.9	32.2	2.9	0.0	0.4	0.3	45% Closed
GW11-03	70.1	29.9	0.0	0.0	0.4	0.4	90% Closed
GW23-10	65.4	34.6	0.0	0.0	0.2	0.2	No indicator on valve to determine positioning.
GW24-10	63.3	36.7	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning. Quick coupler leaking on system side of well. Wild Parsnip growing.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	63.4	36.0	0.6	0.0	0.4	-	100% Closed. Wild Parsnip growing everywhere surrounding area. Couldn't reach top for system pressure.
GW17-10	65.5	34.5	0.0	0.0	5.4	6.1	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	64.6	35.4	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning
GW18-10	66.1	33.5	0.3	0.1	0.1	0.1	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	67.8	32.2	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	66.5	33.3	0.1	0.1	0.1	0.1	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW10-03	69.3	30.1	0.6	0.0	0.1	0.1	35% Closed
GW09-03	72.6	27.3	0.0	0.1	0.1	0.1	55% Closed
GW08-03	71.7	28.3	0.0	0.0	0.1	0.1	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.9	35.1	0.0	0.0	0.1	0.1	100% Open
LCMV4	65.5	34.5	0.0	0.0	0.1	0.1	85% Closed
GW20-07	-	-	-	-	-	-	Unable to find monitoring well due to overgrown vegetation
GW02-10	64.5	35.2	0.2	0.1	0.1	0.1	No indicator on valve to determine positioning.
GW21-07	72.5	26.9	0.6	0.0	0.1	0.1	90% Closed
GW22-07	64.8	34.3	0.9	0.0	0.2	0.1	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	63.1	36.9	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	64.6	34.5	0.8	0.1	0.1	0.1	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled. Well too high to reach.
GW07-10	67.7	31.7	0.6	0.0	0.2	0.1	No indicator on valve to determine positioning
GW08-10	66.5	32.9	0.6	0.0	0.1	0.1	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	67.0	33.0	0.0	0.0	0.1	0.1	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	68.1	31.9	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning
GW15-10	67.5	32.1	0.4	0.0	0.1	0.1	No indicator on valve to determine positioning
GW12-10	68.1	31.9	0.0	0.0	0.1	0.1	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	67.5	32.5	0.0	0.0	6.6	0.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	66.2	33.4	0.4	0.0	0.1	0.1	No indicator on valve to determine positioning
GW13-10	63.4	35.5	1.0	0.1	0.1	0.1	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	61.4	38.3	0.3	0.0	0.1	-	80% Closed. Broken sample port on well . Well adjuster missing wheel. Couldn't reach top for system pressure
GW09-10	62.9	36.8	0.3	0.0	0.3	-1.2	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	63.3	36.7	0.0	0.0	-3.2	-3.2	50% Closed
NGW-2	61.9	37.2	0.9	0.0	-3.2	-3.2	80% Closed
NGW-3	62.1	37.1	0.5	0.3	-3.4	-3.4	80% Closed
NGW-4	61.3	37.5	1.3	-0.1	-3.3	-3.3	70% closed
NGW-9	59.9	38.4	1.7	0.0	-3.2	-3.2	60% Closed
NGW-14	60.7	39	0.3	0.0	-3.2	-3.3	70% Closed
NGW-20	19.2	12.7	15.6	52.5	-3.3	-3.3	50% Closed.
HC-3	45.9	31.9	5.3	16.9	-3.3	-3.2	60% Closed
NGW-26	23.9	18.6	11.8	45.7	-3.3	-3.3	50% Closed
NGW-8	60.5	38.5	0.9	0.1	-3.2	-3.2	60% Closed
NGW-7	60.9	39.1	0	0.0	-3.1	-3.1	60% Closed
NGW-6	38.2	30.1	2.3	29.4	-1 .8	-1.8	60% Closed
NGW-5	60.6	38.2	1.1	0.1	-3.0	-3.0	70% Closed
NGW-10	60.8	38.5	0.7	0.0	-3.0	-3.0	60% Closed
NGW-11	55.2	38.2	0.0	6.6	-2.6	-	60% Closed. Can't reach top for system pressure
NGW-16	36.3	29.3	4.5	29.9	-1.6	-	75% Closed. Can't reach top port for system pressure
NGW-15	61.7	38.3	0.0	0.0	-3.0	-3.0	70% Closed. Condensation observed in well
HC-1	61.3	38.2	0.3	0.2	-1.4	-3.1	30% Closed. Condensate observed in wellhead prior to sampling.
NFA Perimeter LFG System	-	-	-	-	N/A	N/A	No Gas Flow

Notes:
1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 21-Nov-24

Measurements from Gas Utilization Plant (GUP) Equipment OR Flare:

Pressure at GUP OR (Flare): 4 "H_20

Flow at GUP OR (Flare): ~220 cfm

Temp. at GUP OR (Flare): 952 degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA and NFA during survey.
- Cell 4 landfilling in progress.

Weather: partly cloudy, 3 degrees C, minimal breeze to detect wind direction

Field Tech: T. Wright

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant / Flare	47.1	31.3	1.8	19.8	N/A	-6.9	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	55.2	31.7	1.2	11.9	1.5	0.5	No indicator on valve to determine positioning. Quick connect leaking on wellhead.
GW05-10	64.7	32.2	1.5	1.6	2.1	0.5	No indicator on valve to determine positioning
GW06-03	56.8	37.5	2.3	3.4	0.3	0.3	40% Closed
GW07-03	57.8	37.0	1.9	3.3	0.4	-0.1	95% Closed
GW05-00	57.4	36.5	0.4	5.7	0.4	0.3	95% Closed
GW04-00	56.9	37.8	0.0	5.3	0.3	0.3	80% Closed
LCMV1	61.4	32.5	0.2	5.9	-0.4	0.4	60% Closed
GW03-00	59.4	36.1	0.5	4.0	0.3	0.3	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	64.6	32.9	0.0	2.5	-1.1	0.5	45% Closed.
GW02-00	61.5	34.6	0.2	3.7	0.3	0.3	100% Open
GW01-00	63.9	33.1	0.0	3.0	0.3	0.2	20% Closed
LCMV3	65.3	32.6	0	2.1	0.0	0.2	40% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	61.7	33.6	1.8	2.9	0.4	0.3	65% Closed.
GW16-03	59.7	35.8	0.0	4.5	0.3	0.3	80% Closed
GW15-03	61.8	34.8	0.0	3.4	0.3	-	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Could not get cap off for system pressure side.
LCMV5	63.3	32.5	0.0	4.2	0.4	0.5	100% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03.
GW14-03	64.9	32.4	0.0	2.7	0.4	0.3	85% Closed
GW13-03	63.5	32.3	1.9	2.3	0.4	0.4	80% Closed
GW12-03	67.0	29.9	1.6	1.5	0.4	0.4	45% Closed
GW11-03	73.3	25.1	0.0	1.6	0.5	0.4	90% Closed
GW23-10	66.3	31.4	0.0	2.3	0.2	0.1	No indicator on valve to determine positioning.
GW24-10	62.5	34.3	0.0	3.2	0.1	0.1	No indicator on valve to determine positioning. Quick coupler leaking on system side of well.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	66.8	31.2	0.0	2.0	0.4	-	100% Closed. Wild Parsnip growing everywhere surrounding area. Couldn't reach top for system pressure.
GW17-10	65.5	31.7	0.0	2.8	15.1	14.4	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	67.8	30.8	0.0	1.4	0.5	0.5	No indicator on valve to determine positioning
GW18-10	67.2	30.7	0.0	2.1	0.5	0.5	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	69.8	28.7	0.0	1.5	0.6	0.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	68.2	29.8	0.0	2.0	0.5	0.5	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Quick connect on system side is broken, needs replacing.
GW10-03	69.4	27.9	0.5	2.2	0.5	0.5	35% Closed
GW09-03	66.9	29.7	0.0	3.4	0.5	0.5	55% Closed
GW08-03	71.5	26.6	0.0	1.9	0.5	0.5	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	64.2	31.3	0.0	4.5	0.4	0.5	100% Open
LCMV4	64.6	32.5	0.0	2.9	0.2	0.3	85% Closed
GW20-07	68.4	29.8	0.0	1.8	1.5	0.5	80% Closed. Surrounding the well is overgrown vegetation, needs to be cut down for safety.
GW02-10	64.4	32.2	0.0	3.4	0.4	0.4	No indicator on valve to determine positioning.
GW21-07	71.5	26.4	0.0	2.1	0.4	0.4	90% Closed
GW22-07	63.3	32.6	0.8	3.3	0.4	0.4	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	62.2	34.7	0.0	3.1	0.4	0.4	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	63.0	32.6	1.9	2.5	0.4	0.6	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled. Well too high to reach.
GW07-10	66.5	30.4	0.0	3.1	0.5	0.5	No indicator on valve to determine positioning
GW08-10	65.6	30.7	1.2	2.5	0.5	0.6	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW19-07	63.4	32.2	0.6	3.8	0.5	0.4	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	67.5	29.7	0.8	2.0	0.3	0.3	No indicator on valve to determine positioning
GW15-10	66.9	30.5	0.0	2.6	0.5	0.7	No indicator on valve to determine positioning
GW12-10	68.3	30.1	0.0	1.6	0.1	0.6	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements.
GW11-10	67.6	30.0	0.3	2.1	16.7	0.5	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	65.7	31.8	0.0	2.5	0.5	0.5	No indicator on valve to determine positioning
GW13-10	63.2	33.2	0.6	3.0	0.7	0.5	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	60.0	35.5	0.4	4.1	0.5	-	80% Closed. Broken sample port on well . Well adjuster missing wheel. Couldn't reach top for system pressure
GW09-10	61.2	34.3	1.4	3.1	0.5	0.5	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	61.8	34.3	1.0	2.9	-4.4	-4.4	50% Closed
NGW-2	62.2	34.3	2.0	1.5	-4.4	-4.4	80% Closed
NGW-3	62.7	34.2	0.0	3.1	-4.5	-4.4	80% Closed
NGW-4	50.3	30.2	3.7	15.8	-4.5	-2.9	70% closed
NGW-9	60.3	34.8	0.0	4.9	-4.5	-4.4	60% Closed
NGW-14	61.3	35.7	0.0	3.0	-4.5	-4.4	70% Closed
NGW-20	60.3	35.2	0.2	4.3	-4.5	-4.5	50% Closed.
HC-3	39.8	29.0	3.2	28.0	-4.4	-4.1	60% Closed
NGW-26	41.3	27.7	4.9	26.1	-4.4	-4.4	50% Closed
NGW-8	59.7	35.3	0.0	5.0	-4.4	-4.4	60% Closed
NGW-7	60.9	36	0	3.1	-4.4	-4.4	60% Closed
NGW-6	34.0	26.3	3.1	36.6	-2.2	-4.0	60% Closed
NGW-5	61.3	34.7	1.0	3.0	-4.4	-4.4	70% Closed
NGW-10	52.1	33.7	0.0	14.2	-4.4	-4.4	60% Closed
NGW-11	52.7	35.1	0.0	12.2	-3.7	-	60% Closed. Can't reach top for system pressure
NGW-16	31.5	25.0	4.8	38.7	-2.1	-	75% Closed. Can't reach top port for system pressure
NGW-15	61.2	35.7	0.4	2.7	-4.2	-4.4	70% Closed. Condensation observed in well
HC-1	57.8	35.0	1.0	6.2	-3.7	-4.5	30% Closed. Condensate observed in wellhead prior to sampling.
NFA Perimeter LFG System	-	-	-	-	-	-	No Gas Flow

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

Peterborough County/City Waste Management Facility
Landfill Gas Monitoring

Date: 20-Dec-24

Measurements from Gas Utilization Plant (GUP) Equipment OR Flare:

Pressure at GUP OR Flare: 0 "H_20

Flow at GUP OR Flare: N/A cfm

Temp. at GUP OR Flare: N/A degrees C at point of entry

Notes:
- Landfill gas (LFG) flare system operating.
- Minimal odours observed onsite in the SFA and NFA during survey.
- Cell 4 landfilling in progress.

Weather: cloudy, snowing, -7 degrees C, minimal breeze to detect wind direction

Field Tech: T. Wright

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
Gas Utilization Plant / Flare	N/A	N/A	N/A	N/A	N/A	N/A	- Flare system operating, PUG was not onsite during monitoring event.
GW04-10	-	-	-	-	-	1.1	No indicator on valve to determine positioning. Quick connect leaking on wellhead. No flow detected from well ports.
GW05-10	63.2	34.3	1.2	1.3	2.0	1.2	No indicator on valve to determine positioning
GW06-03	55.6	37.5	5.9	1.0	0.9	1.1	40% Closed
GW07-03	55.7	37.0	1.0	6.3	1.0	1.0	95% Closed
GW05-00	55.7	36.6	1.1	6.6	1.0	1.1	95% Closed. One (1) rubber sample port cap missing.
GW04-00	56.5	37.9	1.3	4.3	0.9	-	80% Closed. System pressure port broken off completely - needs to be repaired.
LCMV1	52.1	32.6	1.6	13.7	1.0	1.0	60% Closed
GW03-00	52.3	36.5	8.0	3.2	2.1	0.9	30% Closed. All three (3) rubber sample port caps should be replaced.
LCMV2	62.2	33.1	3.1	1.6	1.1	1.0	45% Closed. Quick connect broken off and stuck in one (1) sample port.
GW02-00	57.7	36.0	4.1	2.2	1.0	1.0	100% Open
GW01-00	62.6	34.2	0.6	2.6	1.1	1.0	20% Closed
LCMV3	65.4	33.6	0.4	0.6	0.3	1.0	40% Closed - Sag in flex hose. Hose should be cut back to eliminate condensate and gas flow restriction.
GW17-03	60.7	33.7	2.5	3.1	1.0	1.0	65% Closed.
GW16-03	61.0	34.6	1.0	3.4	1.0	1.1	80% Closed
GW15-03	62.9	34.2	0.7	2.2	3.8	-	100% Open. Sag in flex hose, hose should be cut back to eliminate condensate and gas flow restriction. All three (3) rubber sample port caps should be replaced. Could not get cap off for system pressure side.
LCMV5	62.1	33.1	1.9	2.9	0.9	1.0	100% Closed. LCMV5 is the smaller wellhead with white hose in GW14-03. System pressure rubber sample port cap missing.
GW14-03	62.0	32.7	0.7	4.6	0.4	1.0	85% Closed. System pressure rubber sample port cap missing.
GW13-03	61.6	34.1	0.7	3.6	1.0	1.0	80% Closed
GW12-03	63.3	32.2	0.7	3.8	1.0	1.0	45% Closed
GW11-03	68.9	27.0	1.2	2.9	1.0	1.0	90% Closed
GW23-10	61.8	32.7	0.8	4.7	1.0	1.0	No indicator on valve to determine positioning.
GW24-10	57.4	35.2	0.8	6.6	1.1	1.0	No indicator on valve to determine positioning. Quick coupler leaking on system side of well.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH_4	CO_2	O_2	Balance			
GW22-10	62.5	31.1	2.3	4.1	1.6	-	100% Closed. Couldn't reach top for system pressure.
GW17-10	59.8	32.9	0.6	6.7	3.8	1.1	No indicator on valve to determine positioning. Suspected blockage in lateral between GW17-10 and GW13-10. Grading is required around well, settlement has occurred and ponding water is evident.
GW20-10	63.3	31.4	1.0	4.3	1.0	1.1	No indicator on valve to determine positioning
GW18-10	54.9	30.2	14.9	0.0	1.0	0.2	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced.
GW21-10	64.5	28.7	1.8	5.0	1.1	1.1	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW19-10	63.4	30.1	1.5	5.0	1.0	1.0	No indicator on valve to determine positioning. Quick coupler on wellhead is leaking and should be replaced. Quick connect on system side is broken, needs replacing.
GW10-03	63.8	26.9	2.6	6.7	1.0	1.0	35% Closed
GW09-03	64.1	29.6	2.4	3.9	1.0	1.0	55% Closed
GW08-03	65.4	27.1	1.1	6.4	1.1	0.9	75% Closed. All three (3) rubber sample port caps should be replaced.
GW18-07	62.5	32.6	1.0	3.9	1.8	1.1	100% Open
LCMV4	62.1	31.2	1.4	5.3	0.2	1.0	85% Closed
GW20-07	4.3	3.0	19.4	73.3	0.1	-	80% Closed. Surrounding the well is overgrown vegetation, needs to be cut down for safety. 1 rubber sample port missing. Can't get rubber cap of system side for pressure.
GW02-10	62.2	31.8	1.1	4.9	1.0	1.0	No indicator on valve to determine positioning.
GW21-07	68.9	24.8	2.9	3.4	1.0	1.0	90% Closed
GW22-07	62.3	31.4	1.3	5.0	1.0	1.1	Approximately 80% Closed - Valve indicator sticker missing. Rubber sample port caps should be replaced.
GW01-10	61.1	33.3	1.1	4.5	1.0	1.0	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW03-10	60.8	33.0	5.4	0.8	1.9	0.1	No indicator on valve to determine positioning
GW06-10	-	-	-	-	-	-	No indicator on valve to determine positioning. Missing rubber casing that covers all three sample ports from weather elements. Engineered fill required around well, settlement has occurred and the well couldn't be sampled. Well too high to reach.
GW07-10	63.3	30.9	1.5	4.3	1.2	1.0	No indicator on valve to determine positioning
GW08-10	62.2	30.5	1.3	6.0	1.0	0.9	No indicator on valve to determine positioning. Missing rubber casing that covers all three (3) sample ports from weather elements.
GW19-07	64.6	28.5	3.6	3.3	1.1	1.0	80% Closed. Two (2) rubber sample port caps should be replaced.
GW16-10	53.5	25.9	4.6	16.0	0.8	1.1	No indicator on valve to determine positioning
GW15-10	52.9	26.8	3.2	17.1	1.0	1.0	No indicator on valve to determine positioning
GW12-10	54.4	26.5	7.3	11.8	0.9	0.4	No indicator on valve to determine positioning. Missing rubber casing that covers all three (3) sample ports from weather elements.
GW11-10	53.5	26.2	7.0	13.3	1.0	1.0	No indicator on valve to determine positioning. Sample tube on the LFG well is broken and requires repairs.
GW14-10	60.9	30.7	4.5	3.9	1.1	1.1	No indicator on valve to determine positioning
GW13-10	62.9	33.1	1.2	2.8	1.2	1.0	No indicator on valve to determine positioning. GW13-10 is connected to GW14-10 lateral above ground as buried lateral from GW13-10 heading North is considered compromised. Sample tube on the LFG well is broken and requires repairs. Missing rubber casing that covers all three sample ports from weather elements.
GW10-10	58.6	36.4	3.2	1.8	4.5	-	80% Closed. Broken sample port on well . Well adjuster missing wheel. Couldn't reach top for system pressure
GW09-10	59.8	35.6	3.9	0.7	1.0	1.0	No indicator on valve to determine positioning.

Well	Gas Concentrations (%)				Static Pressure on the well (inches H_2O)	Static Pressure on the system (inches H_2O)	Comments
	CH4	CO_2	O_2	Balance			
NGW-1	58.7	32.4	2.5	6.4	3.9	3.8	50% Closed
NGW-2	59.0	33.8	0.4	6.8	3.8	3.7	80% Closed
NGW-3	59.6	33.0	5.5	1.9	3.9	3.8	80% Closed
NGW-4	59.3	34.1	0.6	6.0	5.7	1.2	70% closed
NGW-9	59.6	35.0	0.7	4.7	4.1	3.7	60% Closed
NGW-14	59.9	35.4	0.5	4.2	4.2	1.6	70% Closed
NGW-20	59.9	35.2	0.7	4.2	4.1	3.9	50% Closed.
HC-3	41.0	28.3	5.9	24.8	4.1	4.2	60% Closed
NGW-26	42.8	29.3	4.6	23.3	4.1	4.2	50% Closed
NGW-8	59.4	36.1	0.5	4.0	4.0	1.8	60% Closed
NGW-7	60.3	36.5	0.6	2.6	4.2	4.2	60% Closed
NGW-6	60.1	36.5	0.8	2.6	4.2	4.2	60% Closed
NGW-5	60.9	36.2	0.4	2.5	4.0	4.1	70% Closed
NGW-10	-	-	-	-	-	-	60% Closed. Couldn't connect to quick connects
NGW-11	-	-	-	-	-	-	60% Closed. Can't reach top for system pressure. No flow detected.
NGW-16	59.8	36.0	4.0	0.2	3.3	-	75% Closed. Can't reach top port for system pressure
NGW-15	58.9	35.4	0.8	4.9	4.1	4.1	70% Closed.
HC-1	54.3	36.0	9.6	0.1	3.2	1.6	30% Closed. Condensate observed in wellhead prior to sampling.
NFA Perimeter LFG System	-	-	-	-	-	-	No Gas Flow

Notes:

1. To convert from inches of water to kPa divide by 4.01.

2. Static pressure is the pressure of the monitoring point relative to the atmospheric pressure. (http://www.geotechuk.com/technical-faqs/ga2000-and-gem2000-platform/pressure-definitions.aspx)

REPORT

2024 Landfill Surface Monitoring

Peterborough County/City Waste Management Facility

Submitted to:

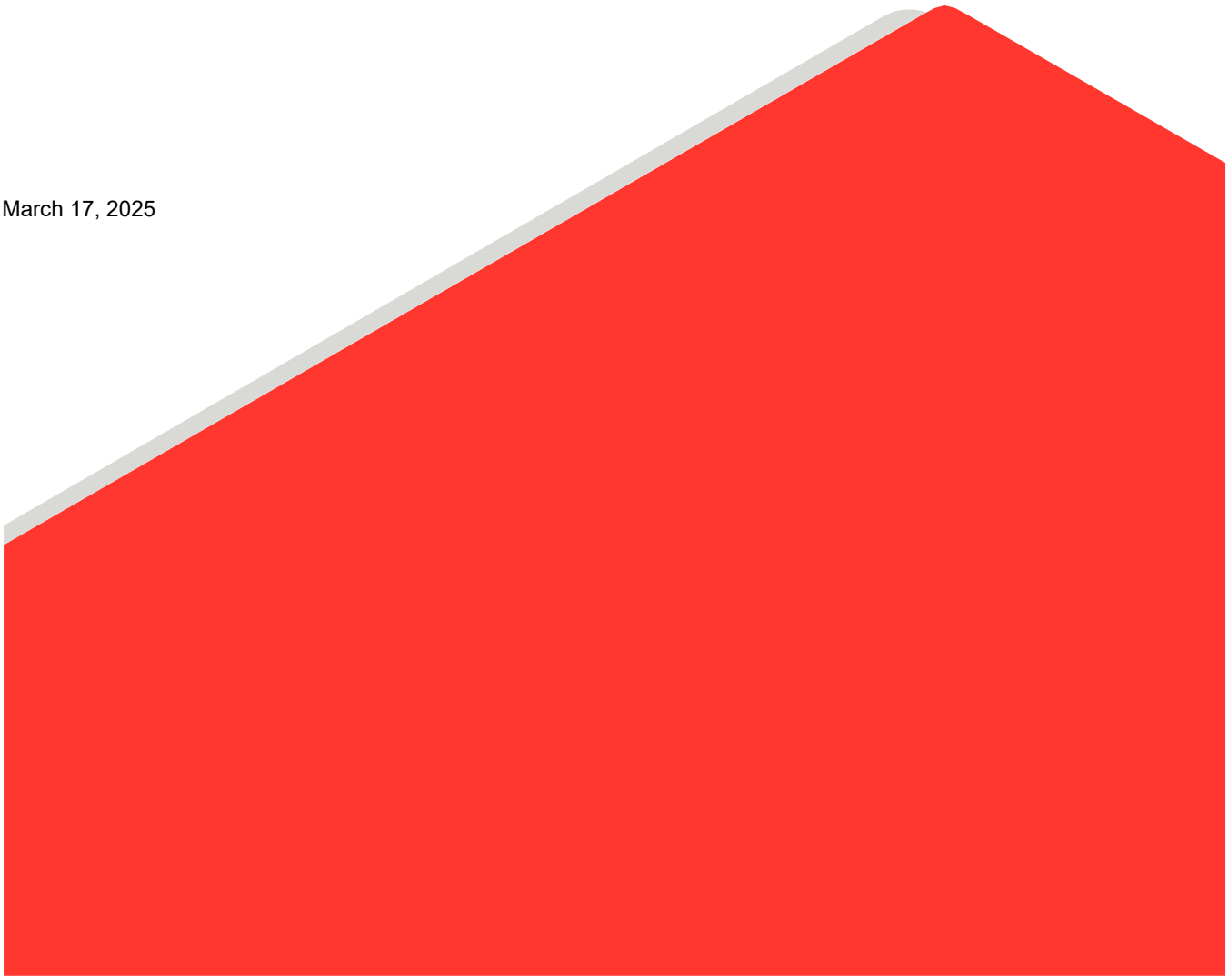
City of Peterborough

500 George Street North
Peterborough, Ontario
K9H 3R9

Submitted by:

WSP Canada Inc.

6925 Century Avenue, Mississauga, Ontario L5N 7K2



March 17, 2025

March 17, 2025

Don Briand
Coordinator, Waste Operations
City of Peterborough
500 George Street North
Peterborough, Ontario
K9H 3R9

Subject: **2024 Landfill Surface Monitoring**

Peterborough County/City Waste Management Facility

Dear Mr. Briand

WSP Canada Inc. (WSP), is pleased to submit to the City of Peterborough (the City), the 2024 report for the Landfill Surface Monitoring undertaken at the Peterborough County/City Waste Management Facility site (hereinafter referred to as the Landfill).

The key findings of the 2024 surface monitoring survey are as follows:

- Eight (8) survey locations were identified with total hydrocarbon concentrations measured above exceedance criteria
- The survey locations with elevated total hydrocarbon concentrations were observed to be point-source emissions from maintenance holes for the leachate collection system

Should you have any questions or wish to discuss the air monitoring program, please do not hesitate to contact the undersigned.

Yours truly,

Josh Guthrie, B.Sc.

Air Quality Scientist

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FIGURE 1
2024 Landfill Surface Monitoring Exceedance Locations

APPENDICES

APPENDIX A
Summary of Landfill Surface Monitoring Results

APPENDIX B
Select Exceedance Photographs

1.0 INTRODUCTION

WSP Canada Inc. (WSP) was retained by the City of Peterborough (the City) to conduct the annual surface monitoring study for the Peterborough County/City Waste Management Facility (the Landfill) site located at 1260 Bensfort Road, Peterborough. The field program was conducted on August 15, 2024.

The sampling program consisted of a walk-over survey of the entire capped south fill area (SFA) Landfill using a handheld flame ionization detector (FID) for total hydrocarbons (THC) analysis and a photo ionization detector (PID) for combustible gas analysis. The purpose of this monitoring was to determine areas of elevated THC and combustible gas concentrations, which are indicators of areas in which landfill gas may be escaping through the existing cover soils. Although methane gas is odourless, it is a surrogate measurement for a leak where the odourous compounds such as reduced sulphurs or volatile organic compounds (VOCs) may be emitted from the landfill.

2.0 SAMPLING METHODOLOGY

The monitoring was based on procedures outlines in the South Coast Air Quality Management District Rule 1150.2 "*CONTROL OF GASEOUS EMISSIONS FROM MUNICIPLE SOLID WASTE LANDFILLS"* (Rule 1150.2).

The landfill monitoring consisted of walking over the entire covered landfill using a THC and PID analyzer. A ThermoFisher TVA2020 was used to collect the measurements. The TVA2020 can use both FID and PID simultaneously. The FID measures organic compounds by utilizing a flame produced by the combustion of hydrogen and air. The FID was calibrated against U.S. EPA protocol methane gas. The FID was used as a THC analyzer in the study. The PID consists of an ultraviolet (UV) lamp of a specific energy and an ionization chamber and is used to detect aromatics, unsaturated hydrocarbons, and chlorinated hydrocarbons as well as some inorganic gases. The PID was calibrated to isobutylene and used to sample combustible gases.

Since both detectors may be displayed and logged simultaneously, the relative signal response of the two detectors provides some reference to the identity of the compounds being measured. For instance, the PID does not respond to the presence of methane, but the FID responds readily to compounds contains carbon and hydrogen. A high FID reading with virtually no PID response might indicate the presence of methane gas. Consequently, PIDs respond very well to some inorganic gases that FIDs cannot detect. A high PID reading with no FID reading might suggest the presence of an inorganic compound. With readings from both detectors readily available, the TVA2020 can help a user make decisions about the type of compound present and which detector reading to use.

The monitoring was conducted in a grid formation, measuring the THC and combustible gas concentrations at approximately five (5) centimeters above the ground. Measurements were obtained along a pre-defined grid with spacing in the north-south and east-west direction of 20 meters, unless "hotspots" were identified. Hotspots are defined as any visible cracking larger than five (5) centimeters in width, areas of bubbling surface water, areas with no vegetation, and/or areas consisting of dead vegetation. These hotspots, if identified, were measured in addition to the points along the pre-defined grid pattern.

In accordance with Rule 1150.2 methodology, the maximum concentration of organic compounds as methane, measured at any point on the surface if the landfill, shall not exceed 500 ppm. Any areas or points exhibiting readings higher than 500 ppm THC, as methane, were noted as part of this monitoring event. These points were marked by recording the UTM co-ordinates from a GPS. The results of the monitoring are presented in **Table 1**, and the locations are shown in **Figure 1**.

3.0 RESULTS

During the monitoring survey, one WSP representative walked over the entire refuse area and monitoring THC and combustible gas levels. During the survey on August 15, the ambient temperature ranged between 15 °C and 18 °C, and wind was light, ranging from approximately 4 km/h – 11 km/h. Barometric pressure remained steady during the survey period. There had been no measurable precipitation for the 72 hours preceding the sampling day. These conditions were considered ideal for the monitoring program.

A majority of the closed Landfill site is covered in vegetation with some small barren areas and some unpaved roads. There were 8 exceedance locations identified out of 178 survey locations, that had THC concentrations above 500 ppm. All concentrations above 500 ppm were measured at leachate collection system maintenance holes. These survey locations are presented in **Figure 1** and **Table 1**.

4.0 DISCUSSION

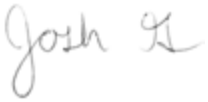
Eight (8) survey locations on the capped SFA Landfill had THC concentrations above 500 ppm. Presented below is a summary of the findings:

- The eight (8) elevated THC concentrations detected at the Landfill were emanating from maintenance holes connected to the leachate collection system and nearby gas monitoring wells. It is likely that landfill gas is entering the leachate collection system and being released through these maintenance holes. WSP understands that the City has attempted to remediate this issue in the past with limited success. WSP can support with additional reviews and remediation work at these maintenance holes, and can suggest possible maintenance hole cover upgrades.
- Slightly elevated THC concentrations (below 500 ppm) were detected at two (2) additional locations at the Landfill and are highlighted in **Table 2**. These concentrations were found to emanate from maintenance holes for the leachate collection system.

As part of the routine site inspections completed by City staff for the site, visual indicators of gas emissions should be identified, including bubbling surface water, dead vegetation, or visible cracking of cover materials larger than five (5) cm in width. If the findings from site inspections suggest a potential change in the cover material, then additional quantitative measurements may be required.

Signature Page

WSP Canada Inc.



Josh Guthrie, B.Sc.,
Air Quality Scientist

Ryan Fletcher, P.Eng.,
Senior Environmental Engineer

FIGURE 1

2024 Landfill Surface Monitoring Exceedance Locations

KEY MAP

SCALE: 1:350,000

LEGEND

SAMPLE LOCATION WITH THC CONCENTRATIONS HIGHER THAN 500 ppm (THC CONCENTRATIONS)

0 25 50 100

1:3,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: CITY OF PETERBOROUGH, PETERBOROUGH COUNTY, ONTARIO BASE MAP, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN, CITY OF PETERBOROUGH, MAXAR
3. COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 17N

CLIENT
CITY OF PETERBOROUGH

PROJECT
2024 LANDFILL MONITORING
1260 BENSFORT RD, PETERBOROUGH, ONTARIO

TITLE
2024 LANDFILL SURFACE MONITORING EXCEEDANCE LOCATIONS

CONSULTANT

wsp

YYYY-MM-DD	2024-12-06
DESIGNED	---
PREPARED	MS
REVIEWED	---
APPROVED	---

PROJECT NO	CONTROL	REV	FIGURE
CA0008825.1917	0001	B	1

APPENDIX A

Summary of Landfill Surface Monitoring Results

Table 1: Summary of Landfill Surface Monitoring Locations with Concentrations Above 500 ppm
2024 Landfill Surface Monitoring
Peterborough County/City Waste Management Facility
Project Number: CA0008825.1917

SAMPLE ID	PID (ppm)	FID (ppm)	EASTING (UTM)	NORTHING (UTM)	FEATURE
1	8.4	614.0	717024	4900310	Mantainence Hole I3, Vegetation along Road
26	12.6	759.0	716841	4899696	Mantainence Hole A0, Vegetation along Road
36	15.7	833.0	717032	4899911	Mantainence Hole LCO5, Vegetation along Road
38	23.5	593.0	717051	4899975	Mantainence Hole LCO6, Vegetation along Road
43	19.2	1392.0	717042	4900119	Mantainence Hole HCO5, Vegetation along Road
133	34.4	1617.0	716800	4900256	Maintanence Hole T5 on Main Road
164	36.3	6202.0	716671	4900007	Mantainence Hole T10, Vegetation along Road
175	0.6	2183.0	716694	4900106	Mantainence Hole T8, Barren Area

Table 2: Landfill Surface Monitoring Locations
2024 Landfill Surface Monitoring
Peterborough County/City Waste Management Facility

SAMPLE ID	PID (ppm)	FID (ppm)	EASTING (UTM)	NORTHING (UTM)	FEATURE
1	8.4	614.0	717024	4900310	Mantainence Hole I3, Vegetation along Road
2	1.6	212.0	717037	4900283	Mantainence Hole I4, Vegetation along Road
3	2.2	97.7	717048	4900253	Mantainence Hole I5, Vegetation along Road
4	10.7	196.0	717058	4900226	Mantainence Hole J1, Vegetation along Road
5	1.2	14.6	717069	4900199	Vegetation along Road
6	1.2	8.2	717081	4900174	Vegetation along Road
7	1.0	1.4	717094	4900144	Vegetation along Road
8	0.9	2.4	717106	4900119	Mantainence Hole D2, Vegetation along Road
9	0.6	0.0	717112	4900089	Vegetation along Road
10	0.6	0.0	717112	4900061	Vegetation along Road
11	0.8	0.0	717101	4900025	Pump Station Holding Tank
12	0.9	0.0	717105	4899994	Vegetation along Road
13	0.5	0.6	717100	4899959	Vegetation along Road
14	0.4	0.3	717091	4899919	Vegetation along Road
15	0.6	1.0	717082	4899889	Vegetation along Road
16	0.6	0.3	717069	4899860	Vegetation along Road
17	0.6	0.2	717058	4899829	Vegetation along Road
18	0.4	0.1	717043	4899801	Vegetation along Road
19	0.5	0.1	717029	4899772	Vegetation along Road
20	0.4	0.1	717017	4899740	Vegetation along Road
21	0.4	0.0	717000	4899713	Vegetation along Road
22	0.3	0.2	716969	4899697	Vegetation along Road
23	0.4	1.1	716937	4899690	Vegetation along Road
24	0.2	0.0	716906	4899682	Vegetation along Road
25	0.4	0.0	716871	4899676	Vegetation along Road
26	12.6	759.0	716841	4899696	Mantainence Hole A0, Vegetation along Road
27	0.2	4.5	716871	4899694	Vegetation along Road
28	0.3	0.0	716912	4899704	Vegetation along Road
29	0.1	0.1	716941	4899716	Vegetation along Road
30	0.4	0.0	716966	4899745	Vegetation along Road
31	0.3	0.0	716981	4899779	Vegetation along Road
32	0.2	0.2	716993	4899807	Vegetation along Road
33	0.2	0.0	717007	4899836	Vegetation along Road
34	0.1	0.0	717016	4899865	Vegetation along Road
35	0.3	13.5	717023	4899895	Mantainence Hole along Road
36	15.7	833.0	717032	4899911	Mantainence Hole LCO5, Vegetation along Road
37	0.1	0.0	717040	4899944	Vegetation along Road
38	23.5	593.0	717051	4899975	Mantainence Hole LCO6, Vegetation along Road
39	0.4	0.0	717056	4900007	Vegetation along Road
40	0.2	2.7	717060	4900024	Mantainence Hole LCO7, Vegetation along Road
41	0.3	0.0	717065	4900055	Vegetation along Road
42	0.3	0.0	717066	4900088	Vegetation along Road
43	19.2	1392.0	717042	4900119	Mantainence Hole HCO5, Vegetation along Road
44	0.2	0.0	717035	4900143	Vegetation along Road
45	0.2	0.0	717031	4900163	GW01-00, Vegetation along Road
46	0.2	0.0	717008	4900198	Vegetation along Road
47	0.3	0.0	716996	4900228	Vegetation along Road
48	0.2	0.9	716986	4900252	GW03-00, Vegetation Area
49	0.2	0.0	716977	4900272	Vegetated Area
50	0.2	0.0	716972	4900310	Ditch by Main Road, Vegetated Area
51	0.2	1.1	716920	4900293	Ditch by Main Road, Vegetated Area
52	0.3	2.2	716933	4900274	Barren/Vegetated Area
53	0.2	0.2	716946	4900255	Vegetated Area
54	0.2	0.1	716956	4900232	Vegetated Area
55	0.3	0.5	716954	4900216	Stressed vegetation
56	0.3	0.9	716952	4900188	Vegetated Area
57	0.3	1.3	716956	4900165	Stressed vegetation
58	0.3	0.0	716970	4900137	Vegetated Area
59	0.3	28.4	716966	4900106	GW19-07, Barren/Vegetated Area
60	0.6	1.3	716986	4900075	Vegetated Area

Table 2: Landfill Surface Monitoring Locations
2024 Landfill Surface Monitoring
Peterborough County/City Waste Management Facility

SAMPLE ID	PID (ppm)	FID (ppm)	EASTING (UTM)	NORTHING (UTM)	FEATURE
61	0.3	0.0	716999	4900065	Vegetated Area
62	0.3	0.0	717009	4900027	Vegetated Area
63	0.3	0.0	717006	4900013	GW09-03, Vegetated Area
64	0.3	0.0	716999	4899984	Vegetated Area
65	0.4	0.0	716983	4899967	GW10-03, Vegetated Area
66	0.3	0.0	716983	4899932	Vegetated Area
67	0.3	0.0	716979	4899900	Vegetated Area
68	0.4	0.0	716966	4899865	Vegetated Area
69	0.4	0.1	716951	4899841	GW12-03, Vegetated Area
70	0.4	0.2	716936	4899820	Vegetated Area
71	0.4	0.0	716923	4899801	Vegetated Area
72	0.4	7.2	716902	4899772	GW14-03, Vegetated Area
73	0.4	0.0	716879	4899760	Vegetated Area
74	0.4	61.7	716860	4899747	Barren Area
75	0.4	2.3	716811	4899728	Barren/Vegetated Area by old Road
76	0.5	0.0	716822	4899781	Barren/Vegetated Area by old Road
77	0.5	0.1	716857	4899790	Vegetated Area
78	0.4	0.0	716885	4899804	Vegetated Area
79	0.5	0.0	716904	4899828	Vegetated Area
80	0.5	0.0	716923	4899856	Vegetated Area
81	0.4	0.0	716937	4899880	Vegetated Area
82	0.5	40.5	716945	4899907	GW11-03, Barren/Vegetated Area
83	0.5	6.5	716955	4899942	GW21-10, Vegetated Area
85	0.5	0.0	716959	4899965	Vegetated Area
85	0.5	0.0	716967	4899984	GW19-10, Vegetated Area
86	0.5	0.0	716956	4900023	Vegetated Area
87	0.6	0.1	716949	4900050	Vegetated Area
88	0.7	0.0	716940	4900082	Vegetated Area
89	0.5	0.0	716927	4900111	Vegetated Area
90	0.5	0.0	716917	4900146	Vegetated Area
91	0.5	0.0	716909	4900177	Vegetated Area
93	0.5	98.9	716908	4900206	Barren/Vegetated Area
94	0.5	0.0	716913	4900230	Vegetated Area
95	0.5	0.0	716902	4900251	Vegetated Area
96	0.5	1.9	716896	4900278	Vegetated Ditch by Main Road
97	0.5	2.3	716908	4900302	Maintanence Hole on Main Road
98	0.6	1.8	716852	4900285	Maintanence Hole on Main Road
99	0.6	3.0	716865	4900249	Vegetated Area
100	0.6	0.9	716870	4900226	Vegetated Area
101	0.6	0.5	716860	4900202	Vegetated Area
102	0.6	1.1	716858	4900175	Vegetated Area
103	0.6	0.0	716859	4900140	Vegetated Area
104	0.7	0.5	716855	4900106	Vegetated Area
105	0.6	4.6	716861	4900084	Vegetated Area
106	0.7	2.8	716868	4900051	GW11-10, Vegetated Area
107	0.6	0.0	716884	4900021	Vegetated Area
108	0.6	0.0	716892	4900005	GW14-10, Vegetated Area
109	0.6	0.0	716904	4899981	Vegetated Area
110	0.6	0.0	716905	4899953	GW18-10, Vegetated Area
111	0.6	0.0	716906	4899928	GW20-10, Vegetated Area
112	1.2	3.2	716888	4899898	Vegetated Area
113	0.6	2.7	716877	4899890	GW22-10, Barren/Vegetated Area
114	0.6	0.0	716862	4899868	Vegetated Area
115	0.6	0.5	716828	4899862	Barren/Old Road
116	0.7	0.0	716808	4899881	Barren Gully
117	0.6	0.0	716826	4899901	Vegetated Area
118	0.7	0.0	716850	4899924	GW17-10, Vegetated Area
119	0.7	0.0	716847	4899970	Vegetation along Road
120	0.6	2.7	716839	4899988	GW13-10, Vegetation along Road
121	0.6	0.0	716832	4900010	Barren/Vegetated Area

Table 2: Landfill Surface Monitoring Locations
2024 Landfill Surface Monitoring
Peterborough County/City Waste Management Facility

SAMPLE ID	PID (ppm)	FID (ppm)	EASTING (UTM)	NORTHING (UTM)	FEATURE
122	0.7	0.2	716821	4900033	GW10-10, Vegetated Area
123	0.6	0.4	716809	4900063	Vegetated Area
124	0.6	0.0	716804	4900080	GW05-10, Vegetation along Road
125	0.6	0.0	716796	4900116	Vegetated Area
126	0.6	0.2	716793	4900150	Vegetated Area
127	0.6	2.4	716784	4900167	Barren/Vegetated Area
128	0.6	0.0	716785	4900183	GW06-03, Vegetated Area
129	0.6	0.6	716788	4900203	Vegetated Area
130	0.7	1.3	716791	4900217	Vegetated Area
131	0.6	0.0	716787	4900247	Vegetated Area
132	0.7	0.0	716787	4900247	Vegetated Ditch by Main Road
133	34.4	1617.0	716800	4900256	Maintanence Hole T5 on Main Road
134	0.5	0.0	716729	4900213	Vegetated Ditch by Main Road
135	0.6	0.0	716736	4900182	Vegetated Area
136	0.6	13.0	716748	4900183	Barren Slope
137	0.5	12.9	716758	4900169	Barren Slope
138	0.5	0.1	716766	4900139	Barren/Vegetated Slope
139	0.6	1.4	716769	4900106	Barren Slope
140	0.6	27.3	716765	4900082	Barren Slope
141	0.6	0.0	716765	4900082	Barren Slope
142	0.6	19.3	716777	4900015	GW09-10, Barren/Vegetated Area
143	0.6	95.9	716770	4899982	Barren Patch
144	0.6	0.5	716765	4899954	Vegetated Area
145	0.6	0.0	716773	4899954	Barren/Vegetated Area on Old Road
146	0.6	0.0	716779	4899926	Vegetated Area
147	0.6	0.0	716779	4899926	Barren/Vegetated Area on Old Road
148	0.6	0.0	716744	4899911	Barren/Vegetated Area on Old Road
149	0.6	0.0	716741	4899944	Vegetated Area
150	0.6	0.6	716741	4899961	Vegetated Area
151	0.6	0.0	716748	4899993	Vegetated Area
152	0.6	0.0	716752	4900028	Barren/Vegetated Area on Old Road
153	0.6	0.0	716736	4900050	Barren/Vegetated Area
154	0.6	41.0	716735	4900089	Barren/Vegetated Area
155	0.6	4.1	716738	4900104	Barren Slope
156	0.6	1.4	716715	4900117	Barren/Vegetated Area
157	0.6	0.0	716713	4900153	Barren/Vegetated Area
158	0.6	0.0	716701	4900166	Vegetation along Road
159	0.5	0.0	716695	4900166	Vegetation along Road
160	0.6	0.0	716654	4900128	Vegetation along Road
161	0.6	0.0	716654	4900128	Vegetation along Road
162	0.6	0.0	716649	4900074	Vegetation along Road
163	0.6	0.0	716651	4900046	Vegetation along Road
164	36.3	6202.0	716671	4900007	Mantainence Hole T10, Vegetation along Road
165	0.6	12.1	716673	4899966	Vegetation along Road
166	0.6	2.3	716693	4899943	Vegetation along Road
167	0.6	0.0	716720	4899930	Vegetation along Road
168	0.8	0.6	716720	4899959	Vegetated Area
169	0.6	2.5	716719	4899965	Vegetated Area
170	0.6	0.0	716711	4900017	Vegetated Area
171	0.6	0.0	716710	4900028	Barren/Vegetated Area on Old Road
172	0.6	0.0	716708	4900062	Barren/Vegetated Area
173	0.6	0.0	716703	4900069	Vegetated Area
174	0.6	0.0	716692	4900096	Barren/Vegetated Area
175	0.6	2183.0	716694	4900106	Mantainence Hole T8, Barren Area
176	0.5	0.0	716694	4900106	Barren Area
177	0.6	0.0	716693	4900147	Barren/Vegetated Area
178	0.5	0.0	716693	4900147	Vegetation along Road

Notes:
XX indicates THC above 500 ppm
XX indicates THC above 100 ppm and below 500 ppm

APPENDIX B

Select Exceedance Photographs

Photograph 1: Location of exceedance at Sample ID: 1. THC concentration of 614 ppm

Photograph 2: Location of exceedance at Sample ID: 26. THC concentration of 759 ppm

Photograph 3: Location of exceedance at Sample ID: 36. THC concentration of 833 ppm

Photograph 4: Location of exceedance at Sample ID: 38. THC concentration of 593 ppm

Photograph 5: Location of exceedance at Sample ID: 43. THC concentration of 1392 ppm

Photograph 6: Location of exceedance at Sample ID: 133. THC concentration of 1617 ppm

Photograph 7: Location of exceedance at Sample ID: 164. THC concentration of 6202 ppm

Photograph 8: Location of exceedance at Sample ID: 175. THC concentration of 2183 ppm

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APPENDIX J

2024 Peterborough Organics Facility Stormwater and Sewer Works Annual Performance Report

March 19, 2025 Project No. CA-WSP-111-53296

Barry Campbell, Manager of Organic Waste Operations
City of Peterborough Environmental Services
500 George Street
Peterborough, Ontario
K9H 3R9

2024 ANNUAL PERFORMANCE REPORT STORMWATER AND SEWER WORKS SUMMARY AND INTERPRETATION ENVIRONMENTAL COMPLIANCE APPROVAL (ECA) NO. 4156-CRM7RY PETERBOROUGH ORGANICS FACILITY, COUNTY OF PETERBOROUGH

We are pleased to provide the summary and interpretation of stormwater and sewer works quality monitoring undertaken in the 2024 calendar year at the Peterborough Organics Facility (Site; POF). This summary was prepared to comply with the requirements of Condition 8(4) of the Ministry of the Environment, Conservation and Parks (MECP) Environmental Compliance Approval (ECA) No. 4156-CRM7RY, issued June 30, 2023. A copy of ECA No. 4156-CRM7RY is provided in **Attachment A**. A summary of Conditions 8 (4) is provided below:

> *Condition 8 (4) The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:*
>
> > *a. a summary and interpretation of all monitoring data, including an overview of the success and adequacy of the Works;*
> >
> > *b. a description of any operating problems encountered and corrective actions taken;*
> >
> > *c. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works, including an estimate of the quantity of any materials removed from the Works;*
> >
> > *d. a summary of any complaints received during the reporting period and any steps taken to address the complaints;*
> >
> > *e. a summary of all spill or abnormal discharge events; and*
> >
> > *f. any other information the District Manager requires from time to time.*

The required monitoring program for the Site is outlined in Condition 7 of ECA No. 4156-CRM7RY. The 2024 monitoring program was completed by the City of Peterborough Staff County and the monitoring program results were provided to WSP Canada Inc. (WSP) for use in preparation of this summary report.

1.0 BACKGROUND

The Peterborough Organics Facility (POF) is on the southern half of Lot 16, Concession 14, Township of Otonabee-South Monaghan, County of Peterborough. The municipal address is 1260 Bensfort Road, located approximately 6 km south of the City of Peterborough, Ontario. The property is owned and operated by the City of Peterborough. This property is located north of the Peterborough County/City of Peterborough Waste Management Facility (PCCWMF) which is home to the County's non-hazardous solid waste landfill site and waste diversion facility.

The stormwater management facility at the POF was constructed in accordance with MECP ECA No. 4156-CRM7RY. A copy of ECA No. 4156-CRM7RY is provided in **Attachment A**.

As of February, 2024, the expanded stormwater management works at the Site have been used in the collection, transmission, treatment and disposal of stormwater runoff from a total catchment area of 7.75 hectares. The facility is designed to provide enhanced level water quality protection and erosion control, and to attenuate post-development peak flows to pre-development peak flows for all storm events up to and including the 100-year storm event, discharging to the Peterborough Wastewater Treatment Plant.

The stormwater management (SWM) facility at the Site consists of a clay-lined wet pond and sediment forebay with a permanent storage volume of 6,409 m^3 and an extended detention volume of 8,198 m^3. The total storage volume (including the permanent pool) is 14,607 m^3, at a total depth of 2.0 m. During a 100-year storm event, the pond is designed to allow a maximum discharge of 5 Litres/s (L/s) via sanitary collection systems which is collected via sanitary and conveyed to the Peterborough Wastewater Treatment Plant.

2.0 MONITORING PROGRAM

The ECA was issued on June 30, 2023 and the facility began accepting material February 6, 2024. Substantial completion of the facility was met on June 28, 2024. In 2024, surface water and leachate samples were collected by County staff using the methods and protocols listed in Condition 7(3) of ECA No. 4156-CRM7RY. Sample Locations are shown on **Figure 1,** attached. Water quality samples from the stormwater pond, sanitary sewers, storm sewers or internal ditches are not required as part of this ECA.

The ECA requires surface water sampling related to the POF be conducted at two locations, POF-SW1 and POF-SW2, within a watercourse situated northwest of the POF. The ECA defines POF-SW1 (the western-most location) as the background location and POF-SW2 (the eastern-most location) as the trigger location. These locations were originally identified in the Environmental Compliance Approval Application submitted by D.M. Wills Associates Ltd., dated September 16, 2022. However, field observations confirm that surface water flow direction is from west to east in this watercourse. To better align with in-field conditions, this report will consider POF-SW1 as the trigger location and POF-SW2 will be considered the background location, as opposed to what is identified in the ECA. Due to the ephemeral nature of the watercourse it is unclear if the two locations are hydraulically connected throughout the year.

2.1 Surface Water

In accordance with Condition 7 of ECA No. 4156-CRM7RY, samples of the surface water at POF-SW1 and POF-SW2 are required to be collected twice annually (spring and fall). According to Schedule B, Table 1, samples are required to be analyzed for the parameters listed below.

Table 1: List of Parameters from Schedule B, Table 1 for Surface Water

Field Parameters	Laboratory Parameters
pH, temperature, and conductivity	**General Parameters:** Total Dissolved Solids (TDS); Total Suspended Solids **Major and Minor Ions:** Alkalinity, Chloride, Sulphate **Nutrients/Organic Indicators:** Ammonia + ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals:** Barium, Boron, Cadmium, Copper, Lead, Mercury, Nickel, Iron, Zinc.

The initial surface water samples were collected on April 15, 2024. Field measurements of pH, conductivity, and temperature were collected during sampling and the samples were submitted to the City of Peterborough Environmental Protection Division Laboratory which is ISO 17025 Certified with Canadian Association for Laboratory Accreditation (CALA) for specific types of water testing.

Surface water locations were dry in the fall of 2024 and could not be sampled.

2.2 Leachate

In accordance with Condition 7 of ECA No. 4156-CRM7RY, grabs samples of leachate are required to be collected three times annually. According to Schedule B, Table 2, samples are required to be analyzed for the parameters listed below.

Table 2: List of Parameters from Schedule B, Table 2 for Leachate

Field Parameters	Laboratory Parameters
pH, temperature, and conductivity	**General Parameters:** Total Dissolved Solids (TDS); Total Suspended Solids **Major and Minor Ions:** Alkalinity, Calcium, Chloride, Magnesium, Sodium, Sulphate **Nutrients/Organic Indicators:** Ammonia + ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals:** Barium, Boron, Cadmium, Copper, Lead, Nickel, Iron, Zinc.

In 2024, leachate samples were collected on April 24, June 17 and October 29. Field measurements of pH, conductivity, and temperature were collected during sampling and the sample was submitted to the City of Peterborough Environmental Protection Division Laboratory which is ISO 17025 Certified with Canadian Association for Laboratory Accreditation (CALA) for specific types of water testing.

3.0 2024 WATER QUALITY MONITORING RESULTS

3.1 Surface Water Results

The 2024 sample results are presented in attached **Table 1** for Surface Water. The laboratory certificates of analysis can be made available upon request. The following sections provide discussion on individual parameter results. The ECA defines POF-SW1 as the background location, representing natural conditions and POF-SW2 is considered to be downgradient of operations. However, as discussed in Section 2.0, the observed flow for this surface water feature is from west to east, and as such, POF-SW2 is considered the background location and POF-SW1 is considered the trigger location for this discussion in this report.

3.1.1 Field Parameters

In 2024 field pH, temperature, and conductivity were measured for the first time with measurements at POF-SW1 of 7.4 and POF-SW2 of 7.03. The field pH value was within the PWQO range of 6.5 to 8.5 pH units.

3.1.2 Laboratory Parameters

Samples collected at POF-SW1 had concentrations generally comparable to background location POF-SW2. Concentrations of chloride and sulphate and total dissolved solids were reported to be elevated in background conditions compared to downgradient results. The alkalinity concentration was 227 mg/L at POF-SW1 and 287 at POF-SW2.

Total Suspended Solids measured to be below method detection limit (MDL) of <2 mg/L at POF-SW1 and 4 mg/L at POF-SW2. Ammonia +Ammonium at POF-SW1 was less than the MDL of <0.1 mg/L and 0.1 mg/L at POF-SW2.

Biological Oxygen Demand (BOD) was found to be below MDL (<2.0 mg/L) at both locations. Chemical Oxygen Demand (COD) was found 30 mg/L at POF-SW1 and 40 mg/L at POF-SW2. Total phosphorous was reported to be 0.02 mg/L at both locations.

In 2024, total mercury was sampled at POF-SW1 and POF-SW2. The results at both locations were found to be below MDL (< 0.1 µg/L). The PWQO for mercury is applicable to a filtered sample reporting the dissolved mercury concentration. The 2024 samples for total mercury are inferred to have less than 0.1 µg/L of dissolved mercury, therefore the 2024 samples meet the PWQO. In 2025, dissolved mercury should be added to the sample suite.

Neither POF-SW1 or POF-SW1 appear to be impacted by onsite leachate.

As shown in attached **Table 1**, the concentrations of total metals were similar at both locations.

3.2 Regulatory Criteria

ECA No. 4156-CRM7RY does not specify Effluent Limits for the leachate samples. Surface water samples are required to be compared to the Provincial Water Quality Objectives (PWQO) and a summary of any exceedances are required, as per Condition 7(5) of the ECA. As such, the sample results have been assessed in this report using the PWQO (MECP 1994 and updates), which are the applicable objectives for surface water quality within Ontario. For the parameter of boron where a PWQO does not exist, the Canadian Environmental Quality Guidelines (CEQG) (Canadian Council of Ministers of the Environment, 1999) was used for assessment.

There are no PWQO/CEQG exceedances reported at POF-SW1 or POF-SW2 in 2024.

3.3 Compliance Summary

Trigger Parameters and Trigger Levels for inferred downgradient location POF-SW1 are summarized in Schedule B, Table 3 and summarized below.

Table 3: Schedule B, Table 3 Trigger Parameters and Trigger Levels

Parameter	Trigger Level
Alkalinity	Shall not be decreased by more than 25% of natural concentration.
Ammonia+ammonium, Total Suspended Solids	75% of historical concentration at background (POF-SW1)[(1)]
Boron	75% of Canadian Council for Ministers of the Environment Water Quality Guideline for the Protection of Aquatic Life
Unionized Ammonia, Cadmium, Copper, Lead, Mercury, Nickel, pH, Total Iron, Total Phosphorus, Zinc	75% of PWQO

[(1)] For the purpose of this report, POF-SW2 is recognized to be the actual background location and was used for trigger level calculations instead of POF-SW1.

Based on the initial results from the single sampling event in April 2024, there is insufficient data to evaluate and set relative criteria that are generated from an assessment of natural conditions or historical trends. For purposes of providing a preliminary Trigger framework, the following 2024 Trigger Levels for the above noted Trigger Parameters are summarized in Table 4.

Table 4: 2024 Surface Water Criteria

Trigger Parameter	Trigger Level	POF SW1 Result	Exceeds Trigger	Three Consecutive Exceedances?
Alkalinity	Not be lower than 215.25 mg/L	227 mg/L	No	No
Ammonia+ammonium	0.075 mg/L	<0.1 mg/L	No	No
Total Suspended Solids	3 mg/L	<2 mg/L	No	No
Boron	1125 µg/L	18 µg/L	No	No
Unionized Ammonia	15 µg/L	0.23µg/L	No	No
Cadmium	0.15 µg/L	<0.1 µg/L	No	No
Copper	3.75 µg/L	1.4 µg/L	No	No
Lead	18.75 µg/L	<0.5 µg/L	No	No
Mercury	0.15 µg/L	<0.1 µg/L	No	No
Nickel	18.75 µg/L	<2 µg/L	No	No

Trigger Parameter	Trigger Level	POF SW1 Result	Exceeds Trigger	Three Consecutive Exceedances?
pH	6.5 to 8.5(1)	7.4	No	No
Iron	225 µg/L	91 µg/L	No	No
Total Phosphorus	22.5 µg/L	20 µg/L	No	No
Zinc	15 µg/L	<5 µg/L	No	No

(1) ECA requires 75% of the PWQO for pH is (a range of 6.5- 8.5). The unmodified PWQO is used here.

The trigger threshold value for pH is stated to be 75% of PWQO. pH is measured on a logarithmic scale and as such, percentiles would result in values inconsistent with environmental protection. It is recommended that the trigger value for pH be the PWQO range of 6.5 to 8.5.

As more samples are collected at both locations, a reliable dataset will be generated.

3.4 Leachate Results

The 2024 sample results are presented in attached **Table 2** for Leachate generated from the POF. The laboratory certificates of analysis can be made available upon request.

Based on the water quality and leachate results from 2024, the POF SWM facility monitoring program was completed in accordance with ECA No. 4156-CRM7RY.

4.0 OPERATING AND MAINTENANCE CONDITIONS

4.1 Condition 8.4.b: Operating Issues and Corrective Actions

Condition 8.4.b of the ECA requires a summary and description of operating problems encountered and corrective actions taken for the monitoring period.

In 2024, drier than optimal conditions of the filter bed resulted in no to minimal leachate from this component of the system. As a result, it was difficult for staff to collect a sample from the biofilter discharge to the sewer. Staff will continue to monitor the manhole in 2025 and efforts have been made to moisten the filter material going forward.

4.2 Condition 8.4.c: Summary of Maintenance

Condition 8.4.c of the ECA requires a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works including an estimate of the quantity of any materials removed from the Works.

In 2024, there were no major repairs to the system. Some routine maintenance was completed in the fall of 2024 as summarized in attached Table 1.

4.3 Condition 8.4.d: Summary of Complaints

Condition 8.4.d of the ECA requires a summary of any complaints received during the reporting period and any steps taken to address the complaints.

In 2024, twenty-two odour complaints associated with the facility were received by the City of Peterborough. None of these complaints were related to the sewer collection, storm /leachate pond or Works under ECA No. 4156-CRM7RY.

4.4 Condition 8.4.e: Spill Reporting

Condition 8.4.e of the ECA requires a summary of all spills or abnormal discharge events.

In 2024, no spills occurred that impacted the facility, sewer system or the storm pond. There was a hydraulic line failure on a compost aerator in early December that resulted in oil spilling to the ground. The oil was contained to the immediate area using woodchips and cleaned up. The impacted material was discarded at the PCCWMF landfill.

4.5 Condition 8.4.f: Requested Information

Condition 8.4.f of the ECA requires a summary of any other information the District Manager requires from time to time.

In 2024, there was a requirement to notify the MECP of the start up of its operation. MECP was notified on April 30, 2024. No additional specific requests were required in 2024 for the sanitary and storm sewer systems.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the evaluation of the 2024 results, the following conclusions are made:

1) In contrast to what is defined in the ECA, POF-SW1 should be regarded as the downgradient/trigger location and POF-SW2 should be regarded as the upgradient/background location.

2) There are no PWQO/CEQG exceedances at POF-SW1 or POF-SW2.

3) There are no exceedances of the Trigger Levels for any of the identified Trigger Parameters at POF-SW1.

4) Based on the water quality and leachate results from 2024, the POF SWM facility monitoring and reporting program was completed in accordance with ECA No. 4156-CRM7RY.

5.2 Recommendations

Based on the evaluation of the 2024 results, the following recommendations are made:

1) It is recommended that the ECA be updated to correctly recognize POF-SW1 as the trigger location and POF-SW2 as the background location.

2) Dissolved mercury should be added to the sample suite for surface water samples to allow for comparison to the applicable PWQO criteria.

3) It is recommended that the Trigger Value for pH be set as the PWQO range of 6.5 to 8.5.

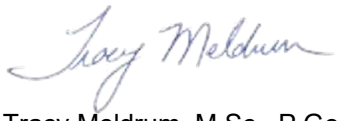
4) Despite this ephemeral watercourse being present along the northern boundary of the Site, neither POF-SW1 or POF-SW2 appear to be directly downgradient or intercepting of stormwater runoff from the POF site or associated stormwater works. It is recommended that the required monitoring locations be re-evaluated.

6.0 CLOSURE

We trust that this submission meets your current needs. If you have any questions or require further information, please feel free to contact us.

Yours sincerely,

WSP Canada Inc.



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Geo-Environmental Engineer

TM/RM/lb

Attachments: Attachment A: ECA No. 4156-CRM7RY
Figure 1: Sample Locations
Table 1: 2024 Surface Water Quality Results
Table 2: 2024 Leachate Quality Results
Table 3: 2024 Summary of Maintenance

https://wsponlinecan.sharepoint.com/sites/ca-111-53296/shared documents/05. technical/0 - monit. and rprt/amr/2024/00. eca mr_pof sw/111-53296-l-reva-pof 2024 annual performance report-19mar2025.docx

7.0 REFERENCES

Canadian Council of Ministers of the Environment, 1999; *Canadian Environmental Quality Guidelines (CEQG)*

Ministry of the Environment and Energy, 1994; *Water Management: Policies Guidelines and Provincial Water Quality Objectives*

ATTACHMENT A

ECA No. 4156-CRM7RY

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4156-CRM7RY
Issue Date: June 30, 2023

The Corporation of the City of Peterborough
500 George Street North
Peterborough, Ontario
K9H 3R9

Site Location: Peterborough Organics Facility
1923 Base Line 1260 Bensfort Road
Township of Otonabee-South Monaghan, County of Peterborough
K9J 1C5

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:

establishment, usage and operation of new municipal sewage works to service the proposed Peterborough Organics Facility located on 1260 Bensfort Road, southern half of Lot 16, Concession 14, City of Peterborough, for the collection and treatment of leachate from a total catchment area of 7.75 hectares, to provide enhanced level water quality protection and erosion control and to attenuate post-development peak flows to pre-development peak flows for all storm events up to and including the 100 year storm event, discharging via a storm water management wet pond to sanitary collection systems, ultimately to Peterborough Wastewater Treatment Plant (WWTP) for treatment and disposal, consisting the following:

Sanitary Sewers:

- internal sanitary sewers, approximately 500 metres in length, from the receiving building, office building, compost bunkers and stormwater management wet pond, discharging to the sanitary collection system within the Peterborough Waste Management Facility.

Storm Sewers:

- internal storm sewers, approximately 500 metres in length, from the parking areas, driveway area and the processing, storage and curing area, discharging to the proposed stormwater management wet pond.

Internal Peripheral Ditch/Grassed Swale:

- internal ditch located along the northern boundary of the Site, approximately 290 metres in length, discharging to the proposed 375 mm internal storm sewer located under the processing, storage and curing area;
- internal ditch located along the southern boundary of the Site, approximately 240 meters in length, discharging to the main cell of the proposed stormwater management wet pond;
- internal ditch located along the eastern boundary of the Site, approximately 200 meters in length, discharging via one proposed 675 mm diameter culvert, under the emergency access driveway to the main cell of the proposed stormwater management wet pond.

Stormwater Management Works:

stormwater management facility (catchment area: 7.75 hectares, imperviousness 90 %): one (1) wet pond, with sediment forebay, located on the southern half of Lot 16, Concession 14 of the Otonabee Ward, receiving runoff through 525 millimetre diameter storm sewer, 675 millimetre culvert and ditches, having a permanent pool installed with aeration fountain with permanent storage volume of 6,409 cubic metres, an extended detention volume of 8,198 cubic metres, and a total storage volume of 14,607 cubic metres including the permanent pool, at a total depth of 2 metres, complete with two stage outlet structure comprised of a 900 millimetre diameter riser pipe connected with 450 millimetre diameter reverse slope inlet to 200 millimetres diameter outlet with an 50 millimetre diameter equivalent valve opening and 8 meter long Broad Crested Emergency Overflow Weir, allowing a maximum discharge of 5 litres per second under the 100-year storm event via sanitary collection systems, ultimately discharging to Peterborough Wastewater Treatment Plant (WWTP);

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted application and supporting documents listed in Schedule A forming part of this Approval.

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

1. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;

2. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

3. "District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;

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

5. "Existing Works" means those portions of the Works included in the Approval that have

been constructed previously;

6. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;

7. "Licensed Engineering Practitioner" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act,* R.S.O. 1990, c. P.28;

8. "Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;

9. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

10. "Owner" means The Corporation of the City of Peterborough and its successors and assignees;

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

12. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;

13. "Works" means the approved sewage works, and includes Proposed Works, Existing Works and modifications made under Limited Operational Flexibility.

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

TERMS AND CONDITIONS

1. GENERAL CONDITION

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

4. The issuance of, and compliance with the conditions of, this Approval does not:

a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to construct or operate the Works; or

b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. EXPIRY OF APPROVAL

1. This Approval will cease to apply to those parts of the Works which have not been constructed within five (5) years of the date of this Approval.

2. In the event that completion and commissioning of any portion of the Works is anticipated to be more than five (5) years, the Owner shall submit an application for extension at least twelve (12) months prior to the end of the five (5) years from the day of issuance of this Approval. The application shall include the reason(s) for the delay, whether there is any design change(s) and a review of whether the standards applicable at the time of Approval of the Works are still applicable at the time of request for extension, to ensure the ongoing protection of the environment.

3. CHANGE OF OWNER

1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

    a. change of address of Owner;

    b. change of Owner, including address of new owner;

    c. change of partners where the Owner 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; or

    d. change of name of the corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C39* shall be included in the notification.

2. In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.

3. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

4. CONSTRUCTION OF PROPOSED WORKS

1. Upon the construction of the Works, the Owner shall prepare a statement, certified by a Licensed Engineering Practitioner, that the Works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

2. Within one (1) year of the construction of the Proposed Works, a set of as-built drawings showing the Works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the Works for the operational life of the Works.

5. OPERATION AND MAINTENANCE

1. The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety, health or flooding hazard to the general public.

2. The Owner shall undertake an inspection of the condition of the Works, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the Works to prevent the excessive build-up of sediment, oil/grit, debris and/or decaying vegetation, to avoid reduction of the capacity and/or permeability of the Works, as applicable. The Owner shall also regularly inspect and clean out the inlet to and outlet from the Works to ensure that these are not obstructed.

3. The Owner shall construct, operate and maintain the Works with the objective that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.

4. The Owner shall operate the wet pond with the outlet valve in a "normally closed position" during normal operation of the wet pond;

5. The Owner shall ensure the immediate clean-out of the Works after a fuel or oil spill capture.

6. The Owner shall ensure that equipment and material for the containment, clean-up and disposal of fuel and oil and materials contaminated with such, is on hand and in good repair for immediate use in the event of:

    a. loss of fuel or oil to the Works; or

    b. a spill within the meaning of Part X of the EPA.

7. The Owner shall prepare an operations manual prior to the commencement of operation of the

Works that includes, but is not necessarily limited to, the following information:

a. operating and maintenance procedures for routine operation of the Works;

b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;

d. contingency plans and procedures for dealing with potential abnormal situations and for notifying the District Manager; and

e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.

8. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

9. The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the Works for inspection by the Ministry. The logbook shall include the following:

a. the name of the Works;

b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the Works; and

c. the date of each spill within the catchment area, including follow-up actions and remedial measures undertaken.

10. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this Approval.

6. TEMPORARY EROSION AND SEDIMENT CONTROL

1. The Owner shall install and maintain temporary sediment and erosion control measures during construction and conduct inspections **once every two (2) weeks** and after each significant storm event (a significant storm event is defined as a minimum of 25 millimetres of rain in any 24 hours period). The inspections and maintenance of the temporary sediment and erosion control measures shall continue until they are no longer required and at which time they shall be removed and all disturbed areas reinstated properly.

2. The Owner shall maintain records of inspections and maintenance which shall be made available for inspection by the Ministry, upon request. The record shall include the name of the inspector, date of inspection, and the remedial measures, if any, undertaken to maintain the temporary sediment and erosion control measures.

7. MONITORING

1. The Owner shall, upon commencement of operation of the Works, carry out a monitoring program, and all samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

2. Samples shall be collected and analyzed at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the monitoring tables in **Schedule B**.

3. The methods and protocols for sampling, analysis, toxicity testing, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

    a. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;

    b. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition) as amended from time to time by more recently published editions;

    c. for any parameters not mentioned in the documents referenced in Paragraphs 3.a and 3.b, the written approval of the District Manager shall be obtained prior to sampling.

4. The measurement frequencies specified in the effluent monitoring table in Schedule B in respect of any parameter are minimum requirements which may, after **six months** of monitoring in accordance with this Condition, be modified by the Director in writing from time to time.

5. The Owner shall compare the monitoring results obtained under Condition 7.2 for each trigger parameter with its corresponding trigger level listed in Table 3 under Schedule B to identify any potential leachate impact to stormwater run-off from the site;

6. In the event that a monitoring result for any of the parameters listed in Table 3 exceeds 75% of the PWQO during three consecutive monitoring events except for parameters where concentrations at POF-SW1 are historically above PWQO, POF-SW2 shall be sampled within one week to verify the exceedance and a water quality assessment shall be completed within 90 days;

7. In the event that a monitoring result for any of the parameters listed in Table 3 exceed the 75th percentile of historical background concentrations (POF-SW1), POF-SW2 shall be sampled

within one week to verify the exceedance and a water quality assessment shall be completed within 90 days;

8. In the event that the trigger level concentration exceedance of any parameter of concern is not confirmed after the second round of sampling, then normal monitoring shall be resumed;

9. In the event that the trigger level concentration exceedance of any parameter of concern is confirmed after the second round of sampling, the following actions shall occur:
   a. Investigation into potential leakages of the catchment system;
   b. A corrective Action Plan should be implemented to prevent future water quality trigger criteria exceedances at the Subject Site's boundary;
   c. Remedial activities as deemed necessary.

10. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. REPORTING

1. **One (1) week** prior to the start-up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.

2. The Owner shall, upon request, make all reports, manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

3. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within **fifteen (15) days** of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.

4. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

   a. a summary and interpretation of all monitoring data, including an overview of the success and adequacy of the Works;

   b. a description of any operating problems encountered and corrective actions taken;

   c. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works, including an estimate of the quantity of

any materials removed from the Works;

d. a summary of any complaints received during the reporting period and any steps taken to address the complaints;

e. a summary of all spill or abnormal discharge events; and

f. any other information the District Manager requires from time to time.

9. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Works", included under Schedule C of this Approval, as amended.

2. Works under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.

3. The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.

4. For greater certainty, the following are **not** permitted as part of Limited Operational Flexibility:

    a. Modifications to the Works that result in an increase of the approved capacity of the Works;

    b. Modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

    c. Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;

    d. Modifications to the Works approved under s.9 of the EPA, and

    e. Modifications to the Works pursuant to an order issued by the Ministry.

5. Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.

6. If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, provide a

revised copy of this plan to the local fire services authority prior to implementing Limited Operational Flexibility.

7. For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the Environmental Protection Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Lake Simcoe Protection Act and Greenbelt Act.

8. At least **thirty (30) day**s prior to implementing Limited Operational Flexibility, the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the District Manager.

9. The Owner shall not proceed with implementation of Limited Operational Flexibility until the District Manager has provided written acceptance of the Notice of Modifications or a minimum of **thirty (30) days** have passed since the day the District Manager acknowledged the receipt of the Notice of Modifications.

10. SPILL CONTINGENCY PLAN

1. Within **six (6) months** from the issuance of this Approval, the Owner shall implement a spill contingency plan - that is a set of procedures describing how to mitigate the impacts of a spill within the area serviced by the Works. The Owner shall, upon request, make this plan available to Ministry staff. This plan shall include as a minimum:

   a. the name, job title and location (address) of the Owner, person in charge, management or person(s) in control of the facility;

   b. the name, job title and 24-hour telephone number of the person(s) responsible for activating the spill contingency plan;

   c. a site plan drawn to scale showing the facility, nearby buildings, streets, catch-basins and manholes, drainage patterns (including direction(s) of flow in storm sewers), any receiving body(ies) of water that could potentially be significantly impacted by a spill and any features which need to be taken into account in terms of potential impacts on access and response (including physical obstructions and location of response and clean-up equipment);

   d. steps to be taken to report, contain, clean up and dispose of contaminants following a spill;

   e. a listing of telephone numbers for: local clean-up company(ies) who may be called upon to assist in responding to spills; local emergency responders including health institution(s); and Ministry Spills Action Centre 1-800-268-6060;

   f. Safety Data Sheets (SDS) for each hazardous material which may be transported or stored

within the area serviced by the Works;

g. the means (internal corporate procedures) by which the spill contingency plan is activated;

h. a description of the spill response training provided to employees assigned to work in the area serviced by the Works, the date(s) on which the training was provided and by whom;

i. an inventory of response and clean-up equipment available to implement the spill contingency plan, location and, date of maintenance/replacement if warranted; and

j. the date on which the contingency plan was prepared and subsequently, amended.

2. The spill contingency plan shall be kept in a conspicuous, readily accessible location on-site.

3. The spill contingency plan shall be amended from time to time as required by changes in the operation of the facility.

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

1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. Condition 1.4 is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance and operation of the Works. The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this Approval doesn't limit the authority of the Ministry to require further information.

2. Condition 2 is included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

4. Condition 4 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works "as constructed" are maintained for future references.

5. Condition 5 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the Works are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the Works. The Condition also ensures that adequate storage is maintained in the Works at all times as required by the design. Furthermore, this Condition is included to ensure that the Works are operated and maintained to function as designed.

6. Condition 6 is included as installation, regular inspection and maintenance of the temporary sediment and erosion control measures is required to mitigate the impact on the downstream receiving watercourse during construction until they are no longer required.

7. Condition 7 is included to require the Owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved Works is consistent with the design and effluent objectives specified in the Approval and that the approved Works does not cause any impairment to the receiving watercourse.

8. Condition 8 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.
9. Condition 9 is included to ensure that the Works are operated 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. These Conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, Ministry’s policies, guidelines, and industry engineering standards and best management practices.

10. Condition 10 is included to ensure that the Owner will implement the Spill Contingency Plan, such that the environment is protected and deterioration, loss, injury or damage to any person(s) or property is prevented.

Schedule A

1. Environmental Compliance Approval Application for Sewage Works submitted by D.M. Wills Associates Limited, dated September 16, 2022, and signed by James Istchenko P.Eng., Manager, Environmental Services, City of Peterborough, and all supporting documentation and information.

Schedule B

Surface Water Monitoring

Table 1	
Sampling Frequency	Twice annually
Sampling Type	Grab Sample
Sampling Locations	POF-SW1 (Background), POF-SW2 (Trigger Location)
Sampling Parameters	**Field Parameters**: Conductivity, pH, Water Temperature **General Parameters**: Total Dissolved Solids, Total Suspended Solids **Major and Minor Ions**: Alkalinity, Chloride, Sulphate **Nutrients/Organic Indicators**: Ammonia+Ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals**: Barium, Boron, Cadmium, Copper, Lead, Mercury, Nickel, Iron, Zinc

Leachate Monitoring

Table 2	
Sampling Frequency	Thrice annually
Sampling Type	Grab Sample
Sampling Locations	Leachate Collection system
Sampling Parameters	**Field Parameters**: Conductivity, pH, Water Temperature **General Parameters**: Total Dissolved Solids, Total Suspended Solids **Major and Minor Ions**: Alkalinity, Calcium, Chloride, Magnesium, Sodium, Sulphate **Nutrients/Organic Indicators**: Ammonia+Ammonium, Total Phosphorus, Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand **Total Metals**: : Barium, Boron, Cadmium, Copper,

	Lead, Nickel, Iron, Zinc

Trigger Parameters and Trigger Levels for POF-SW2

Table 3	
Parameter	**Trigger Level**
Alkalinity	Shall not be decreased by more than 25% of natural concentration.
Ammonia+ammonium, Total Suspended Solids	75% of historical concentration at background (POF-SW1)
Boron	75% of Canadian Council for Ministers of the Environment Water Quality Guideline for the Protection of Aquatic Life
Unionized Ammonia, Cadmium, Copper, Lead, Mercury, Nickel, pH, Total Iron, Total Phosphorus, Zinc	75% of PWQO

Schedule C

Limited Operational Flexibility Criteria for Modifications to Works

1. The modifications to Works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the Works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

    a. Sewage Pumping Stations

        i. Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.

        ii. Forcemain relining and replacement with similar pipe size where the nominal diameter is not greater than 1,200mm.

    b. Sewage Treatment Process

        i. Installing additional chemical dosage equipment including replacing with alternative chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no modifications of treatment processes or other modifications that may alter the intent of operations and may have negative impacts on the effluent quantity and quality.

        ii. Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent's land.

        iii. Optimizing existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where no land acquisition is required.

        iv. Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the Works that result in an increase of the approved Rated Capacity, and may have adverse effects to the effluent quality or location of the discharge.

        v. Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of

equipment is kept the same. For clarity purposes, the following equipment can be considered under this provision: pumps, screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

c. Sewage Treatment Plant Outfall

    i. Replacement of discharge pipe with similar pipe size provided that the outfall location is not changed.

d. Stormwater Management System

    i. Modifications of Works to service the existing approved drainage area located within the site, provided that there is no increase in the average impervious area established in the original design and the discharges from the site will not exceed the attenuated flows established in the original design.

    ii. Installation of new oil grit separators.

e. Sanitary Sewers

    i. Pipe relining and replacement with similar pipe size within the Sewage Treatment Plant site, where the nominal diameter is not greater than 1,200mm.

f. Pilot Systems

    i. Installation of pilot systems for new or existing technologies provided that:

        - any effluent from the pilot system is discharged to the inlet of the sewage treatment plant or hauled off-site for proper disposal,

        - any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and

        - the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and District Manager three months after completion of the pilot project.

2. Works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility.

3. Normal or emergency operational modifications, such as repairs, reconstructions, or other

improvements that are part of maintenance activities, including cleaning, renovations to existing approved Works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.

4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

Ontario

Ministry of the Environment, Conservation and Parks

Form 1
Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE DISTRICT MANAGER

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO license Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. The modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the Environmental Assessment Act.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

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.

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.olt.gov.on.ca**

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

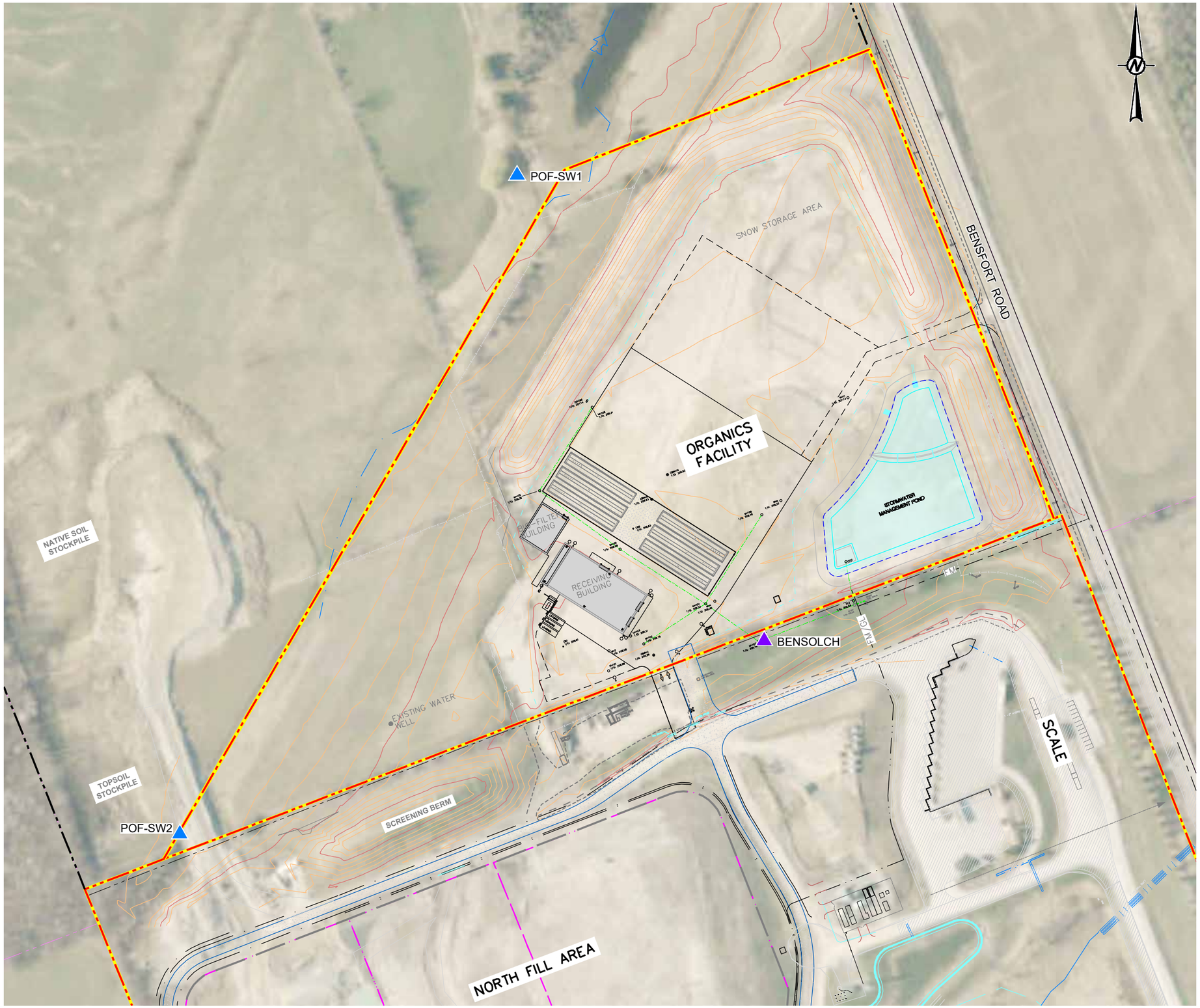
DATED AT TORONTO this 30th day of June, 2023

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

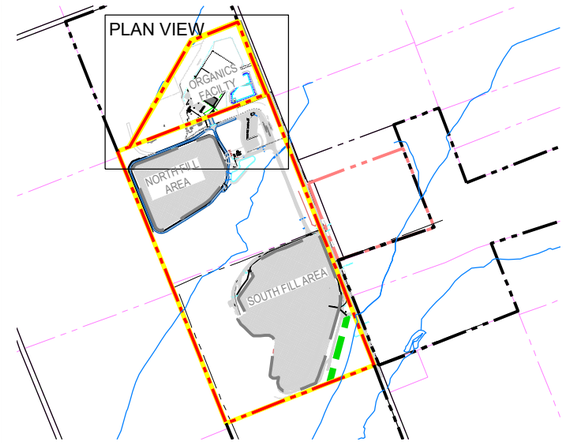
SN/
c: District Manager, DWECD, MECP Peterborough
Michael Lord, D.M. Wills Associates Limited

FIGURE 1

Sample Locations



MAP KEY



PLAN LEGEND

- PROPERTY LINE
- FACILITY (LANDFILL & ORGANICS FACILITY)
- SURFACE WATER SAMPLING STATION
- LEAFATE GRAB SAMPLE

REFERENCES & DISCLAIMERS

1) WSP 2023 ANNUAL MONITORING REPORT;
2) DM WILLS ASSOCIATES LTD. HYDROGEOLOGICAL REPORTING 2023 & 2024.
3) DM WILLS PETERBOROUGH ORGANICS FACILITY TENDER / AS-BUILT DRAWINGS 2024

ALIGNMENT OF ORTHOGRAPHIC IMAGERY IS APPROXIMATED TO SELECT FEATURES ON DATUM. AWAY FROM POINTS OF ALIGNMENT THE ORTHOGRAPHIC IMAGE MAY BE DIMENSIONALLY SKEWED OR PROJECTED OFF THE MAP DATUM PLANE.

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PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
COUNTY OF PETERBOROUGH /
CITY OF PETERBOROUGH

PROJECT
POF STORMWATER COMPLIANCE REPORT
PETERBOROUGH WASTE MANAGEMENT FACILITY

TITLE
PETERBOROUGH ORGANICS FACILITY PLAN

CONSULTANT

wsp

YYYY-MM-DD	2025-01-16
DESIGNED	
PREPARED	JPR
REVIEWED	TG
APPROVED	TLM

PROJECT NO.	CONTROL	REV.	FIGURE
CA0008825	0003	----	1

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

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Tables

Table 1: 2024 Surface Water Sample Results
Peterborough Organics Facility

WELL_CODE		POF-SW1	POF-SW2
WQ_ANA_NO		180096	180097
SAMPLE_DATE		15-Apr-24	15-Apr-24
Parameter	Units		
Field Conductivity	uS/cm	449	571
Field pH	units	7.4	7.03
Field Temperature	degC	9.7	9.2
Suspended Solids	mg/L	<2	4
Total Dissolved Solids	mg/L	330	440
Alkalinity	mg/L	227	287
Chloride	mg/L	2	6.4
Sulphate	mg/L	37.3	76.5
Ammonia	mg/L	<0.1	0.1
Biological Oxygen Demand	mg/L	<2.0	<2.0
Chemical Oxygen Demand	mg/L	30	40
Phosphorous	mg/L	0.02	0.02
Barium	ug/L	30	38
Boron	ug/L	18	26
Cadmium	ug/L	<0.1	<0.1
Copper	ug/L	1.4	1
Iron	ug/L	91	152
Lead	ug/L	<0.5	<0.5
Mercury	ug/L	<0.1	<0.1
Nickel	ug/L	<2	<2
Zinc	ug/L	<5	<5

Table 2: 2024 Leachate Sample Results
Peterborough Organics Facility

Location Code		BENSSOLCH	BENSSOLCH	BENSSOLCH
Sample_ID		Comp LCH drain 20240424	BENSSOLCH20240617	BENSSOLCH20241029
LIMS_ID		180400	182019	185689
SAMPLE_DATE	Units	24-Apr-24	17-Jun-24	29-Oct-24
Field Conductivity	uS/cm	2300	1090	3430
Field pH	units	7.84	7.21	6.09
Field Temperature	degC	6.9	18.7	11.9
Suspended Solids	mg/L	117	2340	37
Total Dissolved Solids	mg/L	1780	1740	3640
Alkalinity	mg/L	607	66.9	699
Calcium	mg/L	142	254	311
Chloride	mg/L	154	79.5	160
Sulphate	mg/L	75.1	51.3	43.2
Magnesium	mg/L	29.8	25.2	45.4
Sodium	mg/L	134	74.8	172
Ammonia + Ammonium	mg/L	8	41.5	121
Biological Oxygen Demand	mg/L	1080	1360	3470
Chemical Oxygen Demand	mg/L	1640	3020	4200
Phosphorous	mg/L	3.06	14	17.8
Barium	ug/L	114	443	84
Boron	ug/L	100	138	180
Cadmium	ug/L	<1	1	<1
Copper	ug/L	42	199	68
Lead	ug/L	<10	88.1	10
Nickel	ug/L	17	41	32
Iron	ug/L	1360	25800	5630
Zinc	ug/L	40	1600	610

Table 1: 2024 Summary of Maintenance

ECA #4156-CRM7RY, 2024 Sewer Monitoring

Date	Type of Work	Comments
2024-03-24	Testing of as-built infrastructure	As required by the contract
2024-04-30	Notification	Notified the local MECP Officer that the sewage works is operational.
2024-08-22	Re-testing of section of sewer	As identified during CCTV Inspection.
2024-10-22	Flushing	Ptbo WWC crew flushed (cleaned) the channels in the bunkers. This is preventative maintenance to reduce the risk of back-ups/overflows from solids build-up in the system.
2024-10-23	Trap cleaning	Due to the layout and size of the bunker solids traps WWC equipment was unable to clean the units. A private contract (sewage company) was hired to clean the units.

APPENDIX K

Monitoring & Screening Checklist

Appendix D-Monitoring and Screening Checklist
General Information and Instructions

General Information: The checklist is to be completed, and submitted with the Monitoring Report.
Instructions: A complete checklist consists of:
(a) a completed and signed checklist, including any additional pages of information which can be attached as needed to provide further details where indicated.
(b) completed contact information for the Competent Environmental Practitioner (CEP)
(c) self-declaration that CEP(s) meet(s) the qualifications as set out below and in Section 1.2 of the Technical Guidance Document.

Definition of Groundwater CEP:
For groundwater, the CEP must have expertise in hydrogeology and meet one of the following:
(a) the person holds a licence, limited licence or temporary licence under the *Professional Engineers Act*; or
(b) the person holds a certificate of registration under the *Professional Geoscientists Act, 2000* and is a practicing member, temporary, member or limited member of the Association of Professional Geoscientists of Ontario. O. Reg. 66/08, s. 2..
Definition of Surface water CEP:
A CEP for surface water assessments is a scientist, professional engineer or professional geoscientist as described in (a) and (b) above with demonstrated experience and post-secondary education, either a diploma or degree, in hydrology, aquatic ecology, limnology, aquatic biology, physical geography with specialization in surface water, and/or water resource management.

The type of scientific work that a CEP performs must be consistent with that person's education and experience. If an individual has appropriate training and credentials in both groundwater and surface water and is responsible for both areas of expertise, the CEP may then complete and validate both sections of the checklist.

Monitoring Report and Site Information	
Waste Disposal Site (WDS) Name	Peterborough County/City Waste Management Facility
Location (e.g. street address, lot, concession)	1260 Bensfort Road; Part Lots 13, 14, and 15, Concessions 13 and 14
GPS Location (taken within the property boundary at front gate/ front entry)	717033, 4900342, Zone 17, NAD 83
Municipality	Township of Otonabee-South Monaghan, County of Peterborough
Client and/or Site Owner	County/City of Peterborough
Monitoring Period (Year)	2024
This Monitoring Report is being submitted under the following:	
Environmental Compliance Approval (ECA) Number (formerly "Certificate of Approval" (C of A)) :	A341508, 2231-8YCPHG, and 4156-CRM7RY
Director's Order No.:	
Provincial Officer's Order No.:	

Other:			
Report Submission Frequency	(•) **Annual** ( ) **Other**		
The site is: **(Operation Status)**	(•) **Open** ( ) **Inactive** ( ) **Closed**		
Is there an active waste transfer station at the site?	( ) **Yes** (•) **No**		
Does this WDS have a Closure Plan?	(•) **Not yet submitted** ( ) **Submitted and under review** ( ) **Submitted and approved**		
Total Approved Capacity	4,445,000	*Units*	Cubic Metres
Maximum Approved Fill Rate	85,000	*Units*	Tonnes per Year
Total Waste Received within Monitoring Period (Year)	35,774	*Units*	Tonnes
Total Waste Received within Monitoring Period (Year) *Describe the methodology used to determine this quantity*	Weighed		
Estimated Remaining Capacity	673,800	*Units*	Cubic Metres
Estimated Remaining Capacity *Describe the methodology used to determine this quantity*	Direct Survey (GPS/Total Station)		
Estimated Remaining Capacity *Date Last Determined*	December 2024		
Non-Hazardous Approved Waste Types	[x] Domestic [x] Industrial, Commercial & Institutional (IC&I) [ ] Source Separated Organics (Green Bin) [ ] Tires	[x] Contaminated Soil [ ] Wood Waste [ ] Blue Box Material [ ] Processed Organics [ ] Leaf and Yard Waste	[ ] Food Processing/Preparation Operations Waste [ ] Hauled Sewage Other: Asbestos
Subject Waste Approved Waste Classes: Hazardous & Liquid Industrial *(separate waste classes by comma)*			

Year Site Opened *(enter the Calendar Year only)*	1981	**Current ECA Issue Date**	23/06/2023
Is your Site required to submit Financial Assurance?		○ **Yes** ◉ **No**	
Describe how your WDS is designed.		○ Natural Attenuation only ○ Fully engineered Facility ◉ Partially engineered Facility	
Does your Site have an approved Contaminant Attenuation Zone?		○ **Yes** ◉ **No**	
If closed, specify ECA, control or authorizing document closure date:		Select Date	
Has the nature of the operations at the site changed during this monitoring period?	◉ **Yes** ○ **No**		
If yes, provide details:	Operations commenced at the Peterborough Organics Facility (POF) to accept Source Separated Organics (SSO)		

Have any measurements been taken since the last reporting period that indicate landfill gas volumes have exceeded the MOE limits for subsurface or adjacent buildings? (i.e. exceeded the LEL for methane)	◯ Yes ◉ No

Groundwater WDS Verification:

Based on all available information about the site and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The monitoring program continues to effectively characterize site conditions and any groundwater discharges from the site. All monitoring wells are confirmed to be in good condition and are secure:	◉ **Yes** ◯ **No**	
2) All groundwater, leachate and landfill gas sampling and monitoring for the monitoring period being reported on was successfully completed as required by ECA or other relevant authorizing/ control document(s):	◉ **Yes** ◯ **No** ◯ **Not Applicable**	If no, list exceptions below or attach information.

Groundwater Sampling Location	**Description/Explanation for change (change in name or location, additions, deletions)**	**Date**

3) a) Some or all groundwater, leachate and landfill gas sampling and monitoring requirements have been established or defined outside of a ministry ECA, authorizing, or control document.	◯ **Yes** ◉ **No** ◯ **Not Applicable**	
b) If yes, the sampling and monitoring identified under 3(a) for the monitoring period being reported on was successfully completed in accordance with established protocols, frequencies, locations, and parameters developed as per the Technical Guidance Document:	◯ **Yes** ◯ **No** ◉ **Not Applicable**	If no, list exceptions below or attach additional information.

Groundwater Sampling Location	**Description/Explanation for change (change in name or location, additions, deletions)**	**Date**

4) All field work for groundwater investigations was done in accordance with Standard Operating Procedures (SOP) as established/outlined per the Technical Guidance Document (including internal/external QA/QC requirements) (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	◉ **Yes** ○ **No**	
Sampling and Monitoring Program Results/WDS Conditions and Assessment:		
5) The site has an adequate buffer, Contaminant Attenuation Zone (CAZ) and/ or contingency plan in place. Design and operational measures, including the size and configuration of any CAZ, are adequate to prevent potential human health impacts and impairment of the environment.	◉ **Yes** ○ **No**	
6) The site meets compliance and assessment criteria.	◉ **Yes** ○ **No**	Please see Section 5 of the 2024 Annual Monitoring Report.
7) The site continues to perform as anticipated. There have been no unusual trends/ changes in measured leachate and groundwater levels or concentrations.	◉ **Yes** ○ **No**	

1) Is one or more of the following risk reduction practices in place at the site: ***(a)*** **There is minimal reliance on natural attenuation of leachate due to the presence of an effective waste liner and active leachate collection/ treatment; or** ***(b)*** **There is a predictive monitoring program in-place (modeled indicator concentrations projected over time for key locations); or** ***(c)*** **The site meets the following two conditions (typically achieved after 15 years or longer of site operation):** ***i.*** **The site has developed stable leachate mound(s) and stable leachate plume geometry/ concentrations; and** ***ii.*** **Seasonal and annual water levels and water quality fluctuations are well understood.**	◉ **Yes** ○ **No**	**Note which practice(s):**	☒ **(a)** ☐ **(b)** ☒ **(c)**
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	○ **Yes** ◉ **No** ○ **Not Applicable**	Please see Section 5 of the 2024 Annual Monitoring Report.	

Groundwater CEP Declaration:

I am a licensed professional Engineer or a registered professional geoscientist in Ontario with expertise in hydrogeology, as defined in Appendix D under Instructions. Where additional expertise was needed to evaluate the site monitoring data, I have relied on individuals who I believe to be experts in the relevant discipline, who have co-signed the compliance monitoring report or monitoring program status report, and who have provided evidence to me of their credentials.

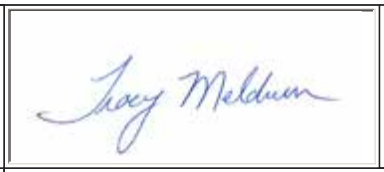
I have examined the applicable Environmental Compliance Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended), and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories,* or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature and will be rectified for the next monitoring/reporting period. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

◉ **No changes to the monitoring program are recommended** ○ **The following change(s) to the monitoring program is/ are recommended:**	
◉ **No Changes to site design and operation are recommended** ○ **The following change(s) to the site design and operation is/are recommended:**	
Name:	Tracy Meldrum, M.Sc., P.Geo.
Seal:	Add Image

Signature:		**Date:**	May 13, 2025
CEP Contact Information:	Tracy Meldrum		
Company:	WSP Canada Inc.		
Address:	1224 Gardiners Road, Suite 201, Kingston, Ontario, K7P 0G2		
Telephone No.:	613-856-0300	Fax No. :	
E-mail Address:	tracy.meldrum@wsp.com		
Co-signers for additional expertise provided:			
Signature:		**Date:**	
Signature:		**Date:**	

Surface Water WDS Verification:

Provide the name of surface water body/bodies potentially receiving the WDS effluent and the approximate distance to the waterbody (including the nearest surface water body/bodies to the site):	
Name (s)	Un-named water courses and low lying areas.

Distance(s)	On and adjacent to the site.

Based on all available information and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The current surface water monitoring program continues to effectively characterize the surface water conditions, and includes data that relates upstream/background and downstream receiving water conditions:	◉ **Yes** ◯ **No**	If no, identify issues (Type Here):
2) All surface water sampling for the monitoring period being reported was successfully completed in accordance with the ECA or relevant authorizing/control document(s) (if applicable):	◯ **Yes** ◉ **No** ◯ **Not applicable**	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	**Description/Explanation for change (change in name or location, additions, deletions)**	**Date**
Outlined in Section 6.0 of the 2024 Annual Monitoring Report.		

3) a) Some or all surface water sampling and monitoring program requirements for the monitoring period have been established outside of a ministry ECA or authorizing/control document.	◯ **Yes** ◉ **No** ◯ **Not Applicable**	
b) If yes, all surface water sampling and monitoring identified under 3 (a) was successfully completed in accordance with the established program from the site, including sampling protocols, frequencies, locations and parameters) as developed per the Technical Guidance Document:	◯ **Yes** ◯ **No** ◉ **Not Applicable**	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date

4) All field work for surface water investigations was done in accordance with SOP, including internal/external QA/QC requirements, as established/outlined as per the Technical Guidance Document, MOE 2010, or as amended. (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	(●) Yes ( ) No	

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The receiving water body meets surface water-related compliance criteria and assessment criteria: i.e., there are no exceedances of criteria, based on MOE legislation, regulations, Water Management Policies, Guidelines and Provincial Water Quality Objectives and other assessment criteria (e.g., CWQGs, APVs), as noted in Table A or Table B in the Technical Guidance Document (Section 4.6):	( ) Yes (●) No

If no, list parameters that exceed criteria outlined above and the amount/percentage of the exceedance as per the table on the following page or provide details in an attachment:

Parameter	Compliance or Assessment Criteria or Background	Amount by which Compliance or Assessment Criteria or Background Exceeded
e.g. Nickel	e.g. ECA limit, PWQO, background	e.g. X% above PWQO
Please see Section 6.3 of the 2024 Annual Monitoring Report.		
6) In my opinion, any exceedances listed in Question 5 are the result of non-WDS related influences (such as background, road salting, sampling site conditions)?	(●) **Yes** ( ) **No**	Please see Section 6 of the 2024 Annual Monitoring Report.

7) All monitoring program surface water parameter concentrations fall within a stable or decreasing trend. The site is not characterized by historical ranges of concentrations above assessment and compliance criteria.	◉ **Yes** ◯ **No**	
8) For the monitoring program parameters, does the water quality in the groundwater zones adjacent to surface water receivers exceed assessment or compliance criteria (e.g. , PWQOs, CWQGs, or toxicity values for aquatic biota (APVs)):	◉ Yes ◯ No ◯ Not Known ◯ Not Applicable	Please see Section 5 and 6 of the 2024 Annual Monitoring Report.
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	◯ **Yes** ◯ **No** ◉ **Not Applicable**	

Surface Water CEP Declaration:

I, the undersigned hereby declare that I am a Competent Environmental Practitioner as defined in Appendix D under Instructions, holding the necessary level of experience and education to design surface water monitoring and sampling programs, conduct appropriate surface water investigations and interpret the related data as it pertains to the site for this monitoring period.

I have examined the applicable Environmental Compliance Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended) and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories,* or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature or will be rectified for future monitoring events. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

○ **No Changes to the monitoring program are recommended**	
◉ **The following change(s) to the monitoring program is/are recommended:**	It is recommended that an upstream surface water monitoring station be established within the western watercourse to better characterize the water quality within the Crystal Springs Wetland.
◉ **No changes to the site design and operation are recommended**	
○ **The following change(s) to the site design and operation is/ are recommended:**	

CEP Signature	
Relevant Discipline	Hydrogeology
Date:	13-May-2025
CEP Contact Information:	Tracy Meldrum
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