Phase Two Environmental Site Assessment
112 Montreal Road, Ottawa, Ontario

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Legal Notification

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Executive Summary

EXP Services Inc. (EXP) was retained by 2705460 Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) for the property located at 112 Montreal Road in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was as a motel, which is defined in O.Reg 153/04 as a commercial land use. It is proposed that residential buildings be constructed on the Phase Two property. As the proposed land use is more sensitive than the previous land use, a Record of Site Condition (RSC) is required.

The Phase Two property is located on the south side of Montreal Road, west of the Vanier Parkway. The Phase Two property is irregular in shape with an area of 0.96 hectares. The Phase Two property is legally described as Lot 5, Part Lot 6 and 7, Block 2, Plan 29; Part Lots 40, 41 and 88, Plan 49, Vanier/Gloucester. The property identification number (PIN) is 042370019.

At the time of this investigation, the Phase Two property was vacant. The east part of the Phase Two property had been excavated to the bedrock surface, and ponded water was present. The west part of the Phase Two property was paved. Historically, the site was operated as a motel and was occupied by seven buildings including a laundry building, restaurant, and what was formerly a detached residence. All of the site buildings were demolished and removed from the Phase Two property in 2019.

The Phase Two property topography is relatively flat. The regional topography slopes downwards to the west. The local groundwater flow direction is anticipated to be west/northwest towards the Rideau River.

Based on a review of the available records, the following PCAs resulting in APECs were identified:

- PCA #30 – Importation of fill material of unknown quality (impacted fill material identified in previous investigations)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 120 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 138 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former oil warehouse at 296 Kendall Avenue)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 94 Montreal Road)
- PCA #46 – Rail yards, tracks, and spurs (former CP rail line east of the site)

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. The following APEC were identified on the Phase Two property, as shown in Table EX-1:

Table EX-1: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
1. Impacted fill material on the site	Entire Phase One property	PCA #30 – Importation of fill material of unknown quality	On-site	Benzene, toluene, ethylbenzene, xylene (BTEX), and petroleum hydrocarbons (PHC), metals	Soil

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
2. Gas station at 120 Montreal Road	Northeast corner of Phase One property	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX, PHC	Groundwater
3. Former dry cleaner at 90 Montreal Road	Northwest corner of Phase One property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)	Off-site	Volatile organic compounds (VOC)	Groundwater
4. Former oil warehouse at 296 Kendall Avenue	Area along east property line	PCA #28 – Gasoline and associated products in fixed tanks	Off-site	BTEX, PHC	Groundwater
5. Former gas station at 138 Montreal Road	Area along east property line	PCA #28 – Gasoline and associated products storage in fixed tanks	Off-site	BTEX, PHC	Groundwater
6. Former rail line east of the site	East part of Phase One property	PCA #46 – Rail yards, tracks, and spurs	Off-site	PHC, polycyclic aromatic hydrocarbons (PAH), metals	Groundwater

In 2013 and 2014, EXP completed a preliminary geotechnical investigation and a Phase II Environmental Site Assessment at the Phase Two property. At that time, the Phase Two property was occupied by several low-rise buildings (which have since been demolished). The preliminary geotechnical Investigation consisted of drilling nine boreholes across the Phase Two property and revealed that below 0.2 m to 2.7 m of fill, compact to very dense silty sand till was contacted and extended to depths of 2.1 m to 3.3 m depth. Limestone bedrock underlies the till and extends to the entire depth investigated, i.e., 2.3 and 3.3 m. The groundwater table at the Site was established at 2.4 m to 4.2 m depth. The results of the Phase II ESA showed that petroleum parameters were either non-detectable or below the Ministry of the Environment, Conservation and Parks (MECP) Table 3 Site Condition Standards (SCS) for residential/parkland/institutional property use, with the exception of some exceedances in some of the fill and till samples in some of the boreholes.

In 2022, an additional geotechnical investigation and a soil characterization program (for excess soil) was conducted in conjunction with the Phase Two investigation by EXP. Since the previous investigation was completed, all the structures had been demolished and removed. The west part of the Phase Two property was paved and in use for parking. The remainder of the Phase Two property was fenced and a soil berm has been constructed along the boundary between the parking area and the east part of the Phase Two property. The east part of the Phase Two property appears to have been excavated to the bedrock surface.

On August 31, 2022, nine (9) test pits (TP1 to TP9) were excavated at the Site using a rubber-tire excavator, under the full-time supervision of EXP staff. The test pits were excavated to a maximum depth of 2.2 metres below ground surface (m bgs) or refusal due to the presence of bedrock.

Between September 14 and 22, 2022, six boreholes (BH-1 to BH-6) and ten auger holes (AH1 to AH10) were advanced at the site by a licensed well driller, under the full-time supervision of EXP staff. The boreholes were drilled to a maximum depth of 4.4 m bgs or refusal due to the presence of bedrock. Bedrock was cored in all six boreholes to a maximum depth of 15.3 m bgs. The auger holes were drilled to a maximum depth of 2.9 m bgs.

On February 9 and 10, 2023, an additional five boreholes (MW23-1 to MW23-5) were advanced at the Phase Two property. Bedrock was air hammered in the five boreholes to a maximum depth of 7.3 m bgs. All five of the boreholes were completed as monitoring wells.

As part of the 2013 investigation, six soil samples and one duplicate sample were submitted for analysis of BTEX, PHC, and metals. As part of the current investigation, forty-nine soil samples and five duplicate samples were submitted for analysis of BTEX, PHC, and metals.

In 2013, three soil samples exceeded the Table 3 SCS for barium, lead, and/or zinc. One soil sample, and it's duplicate exceeded the Table 3 SCS for PHC fraction F3.

In 2022, two soil samples exceeded the Table 3 SCS for copper, lead, and/or mercury, and five soil samples exceeded for conductivity, and five soil samples exceeded for PHC.

In 2023, eight groundwater samples and one duplicate sample were submitted for chemical analysis of PHC, PAH, VOC and metals parameters. There were no exceedances of the MECP 3 SCS for any of the parameters analyzed.

All of the exceedances in soil were limited to metals parameters and PHC fractions F2 and F3. There were no groundwater exceedances of the Table 3 SCS for any of the parameters analyzed. Since there are no volatile COCs on the Phase Two Property, soil vapour migration is not considered an issue. Chemical transformations of contaminants in soil are not a significant concern at the Phase Two property.

It is EXP's opinion that some of the PCA that were identified in the Phase One ESA have adversely affected the property. It is recommended that the impacted soil at the Phase Two be removed prior to re-development.

The Qualified Person can confirm that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.

This executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety.

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1.0 Introduction

EXP Services Inc. (EXP) was retained by 2705460 Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) for the property located at 112 Montreal Road in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was as a motel, which is defined in O.Reg 153/04 as a commercial land use. It is proposed that residential buildings be constructed on the Phase Two property. As the proposed land use is more sensitive than the previous land use, a Record of Site Condition (RSC) is required.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

1.1 Site Description

The Phase Two property is located on the south side of Montreal Road, west of the Vanier Parkway, as shown on Figure 1 in Appendix A. The Phase Two property is irregular in shape with an area of 0.96 hectares. The Phase Two property is legally described as Lot 5, Part Lot 6 and 7, Block 2, Plan 29; Part Lots 40, 41 and 88, Plan 49, Vanier/Gloucester. The property identification number (PIN) is 042370019.

At the time of this investigation, the Phase Two property was vacant. The east part of the Phase Two property had been excavated to the bedrock surface and ponded water was present. The west part of the Phase Two property was paved. Historically, the site was operated as a motel and was occupied by seven buildings including a laundry building, restaurant, and what was formerly a detached residence. All of the site buildings were demolished and removed from the Phase Two property in 2019. The Phase Two property site location and site layout are shown on Figures 1 and 2 in Appendix A.

The Phase Two property topography is relatively flat. The regional topography slopes downwards to the west. The local groundwater flow direction is anticipated to be west/northwest towards the Rideau River.

Refer to Table 1.1 for the Site identification information.

Table 1.1: Site Identification Details

Civic Address	112 Montreal Road, Ottawa, Ontario
Current Land Use	Vacant
Proposed Future Land Use	Residential
Property Identification Number	042370019
UTM Coordinates	Zone 18, 447090 m E and 503121 m N
Site Area	0.96 hectares
Property Owner	2705460 Ontario Inc.

A survey plan of the Phase Two property was completed by Fairhall, Moffat & Woodland Ltd. in 2019. A copy of the survey plan is provided in Appendix B.

1.2 Property Ownership

The registered owner of the Phase Two property is 2705460 Ontario Inc. Authorization to proceed with this investigation was provided by Mr. Seth Richards on behalf of 2705460 Ontario Inc. Contact information for Mr. Richards is 231 Brittany Drive, Ottawa, Ontario K1K 0R8.

1.3 Current and Proposed Future Use

The most recent use of the property was commercial (motel). The proposed future use of the property is residential. Since the past use of the property was commercial land use, an RSC must be filed, per Ontario Regulation 153/04.

1.4 Applicable Site Condition Standards

Analytical results obtained for soil and groundwater samples were compared to Site Condition Standards (SCS) established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document entitled *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, 2011. This document provides tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects-based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites. The effects-based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Table 1 to 9 SCS are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived
- Table 2 – applicable to sites with potable groundwater and full depth restoration
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration
- Table 4 – applicable to sites with potable groundwater and stratified restoration
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration
- Table 6 – applicable to sites with potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 7 – applicable to sites with non-potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 m of a water body

Application of the generic or background SCS to a specific site is based on a consideration of site conditions related to soil pH, thickness and extent of overburden material, and proximity to an area of environmental sensitivity or of natural significance. For some chemical parameters, consideration is also given to soil textural classification with SCS having been derived for both coarse and medium-fine textured soil conditions.

For assessment purposes, EXP selected the 2011 Table 3 SCS for a non-potable groundwater condition and residential/parkland/ institutional property use.

The selection of these categories was based on the following factors:

- Bedrock is greater than 2 metres below grade across the subject property;
- The Phase Two property is not located within 30 metres of a waterbody;

- The Phase Two property is not located within an area of natural significance, does not include nor is adjacent to an area of natural significance, and does not include land that is within 30 metres of an area of natural significance;
- The Phase Two property and study area is serviced with potable water by the City of Ottawa through its water distribution system;
- The Phase Two property is not located in an area designated in a municipal official plan as a well-head protection area;
- The proposed buildings are planned for residential use; and
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

2.0 Background Information

2.1 Physical Setting

The Phase Two property is located on the south side of Montreal Road, west of the Vanier Parkway, as shown on Figure 1 in Appendix A. The Phase Two property is irregular in shape with an area of 0.96 hectares. The Phase Two property is legally described as Lot 5, Part Lot 6 and 7, Block 2, Plan 29; Part Lots 40, 41 and 88, Plan 49, Vanier/Gloucester. The property identification number (PIN) is 042370019.

A site plan showing the Phase Two property is presented as Figure 2 in Appendix A.

The Phase Two property and study area is serviced with potable water by the City of Ottawa through its water distribution system. Thus, in accordance with Section 35 of Ontario Regulation 153/04, potable water standards do not apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance.

The Phase Two property is not a shallow soil property as defined in Section 43.1 of the regulation. It does not include all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body.

Under any fill, the natural overburden deposits in the area is glacial till that would consist of clay, silt, sand, and gravel. Bedrock geology maps indicated limestone of the Eastview Formation. Based on previous investigations, bedrock is present between 2.3 and 3.3 metres below ground surface.

The Phase Two property topography is relatively flat. The regional topography slopes downwards to the west. The local groundwater flow direction is anticipated to be west/northwest towards the Rideau River.

2.2 Past Investigations

EXP prepared a report entitled *Phase One Environmental Site Assessment, 112 Montreal Road, Ottawa, Ontario,* dated April 5, 2023. The Phase One study area included the entire Phase Two property as well as properties within 250 m of the Phase Two property. Based on the results of the Phase One ESA, EXP identified six APECs on the Phase One property. A summary is provided in Table 2.1.

Table 2.1: Findings of Phase One ESA

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
1. Impacted fill material on the site	Entire Phase One property	PCA #30 – Importation of fill material of unknown quality	On-site	Benzene, toluene, ethylbenzene, xylene (BTEX), and petroleum hydrocarbons (PHC), metals	Soil
2. Gas station at 120 Montreal Road	Northeast corner of Phase One property	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX, PHC	Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
3. Former dry cleaner at 90 Montreal Road	Northwest corner of Phase One property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)	Off-site	Volatile organic compounds (VOC)	Groundwater
4. Former oil warehouse at 296 Kendall Avenue	Area along east property line	PCA #28 – Gasoline and associated products in fixed tanks	Off-site	BTEX, PHC	Groundwater
5. Former gas station at 138 Montreal Road	Area along east property line	PCA #28 – Gasoline and associated products storage in fixed tanks	Off-site	BTEX, PHC	Groundwater
6. Former rail line east of the site	East part of Phase One property	PCA #46 – Rail yards, tracks, and spurs	Off-site	PHC, polycyclic aromatic hydrocarbons (PAH), metals	Groundwater

The locations of the APEC are shown on Figure 3 in Appendix A.

The Phase One ESA was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices. A copy of the Phase One conceptual site model is provided as Figure 3 in Appendix A.

In 2013 and 2014, EXP completed a preliminary geotechnical investigation and a Phase II Environmental Site Assessment at the Phase Two property. At that time, the Phase Two property was occupied by several low-rise buildings (which have since been demolished). The preliminary geotechnical Investigation consisted of drilling nine boreholes across the Phase Two property and revealed that below 0.2 m to 2.7 m of fill, compact to very dense silty sand till was contacted and extended to depths of 2.1 m to 3.3 m depth. Limestone bedrock underlies the till and extends to the entire depth investigated, i.e., to 2.3 and 3.3m. The groundwater table at the Phase Two property was established at 2.4 m to 4.2 m depth. The results of the Phase II ESA showed that petroleum parameters were either non-detectable or below the Ministry of the Environment, Conservation and Parks (MECP) Table 3 Site Condition Standards (SCS) for residential/parkland/institutional property use, with the exception of some exceedances in some of the fill and till samples in some of the boreholes.

In 2022, an additional geotechnical investigation and a soil characterization program (for excess soil) was conducted in conjunction with the Phase Two investigation by EXP. Since the previous investigation was completed, all the structures had been demolished and removed. The west part of the Phase Two property was paved and in use for parking. The remainder of the Phase Two property was fenced and a soil berm had been constructed along the boundary between the parking area and the east part of the site. The east part of the Phase Two property appears to have been excavated to the bedrock surface.

Boreholes from the 2013 and 2022 investigations are shown on Figure 2.

3.0 Scope of the Investigation

3.1 Overview of Site Investigation

The objective of the Phase Two ESA was to assess the quality of soil and groundwater quality on the Phase Two property.

The most recent use of the property was commercial (motel). The proposed future use of the property is residential. As the most proposed land use us more sensitive than the most recent land use, a Record of Site Condition (RSC) must be filed, per Ontario Regulation 153/04.

3.2 Scope of Work

The Phase ESA was conducted in conjunction with a geotechnical investigation, hydrogeological investigation, and excess soil management plan. The scope of work for the Phase Two ESA was as follows:

- Drilling five boreholes (M23-1 to MW23-5) on the subject property and completing all of them as monitoring wells;
- Excavating nine test pits in the existing berm for soil characterization;
- Advancing ten auger holes across the Phase Two property for soil characterization;
- Drilling six boreholes (BH1 to BH6) on the subject property for geotechnical purposes;
- Submitting select soil samples for laboratory analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), petroleum hydrocarbon (PHC) fractions F1 to F4, volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAH), and/or metals;
- Collecting groundwater samples from the monitoring wells and submitting them for analysis of PHC, PAH, VOC and/or metals;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario Ministry of the Environment, Conservation and Parks (MECP);
- Conducting an elevation survey of the boreholes and test pits;
- Monitoring groundwater levels in the new monitors to determine groundwater elevations; and,
- Preparing a report summarizing the results of the assessment activities.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

3.3 Media Investigated

The Phase Two ESA included the investigation of soil and groundwater on the Phase Two property. There are no waterbodies on the Phase Two property, therefore sediment sampling was not required.

The contaminants of potential concern (COPC) identified in the Phase One ESA were identified as target parameters for this Phase Two ESA. The APEC and COPC identified in the Phase One ESA are outlined in Section 2.2.

3.4 Phase One Conceptual Site Model

The Phase One conceptual site model (CSM) was developed by considering the following physical characteristics and pathways. The CSM showing the topography of the site, inferred groundwater flow, general site features, APEC, and PCA is shown in Figure 3 in Appendix A.

3.4.1 Buildings and Structures

No buildings or structures were present on the Phase Two property.

3.4.2 Water Bodies and Groundwater Flow Direction

There are no water bodies on the Phase Two property. The closest body of water is the Rideau River, located approximately 300 metres west of the site. Previous investigations indicate that the groundwater flow direction at the Phase Two property is to the east/northeast towards the Ottawa River, although it is likely that regional groundwater flow is to the west/northwest towards the Rideau River.

3.4.3 Areas of Natural Significance

There are no ANSI within the Phase Two study area.

3.4.4 Water Wells

Twenty-eight well records were identified in the Phase Two study area. One of the well records was for water supply for air conditioning at the Eastview Theatre installed in 1950. This building is no longer present. The remainder of the records were for monitoring wells.

3.4.5 Potentially Contaminating Activity

The following PCAs were identified on the Phase One property:

- PCA #30 – Importation of fill material of unknown quality (impacted fill material identified in previous investigations)

By definition, a PCA present on the Phase One property result in an APEC.

The following PCAs were identified in the Phase One study area:

- PCA #10 – Commercial autobody shop (former repair garage located at 137 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage located at 164 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage located at 42 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage at 41 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage at 164 Jeanne Mance Street)
- PCA #10 – Commercial autobody shop (former repair garage at 299 Montgomery Street)
- PCA #10 – Commercial autobody shop (repair garage at 271 Durocher Street)
- PCA #10 – Commercial autobody shop (former repair garage at 258 Durocher Street)
- PCA #10 – Commercial autobody shop (former repair garage at 52 McArthur Avenue)
- PCA #10 – Commercial autobody shop (former repair garage at 373 Marguerite Avenue)

- PCA #12 – Concrete, cement and lime manufacturing (former concrete block manufacturer at 154-158 McArthur Road)
- PCA #12 – Concrete, cement and lime manufacturing (former concrete pipe manufacturer at 2 Mark Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 120 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former oil warehouse at 296 Kendall Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 138 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 42 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (UST formerly present at grocery warehouse at 1625 Vanier Parkway)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 164 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 80-82 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 287 Savard Street)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 4 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 5 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former bus depot with USTs at 150 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 137 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 350 Montgomery Street)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 201 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (UST formerly present at transport company at 100 McArthur Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former oil warehouse at 155 McArthur Road)
- PCA #34 – Metal fabrication (former brass foundry at 110-120 McArthur Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 90 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 11 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 21 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 52 McArthur Avenue)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 196 Jean Mance Street)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 201 Montreal Road)

- PCA #46 – Rail yards, tracks, and spurs (former CP rail line east of the site)
- PCA #59 – Bulk storage of treated and preserved wood products (former lumber yard at 3 Selkirk Street)

Due to the distance and cross gradient location from the Phase One property, the majority of the off-site PCAs were determined not to result in APECs. The off-site PCAs that were determined to result in APECs on the Phase One property include PCA #28 (gas station at 120 Montreal Road, former gas station at 138 Montreal Road, former oil warehouse at 296 Kendall Avenue), PCA #37 (former dry cleaner at 90 Montreal Road), and PCA #46 (former CP rial line east of the Phase One property).

3.4.6 Areas of Potential Environmental Concern

The APEC identified are summarized in Table 3.1.

Table 3.1: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
1. Impacted fill material on the site	Entire Phase One property	PCA #30 – Importation of fill material of unknown quality	On-site	Benzene, toluene, ethylbenzene, xylene (BTEX), and petroleum hydrocarbons (PHC), metals	Soil
2. Gas station at 120 Montreal Road	Northeast corner of Phase One property	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX, PHC	Groundwater
3. Former dry cleaner at 90 Montreal Road	Northwest corner of Phase One property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)	Off-site	Volatile organic compounds (VOC)	Groundwater
4. Former oil warehouse at 296 Kendall Avenue	Area along east property line	PCA #28 – Gasoline and associated products in fixed tanks	Off-site	BTEX, PHC	Groundwater
5. Former gas station at 138 Montreal Road	Area along east property line	PCA #28 – Gasoline and associated products storage in fixed tanks	Off-site	BTEX, PHC	Groundwater
6. Former rail line east of the site	East part of Phase One property	PCA #46 – Rail yards, tracks, and spurs	Off-site	PHC, polycyclic aromatic hydrocarbons (PAH), metals	Groundwater

3.4.7 Underground Utilities

The Phase Two property is currently vacant. The former buildings (and any future development) were serviced by municipal water and sewer, natural gas and underground hydro. Surrounding properties are supplied by municipal water provided by the City of Ottawa. The source of municipal water is the Ottawa River.

3.4.8 Subsurface Stratigraphy

A review of geological maps revealed that, under any fill, the natural overburden deposits in the area is glacial till that would consist of clay, silt, sand, and gravel. Bedrock geology maps indicated limestone of the Eastview Formation. The Phase One property topography is relatively flat. Based on previous investigations, bedrock is present between 2.3 and 3.3 metres below ground surface.

3.4.9 Uncertainty Analysis

The CSM is a simplification of reality, which aims to provide a description and assessment of any areas where potentially contaminating activity that occurred within the Phase Two study area may have adversely affected the Phase Two property. All information collected during this investigation, including records, interviews, and site reconnaissance, has contributed to the formulation of the CSM.

Information was assessed for consistency, however EXP has confirmed neither the completeness nor the accuracy of any of the records that were obtained or of any of the statements made by others. All reasonable inquiries to obtain accessible information were made, as required by Schedule D, Table 1, Mandatory Requirements for Phase Two Environmental Site Assessment Reports. The CSM reflects our best interpretation of the information that was available during this investigation.

3.5 Deviations from Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the Phase Two property, as described in Section 4.

No significant deviations from the SAAP, as provided in Appendix C, were reported that affected the sampling and data quality objectives for the Phase Two property. Two of the monitoring wells could not be samples as they were frozen at the time of sampling.

3.6 Impediments

No impediments were encountered during this investigation.

4.0 Investigation Method

4.1 General

The current investigation was performed following the requirements given under Ontario Regulation 153/04 and in accordance with generally accepted professional practices.

The site investigative activities were conducted in conjunction with a geotechnical investigation and soil characterization investigation and consisted of the excavating of test pits and the drilling of boreholes to facilitate the collection of soil samples for visual inspection and chemical analyses. Select boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

Prior to the commencement of drilling and excavating, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

4.2 Drilling and Test Pit Program

On August 31, 2022, nine (9) test pits (TP1 to TP9) were excavated at the Site using a rubber-tire excavator, under the full-time supervision of EXP staff. The test pits were excavated to a maximum depth of 2.2 metres below ground surface (m bgs) or refusal due to the presence of bedrock. The locations of the test pits are presented on Figure 2 in Appendix A.

Between September 14 and 22, 2022, six boreholes (BH-1 to BH-6) and ten auger holes (AH1 to AH10) were advanced at the site by a licensed well driller, under the full-time supervision of EXP staff. The boreholes were drilled to a maximum depth of 4.4 m bgs or refusal due to the presence of bedrock. Bedrock was cored in all six boreholes to a maximum depth of 15.3 m bgs. The auger holes were drilled to a maximum depth of 2.9 m bgs.

On February 9 and 10, 2023, an additional five boreholes (MW23-1 to MW23-5) were advanced at the Phase Two property. Bedrock was air hammered in the five boreholes to a maximum depth of 7.3 m bgs. Each of the boreholes were completed as monitoring wells. The boreholes were advanced using a truck and track-mounted drill rig. Representative soil samples were recovered from the boreholes continuously using split spoon sampling equipment. Nitrile gloves (i.e., one pair per sample) were used during sample handling. No petroleum-based greases or solvents were used during drilling activities.

EXP staff continuously monitored the drilling and test pitting activities to log the stratigraphy observed from the recovered soil cores, to record the depth of soil sample collection, to record total depths of borings, and to record visual or olfactory observations of potential impacts. Field observations are summarized on the borehole logs provided in Appendix B.

The locations and geodetic elevations of the boreholes were established by a survey crew from EXP and are shown in Figure 2 in Appendix A.

4.3 Soil Sampling

The soil sampling during the completion of this Phase Two ESA was undertaken in general accordance with the SAAP presented in Appendix C.

Soil samples were selected for laboratory analysis based on combustible vapour measurements and visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, Paracel Laboratories and Caduceon Laboratories of Ottawa, Ontario. The samples were transported/submitted

within 24 hours of collection to the laboratory following chain of custody protocols for chemical analysis. Soil samples were submitted for laboratory analysis of PHC, VOC, PAH, and/or metals. As part of the 2013 investigation, one soil sample was submitted for analysis of pH.

Soil samples for geologic characterization were collected on a continuous basis in the overburden materials using 5 cm diameter, 61 cm long, split spoon samplers advanced into the subsurface using the drill rig. A split spoon sample was collected approximately every 80 cm as drilling progressed. The split spoon samplers were decontaminated between sampling intervals by EXP staff using a potable water/phosphate-free detergent solution followed by rinses with potable water. EXP staff continuously monitored the drilling activities to log the stratigraphy observed from the recovered soil cores, to record the depth of soil sample collection, to record total depths of borings/excavation, and to record visual or olfactory observations of potential impacts. Field observations are summarized on the borehole logs provided in Appendix D.

4.4 Field Screening Measurements

Soil samples were placed in a sealed Ziploc plastic bag and allowed to reach ambient temperature prior to field screening with a combustible and organic vapour meter calibrated to hexane gas prior to use. The field screening measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These 'headspace' readings provide a real-time indication of the relative concentration of combustible vapours encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of potential impacts and the selection of soil samples for analysis.

Readings of combustible and organic vapour concentrations in the soil samples collected during the drilling investigation were recorded using an RKI Eagle 2, where there was sufficient recovery. This instrument is designed to detect and measure concentrations of combustible gas in the atmosphere to within 5 parts per million by volume (ppmv) from 0 ppmv to 200 ppmv, 10 ppmv increments from 200 ppmv to 1,000 ppmv, 50 ppmv increments from 1,000 ppmv to 10,000 ppmv, and 250 ppmv increments above 10,000 ppmv. It is equipped with two ranges of measurement, reading concentrations in ppmv or in percentage lower explosive limit (% LEL). The RKI Eagle 2 instrument can determine combustible vapour concentrations in the range equivalent to 0 to 11,000 ppmv of hexane.

The instrument was configured to eliminate any response from methane for all sampling conducted at the subject property. Instrument calibration is checked on a daily basis in both the ppmv range and % LEL range using standard gases comprised of known concentrations of hexane (400 ppmv, 40% LEL) in air. If the instrument readings are within ±10% of the standard gas value, then the instrument is deemed to be calibrated, however if the readings are greater than ±10% of the standard gas value then the instrument is re-calibrated prior to use.

The field screening measurements, in parts per million by volume (ppmv), are presented in the test pit logs provided in Appendix D.

4.5 Groundwater: Monitoring Well Installation

All of the boreholes installed in 2023 were completed as monitoring wells. The monitoring wells were installed in accordance with EXP standard practice, and the installation configuration is documented on the respective borehole log. All boreholes were backfilled upon completion of drilling and the installation of the standpipes and monitoring wells.

Monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 (as amended). The monitoring wells consisted of a 38 mm or 52 mm diameter Schedule 40 PVC screen that was no more than 3.0 m long and a 32 mm or 51 mm diameter Schedule 40 PVC riser pipe that was at least 0.8 m long. The annular space around the wells was backfilled with sand to an average height of 0.3 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 m below ground surface. Details of the monitoring well installations are shown on the borehole logs provided in Appendix D.

Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

- The use of well pipe components (e.g., riser pipe and well screens) with factory machined threaded flush coupling joints;
- Construction of wells without the use of glues or adhesives;
- Removing the protective plastic wraps from well components at the time of borehole insertion to prevent contact with the ground and other surfaces; and,
- Cleaning or disposal of drilling equipment between sampling locations.

4.6 Groundwater: Field Measurement and Water Quality Parameters

Field measurement of water quality parameters is described in Section 4.7.

All measurements of petroleum vapours in the monitor riser were made with an RKI Eagle 2 in methane elimination mode. Immediately after removing the well cap, the collection tube of the Eagle was inserted into the riser and the peak instrument reading was recorded. EXP used a Heron water level tape to measure the static water level in each monitoring well. The measuring tape was cleaned with phosphate-free soap and tap water, rinsed with distilled water after each measurement.

4.7 Groundwater: Sampling

All groundwater samples were collected via a low flow sampling technique using a Horiba U-52 multi probe water quality meter. The U-52 probe was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions. These parameters are considered to be stable when three consecutive readings meet the following conditions:

- Turbidity: within 10% for values greater than 5 nephelometric turbidity units (NTU), or three values less than 5 NTU;
- Dissolved oxygen: within 10% for values greater than 0.5 mg/L, or three values less than 0.5 mg/L;
- Conductivity: within 3%;
- Temperature: ± 1°C;
- pH: ± 0.1 unit; and,
- Oxidation reduction potential: ±10 millivolts.

When stabilization occurs, equilibrium between groundwater within a monitor and the surrounding formation water is attained. As such, samples collected when stabilization occurs are considered to be representative of formation water.

The groundwater sampling during the completion of this Phase Two ESA was undertaken in general accordance with the SAAP presented in Appendix C. The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

On February 28, 2023, groundwater samples were collected from eight monitoring wells (MW23-1, MW23-1, MW23-4, MW23-5, BH-1, BH-2, BH-4 and MW13-2) using the low flow sampling method described above. Eight groundwater samples, and one field duplicate were submitted for chemical analysis of PHC, PAH, VOC and/or metals parameters.

4.8 Sediment: Sampling

There are no waterbodies present on the Phase Two property, therefore sediment sampling was not required.

4.9 Analytical Testing

The contracted laboratories selected to perform chemical analysis on all soil and groundwater samples were Paracel and Caduceon. Both laboratories are accredited laboratories under the Standards Council of Canada/Canadian Association for Laboratory Accreditation in accordance with ISO/IEC 17025:1999- General Requirements for the Competence of Testing and Calibration Laboratories.

4.10 Residue Management

The drill cuttings from drilling activities and purged water from groundwater development and sampling were disposed of on the Phase Two property. Fluids from cleaning drilling equipment were disposed of by the driller at their facility.

4.11 Elevation Surveying

An elevation survey was conducted by EXP. The top of casing and ground surface elevation of each monitoring well location was surveyed relative to a geodetic reference. The Universal Transverse Mercator (UTM) coordinates of each monitoring well were also recorded so that their locations could be plotted accurately.

4.12 Quality Assurance and Quality Control Measures

All soil and groundwater samples were placed in coolers containing ice packs prior to and during transportation to the contract laboratories.

A QA/QC program was also implemented to ensure that the analytical results received are accurate and dependable. A QA/QC program is a system of documented checks that validate the reliability of the data. Quality Assurance is a system that ensures that quality control procedures are correctly performed and documented. Quality Control refers to the established procedures observed both in the field and in the laboratory, designed to ensure that the resulting end data meet intended quality objectives. The QA/QC program implemented by EXP incorporated the following components:

- Collecting and analysing field duplicate samples to ensure analytical precision;
- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document field activities; and,
- Using only laboratory-supplied sample containers and following prescribed sample protocols, including using proper preservation techniques, meeting sample hold times, and documenting sample transmission on chains of custody, to ensure the integrity of the samples is maintained.

BV Labs' QA/QC program involved the systematic analysis of control standards for the purpose of optimizing the measuring system as well as establishing system precision and accuracy and included calibration standards, method blanks, reference standards, spiked samples, surrogates and duplicates.

5.0 Review and Evaluation

5.1 Geology

Fill was contacted at surface and underlying asphalt in AH-1 to AH-10 and BH-3, BH-4, and BH-6. The fill extends to depths of 0.3 m bgs to 2.2 m bgs. The fill generally consists of sand with gravel. In BH-3, BH-4 and BH-6 the fill contained construction debris such as concrete and metal fragments.

In AH-1 to AH-10 and BH-3 and BH-4 glacial till was contacted beneath the fill at depths of 0.3 m to 2.2 m. The glacial till contains varying amounts of gravel, sand, silt and clay within the soil matrix as well as cobbles and boulders

Refusal was met in AH-3 to AH-6 and BH-1 to BH-6 at depths ranging from surface to 4.4 m bgs. Washboring and rock coring were used in the 2022 boreholes to confirm bedrock presence. Air hammering was used to install monitoring wells within the bedrock. The bedrock encountered at the site was limestone with shaley partings along bedding planes.

A plan view showing cross-sections is provided as Figure 5 in Appendix A, while the Phase Two property geology is depicted in cross-sections on Figure 6 in Appendix A.

5.2 Groundwater: Elevations and Flow Direction

On February 27, 2023, the monitoring wells were inspected for general physical condition, groundwater depth, the presence of light non-aqueous phase liquid (LNAPL).

Overburden groundwater monitoring and elevation data are provided below.

Table 5.1: Monitoring and Elevation Data

Monitoring Well ID	Grade Elevation (masl)	Top of Casing Elevation (masl)	Screen Depth (mbgs)	Depth to LNAPL (mbgs)	February 27, 2023	
					Depth to Groundwater (mbTOC)	Groundwater Elevation (masl)
MW13-2	56.13	56.10	4.1 to 5.6	N/A	2.52	53.58
MW23-1	56.37	57.31	4.3 to 7.3	N/A	4.67	52.64
MW23-2	54.26	55.05	1.8 to 4.8	N/A	2.13	52.92
MW23-3	54.27	-	1.5 to 4.5	-	N/A*	-
MW23-4	56.30	57.30	1.5 to 4.5	N/A	3.17	54.13
MW23-5	56.96	57.65	3.9 to 6.9	N/A	3.60	54.05
BH-1	55.38	55.81	5.7 to 8.7	N/A	2.63	53.18
BH-2	54.08	54.40	7.2 to 10.2	N/A	1.21	53.19
BH-4	56.10	55.98	12.3 to 15.3	N/A	4.86	51.12
BH-6	55.84	56.64	9.2 to 12.2	-	N/A*	-

Notes: Elevations were measured to a geodetic datum
*Water frozen at ground surface
mbgs – metres below ground surface
masl – metres above sea level
mbTOC – metres below top of monitor casing
N/A – not applicable

Based on the groundwater elevations, a groundwater contour plan was prepared. The bedrock groundwater flow direction was determined to be to the northwest. The groundwater contour plan is provided as Figure 4 in Appendix A.

5.3 Groundwater: Hydraulic Gradients

Horizontal hydraulic gradients were estimated for the groundwater flow components identified in the overburden aquifer based on the January 2023 groundwater elevations.

The horizontal hydraulic gradient is calculated across the using the following equation:

$$i = \Delta h/\Delta s$$

Where,

i = horizontal hydraulic gradient;
Δh (m) = groundwater elevation difference; and,
Δs (m) = separation distance.

The horizontal hydraulic gradient was calculated to be 0.095 m/m.

On March 3, 2023 rising head tests were conducted on three of the monitoring wells installed in 2023. The rising head test requires that the static water level be measured in each monitoring well prior to the removal of groundwater. Groundwater is removed from the monitoring well using a bailer. After the water level has been sufficiently lowered, an interface probe is lowered into the monitor as quickly as possible to measure the new water level. The time at which the new water level is measured is noted as time equal zero. Water level readings are subsequently taken at frequent intervals. Both the water levels and the time they were taken are recorded.

The frequency of the time measurement is determined by the rate the water level recovers to the static water level. Measurements are taken until at least 70% recovery has been achieved or, in cases where recovery is extremely slow, until it is deemed that a sufficient amount of time has elapsed. Using the Hvorslev model, the hydraulic conductivity for the monitoring well was calculated.

All water level measurements were made with a Heron oil/water interface probe. Both the probe and the measuring tape that come into contact with liquids within a monitor are cleaned with phosphate-free soap and tap water, rinsed with distilled water and then finally rinsed with methanol after each hydraulic conductivity test is concluded.

Table 5.2: Rising Head Tests

Monitoring Well ID/ Installation ID	Horizon	Screen Depth (mbgs)	Initial Static Water Level (mbToC)	Water Level after Purging (mbToC)	Recovery to Static after Elapsed time (%)	Hydraulic Conductivity (cm/s)
MW23-2	Bedrock	1.8 to 4.8	2.37	5.16	77	7.16×10^{-7}
MW23-4	Bedrock	1.5 to 4.5	3.20	5.25	96	1.88×10^{-6}
MW23-5	Bedrock	3.9 to 6.9	3.91	6.94	58	2.99×10^{-7}

Notes: mbTOC – metres below top of monitor casing

The data and the calculations for the hydraulic conductivity testing are provided in Appendix G.

5.4 Soil: Field Screening

The methodology for the collection of soil vapour concentration measurements is described in Section 4.4.

Petroleum vapours ranged from non-detectable to 20 ppm in samples collected from the test pits. Field screening data is presented in the test pit logs in Appendix D.

5.5 Soil: Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes and from the north wall of the utility trench excavation. The selection of representative "worst case" soil samples from each borehole was based on field visual or olfactory evidence of impacts and/or presence of potential water bearing zones.

As part of the 2013 investigation, six soil samples and one duplicate sample were submitted for analysis of BTEX, PHC, and metals. As part of the current investigation, thirty soil samples and three duplicate samples were submitted for analysis of BTEX, PHC, and metals.

In 2013, three soil samples exceeded the Table 3 SCS for barium, lead, and/or zinc. One soil sample, and it's duplicate exceeded the Table 3 SCS for PHC fraction F3.

In 2022, two of the auger hole samples (AH-1 and AH-2) exceeded the Table 3 SCS for copper, lead, and/or mercury; and one auger hole sample (plus it's duplicate) exceeded for electrical conductivity. Two of the auger hole samples (AH-3 and AH-4) also exceeded the Table 3 SCS for PHC fraction F2.

Four of the samples collected from the test pits (TP-3, TP-4, TP-5) exceeded the Table 3 SCS for conductivity; and two soil samples and a duplicate sample (TP-4, TP-7 and duplicate) exceeded the Table 3 SCS for PHC fraction F3.

One sample collected from the boreholes (BH-6) exceeded the Table 3 SCS for conductivity; and one soil samples from BH1 exceeded the Table 3 SCS for PHC fraction F2 and F3.

The soil results are provided in Tables 1 and 2 in Appendix E. They are shown in plan view on Figures 7 and 8 and on cross-sections on Figures 9 and 10 in Appendix A.

Copies of the laboratory Certificates of Analysis are provided in Appendix F.

5.6 Groundwater: Quality

All groundwater samples were collected via a low flow sampling technique. EXP monitored several water quality parameters (such as water level, temperature, dissolved oxygen, conductivity, salinity, pH, oxygen reduction potential and turbidity) in order to ensure that the samples collected were representative of actual groundwater conditions.

Following their installation, the monitoring wells were developed by purging water with an inertial pump and foot valve until it became clear.

One of the monitoring wells installed in 2013 (MW13-2) and seven of the new monitoring wells (BH-1, BH-2, BH-4, MW23-1, MW23-2, MW23-4, and MW23-5) were sampled on February 27, 2023. Eight groundwater samples and one duplicate sample were submitted for chemical analysis of PHC, PAH, VOC and metals parameters. There were no exceedances of the MECP 3 SCS for any of the parameters analyzed.

The analytical results are included in Tables 3 to 5 in Appendix E and are shown in plan view on Figures 11 to 13 and on cross-sections on Figures 14 to 16 in Appendix A.

Copies of the laboratory Certificates of Analysis are provided in Appendix F.

5.6.1 Chemical Transformation and Contaminant Sources

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as

well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

All of the exceedances in soil were limited to metals parameters and PHC fractions F2 and F3. There were no groundwater exceedances of the Table 3 SCS for any of the parameters analyzed.

Since there are no volatile COCs on the Phase Two Property, soil vapour migration is not considered an issue. Chemical transformations of contaminants in soil are not a significant concern at the Phase Two property.

Cross-sections that depict the geological, hydrogeological, and groundwater chemical data for the Phase Two property are provided as Figure 6 in Appendix A.

5.6.2 Evidence of Non-Aqueous Phase Liquid

Inspection of the groundwater monitoring wells did not indicate the presence of non-aqueous phase liquid (NAPL).

5.6.3 Maximum Concentrations

Contaminants that exceeded the applicable Table 3 residential standards included:

Soil: PHC F2 and F3, copper, lead, mercury, and conductivity

Groundwater: none

Maximum soil and groundwater concentrations are provided in Tables 6 and 7 in Appendix E.

5.7 Sediment: Quality

There are no water bodies on the Phase Two property, therefore sediment sampling was not required.

5.8 Quality Assurance and Quality Control Results

Quality assurance and quality control measures were taken during the field activities to meet the objectives of the sampling and quality assurance plan to collect unbiased and representative samples to characterize existing conditions in the fill materials and groundwater at the site. QA/QC measures, included:

- Collection and analysis of blind duplicate soil and groundwater samples to ensure sample collection precision;
- Analysis of a groundwater field blank for all parameters that were analysed to assess potential impact during sampling;
- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document on-site activities; and,
- Using only laboratory supplied sample containers and following prescribed sample protocols, including proper preservation, meeting sample hold times, proper chain of custody documentation, to ensure integrity of the samples.

The analytical laboratory's QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificates

of Analysis prepared by Caduceon. The QA/QC results are reported as percent recoveries for matrix spikes, spiked blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks.

Review of the laboratory QA/QC results reported indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. For QA/QC purposes, the analytical sample results are quantitatively evaluated by calculating the relative percent difference (RPD) between the samples and their duplicates. To accurately calculate a statistically valid RPD, the concentration of the analytes found in both the original and duplicate sample must be greater than five times the reporting detection limit (RDL).

The results of the RPD calculations are provided in Appendix E in Tables 8 to 12. All of the RPD for soil and groundwater were either not calculable or within the applicable alert limits.

5.9 Phase Two Conceptual Site Model

A Conceptual Site Model (CSM) provides a narrative, graphical and tabulated description integrating information related to the Phase Two property's geologic and hydrogeological conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of contaminants of concern, contaminant fate and transport, and potential exposure pathways.

5.9.1 Introduction

EXP Services Inc. (EXP) was retained by 2705460 Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) for the property located at 112 Montreal Road in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was as a motel, which is defined in O.Reg 153/04 as a commercial land use. It is proposed that residential buildings be constructed on the Phase Two property. As the proposed land use is more sensitive than the previous land use, a Record of Site Condition (RSC) is required.

5.9.2 Physical Site Description

The Phase Two property is located on the south side of Montreal Road, west of the Vanier Parkway, as shown on Figure 1 in Appendix A. The Phase Two property is irregular in shape with an area of 0.96 hectares. The Phase Two property is legally described as Lot 5, Part Lot 6 and 7, Block 2, Plan 29; Part Lots 40, 41 and 88, Plan 49, Vanier/Gloucester. The property identification number (PIN) is 042370019.

At the time of this investigation, the Phase Two property was vacant. The east part of the Phase Two property had been excavated to bedrock surface, and ponded water was present. The west part of the Phase Two property was paved. Historically, the site was operated as a motel and was occupied by seven buildings including a laundry building, restaurant, and what was formerly a detached residence. All of the site buildings were demolished and removed in 2019. The Phase Two property site location and site layout are shown on Figure 1 and 2 in Appendix A.

The Phase Two property topography is relatively flat. The regional topography slopes downwards to the west. The local groundwater flow direction is anticipated to be west/northwest towards the Rideau River.

Refer to Table 5.4 for the Site identification information.

Table 5.3: Site Identification Details

Civic Address	112 Montreal Road, Ottawa, Ontario
Current Land Use	Vacant
Proposed Future Land Use	Residential
Property Identification Number	042370019
UTM Coordinates	Zone 18, 447090 m E and 503121 m N
Site Area	0.96 hectares
Property Owner	2705460 Ontario Inc.

The Phase One Conceptual Site Model is provided as Figure 3.

The Phase Two property and study area is serviced with potable water by the City of Ottawa through its water distribution system. Thus, in accordance with Section 35 of Ontario Regulation 153/04, potable water standards do not apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance.

The Phase Two property is not a shallow soil property as defined in Section 43.1 of the regulation. It does not include all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body.

5.9.3 Geological and Hydrogeological

Under any fill, the natural overburden deposits in the area is glacial till that would consist of clay, silt, sand, and gravel. Bedrock geology maps indicated limestone of the Eastview Formation. Based on previous investigations, bedrock is present between 2.3 and 3.3 metres below ground surface.

The Phase Two property topography is relatively flat. The regional topography slopes downwards to the west. The local

A plan view showing cross-sections is provided as Figure 5, while the Phase Two property geology is depicted in cross-sections on Figure 6.

A summary of factors that apply to the Phase Two property is provided in Table 5.5.

Table 5.4: Site Characteristics

Characteristic	Description
Minimum Depth to Bedrock	55.3 masl (0 m bgs)*
Minimum Depth to Groundwater	1.21 m bgs (February 27, 2023)
Shallow Soil Property	No, bedrock is greater than 2.0 mbgs*
Proximity to water body or ANSI	300 m west – Rideau River
Soil pH	7.22

Soil Texture	Coarse
Current Property Use	Vacant, formerly commercial (motel)
Future Property Use	Residential
Proposed Future Building	Residential/Commercial
Areas Containing Suspected Fill	Entire Phase Two property

*The east part of the property was excavated to bedrock surface prior to the geotechnical investigation. The 2013 investigation identified minimum depth to bedrock was 2.1 metres below ground surface.

5.9.4 Utilities and Impediments

The Phase Two property is currently vacant. The former buildings (and any future development) were serviced by municipal water and sewer, natural gas and underground hydro. Surrounding properties are supplied by municipal water provided by the City of Ottawa. The source of municipal water is the Ottawa River.

5.9.5 Potentially Contaminating Activities

The following PCAs were identified on the Phase One property:

- PCA #30 – Importation of fill material of unknown quality (impacted fill material identified in previous investigations)

By definition, a PCA present on the Phase One property result in an APEC.

The following PCAs were identified in the Phase One study area:

- PCA #10 – Commercial autobody shop (former repair garage located at 137 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage located at 164 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage located at 42 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage at 41 Montreal Road)
- PCA #10 – Commercial autobody shop (former repair garage at 164 Jeanne Mance Street)
- PCA #10 – Commercial autobody shop (former repair garage at 299 Montgomery Street)
- PCA #10 – Commercial autobody shop (repair garage at 271 Durocher Street)
- PCA #10 – Commercial autobody shop (former repair garage at 258 Durocher Street)
- PCA #10 – Commercial autobody shop (former repair garage at 52 McArthur Avenue)
- PCA #10 – Commercial autobody shop (former repair garage at 373 Marguerite Avenue)
- PCA #12 – Concrete, cement and lime manufacturing (former concrete block manufacturer at 154-158 McArthur Road)
- PCA #12 – Concrete, cement and lime manufacturing (former concrete pipe manufacturer at 2 Mark Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 120 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former oil warehouse at 296 Kendall Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 138 Montreal Road)

- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 42 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (UST formerly present at grocery warehouse at 1625 Vanier Parkway)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 164 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 80-82 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 287 Savard Street)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 4 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (gas station at 5 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former bus depot with USTs at 150 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 137 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 350 Montgomery Street)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former gas station at 201 Montreal Road)
- PCA #28 – Gasoline and associated products storage in fixed tanks (UST formerly present at transport company at 100 McArthur Avenue)
- PCA #28 – Gasoline and associated products storage in fixed tanks (former oil warehouse at 155 McArthur Road)
- PCA #34 – Metal fabrication (former brass foundry at 110-120 McArthur Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 90 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 11 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 21 Montreal Road)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 52 McArthur Avenue)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 196 Jean Mance Street)
- PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (former dry cleaner at 201 Montreal Road)
- PCA #46 – Rail yards, tracks, and spurs (former CP rail line east of the site)
- PCA #59 – Bulk storage of treated and preserved wood products (former lumber yard at 3 Selkirk Street)

Due to the distance and cross gradient location from the Phase One property, the majority of the off-site PCAs were determined not to result in APECs. The off-site PCAs that were determined to result in APECs on the Phase One property include PCA #28 (gas station at 120 Montreal Road, former gas station at 138 Montreal Road, former oil warehouse at 296 Kendall Avenue), PCA #37 (former dry cleaner at 90 Montreal Road), and PCA #46 (former CP rial line east of the Phase One property).

5.9.6 Areas of Potential Environmental Concern/Potential Contaminates of Concern

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. The following APEC were identified on the Phase Two property, as shown on Figure 2 and Table 5.6 below:

Table 5.5: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
1. Impacted fill material on the site	Entire Phase Two property	PCA #30 – Importation of fill material of unknown quality	On-site	Benzene, toluene, ethylbenzene, xylene (BTEX), and petroleum hydrocarbons (PHC), metals	Soil
2. Gas station at 120 Montreal Road	Northeast corner of Phase Two property	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX, PHC	Groundwater
3. Former dry cleaner at 90 Montreal Road	Northwest corner of Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)	Off-site	Volatile organic compounds (VOC)	Groundwater
4. Former oil warehouse at 296 Kendall Avenue	Area along east property line	PCA #28 – Gasoline and associated products in fixed tanks	Off-site	BTEX, PHC	Groundwater
5. Former gas station at 138 Montreal Road	Area along east property line	PCA #28 – Gasoline and associated products storage in fixed tanks	Off-site	BTEX, PHC	Groundwater
6. Former rail line east of the site	East part of Phase Two property	PCA #46 – Rail yards, tracks, and spurs	Off-site	PHC, polycyclic aromatic hydrocarbons (PAH), metals	Groundwater

5.9.7 Investigation

The site investigative activities consisted of excavating test pits, advancing augar holes, and drilling boreholes to facilitate the collection of soil samples for visual inspection and chemical analysis. The boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

Prior to the commencement of drilling, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

In 2013 and 2014, EXP completed a preliminary geotechnical investigation and a Phase II Environmental Site Assessment at the Phase Two property. At that time, the Phase Two property was occupied by several low-rise buildings (which have since been demolished). The preliminary geotechnical Investigation consisted of drilling nine boreholes across the Phase Two property and revealed that below 0.2 m to 2.7 m of fill, compact to very dense silty sand till was contacted and extended to depths of 2.1 m to 3.3 m depth. Limestone bedrock underlies the till and extends to the entire depth investigated, i.e., to 2.3

and 3.3 m. The groundwater table at the Site was established at 2.4 m to 4.2 m depth. The results of the Phase II ESA showed that petroleum parameters were either non-detectable or below the Ministry of the Environment, Conservation and Parks (MECP) Table 3 Site Condition Standards (SCS) for residential/parkland/institutional property use, with the exception of some exceedances in some of the fill and till samples in some of the boreholes.

On August 31, 2022, nine (9) test pits (TP1 to TP9) were excavated at the Site using a rubber-tire excavator, under the full-time supervision of EXP staff. The test pits were excavated to a maximum depth of 2.2 metres below ground surface (m bgs) or refusal due to the presence of bedrock. The locations of the test pits are presented on Figure 2 in Appendix A.

Between September 14 and 22, 2022, six boreholes (BH-1 to BH-6) and ten auger holes (AH1 to AH10) were advanced at the site by a licensed well driller, under the full-time supervision of EXP staff. The boreholes were drilled to a maximum depth of 4.4 m bgs or refusal due to the presence of bedrock. Bedrock was cored in all six boreholes to a maximum depth of 15.3 m bgs. The auger holes were drilled to a maximum depth of 2.9 m bgs.

On February 9 and 10, 2023, an additional five boreholes (MW23-1 to MW23-5) were advanced at the Phase Two property. Bedrock was cored in all of the boreholes, to a maximum depth of 7.3 m bgs. All five of the boreholes were completed as monitoring wells.

5.9.8 Soil Sampling

Soil samples were selected for laboratory analysis based on combustible vapour measurements and visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory.

As part of the 2013 investigation, six soil samples and one duplicate sample were submitted for analysis of BTEX, PHC, and metals. As part of the current investigation, forty-nine soil samples and five duplicate samples were submitted for analysis of BTEX, PHC, and metals.

In 2013, three soil samples exceeded the Table 3 SCS for barium, lead, and/or zinc. One soil sample, and it's duplicate exceeded the Table 3 SCS for PHC fraction F3.

In 2022, two of the auger hole samples (AH-1 and AH-2) exceeded the Table 3 SCS for copper, lead, and/or mercury; and one auger hole samples (plus it's duplicate) exceeded for conductivity. Two of the auger hole samples (AH-3 and AH-4) also exceeded the Table 3 SCS for PHC fraction F2.

Four of the samples collected from the test pits (TP-3, TP-4, TP-5) exceeded the Table 3 SCS for conductivity; and two soil samples and a duplicate sample (TP-4, TP-7 and duplicate) exceeded the Table 3 SCS for PHC fraction F3.

One sample collected from the boreholes (BH-6) exceeded the Table 3 SCS for conductivity; and one soil samples from BH1 exceeded the Table 3 SCS for PHC fraction F2 and F3.

The soil results are provided in Tables 1 and 2 in Appendix E. They are shown in plan view on Figures 7 and 8 and on cross-sections on Figures 9 and 10 in Appendix A.

5.9.9 Groundwater Sampling

All groundwater samples were collected via a low flow sampling technique using a multi probe water quality meter. The water quality meter was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were

monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions.

The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

One of the monitoring wells installed in 2013 (MW13-2), and seven of the new monitoring wells (BH-1, BH-2, BH-4, MW23-1, MW23-2, MW23-4, and MW23-5) were sampled on February 27, 2023. Eight groundwater samples and one duplicate sample were submitted for chemical analysis of PHC, PAH, VOC and metals parameters. There were no exceedances of the MECP 3 SCS for any of the parameters analyzed.

The analytical results are included in Tables 3 to 5 in Appendix E and are shown in plan view on Figures 11 to 13 and on cross-sections on Figures 14 to 16 in Appendix A.

5.9.10 Contaminants of Concern

Contaminants that exceeded the applicable Table 3 residential standards included:

Soil: PHC F2 and F3, copper, lead, mercury, and conductivity

Groundwater: none

Maximum soil and groundwater concentrations are provided in Tables 6 and 7 in Appendix E.

5.9.11 Contaminant Fate and Transport

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

All of the exceedances in soil were limited to metals parameters and PHC fractions F2 and F3. There were no groundwater exceedances of the Table 3 SCS for any of the parameters analyzed.

Since there are no volatile COCs on the Phase Two Property, soil vapour migration is not considered an issue. Chemical transformations of contaminants in soil are not a significant concern at the Phase Two property.

A plan view showing cross-sections is provided as Figure 5 in Appendix A, while the Phase Two property geology is depicted in cross-sections on Figure 6 in Appendix A.

6.0 Conclusions

During the current investigation, the soil and groundwater quality at the Phase Two property were investigated. Results were compared to Regulation 153/04 Table 3 SCS for residential/parkland/institutional property use and coarse textured soils in a non-potable groundwater condition.

Soil samples exceeded the Table 3 SCS for barium, copper, lead, mercury, zinc, conductivity, and/or PHC. All of the exceedances in soil were limited to metals parameters and PHC fractions F2 and F3. There were no groundwater exceedances of the Table 3 SCS for any of the parameters analyzed. Since there are no volatile COCs on the Phase Two Property, soil vapour migration is not considered an issue. Chemical transformations of contaminants in soil are not a significant concern at the Phase Two property.

It is EXP's opinion that some of the PCA that were identified in the Phase One ESA have adversely affected the property. It is recommended that the impacted soil at the Phase Two be removed prior to re-development.

The Qualified Person can confirm that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.

Leah Wells, P.Eng.
Environmental Engineer
Earth and Environment

Mark McCalla, P.Geo.
Team Lead/Senior Project Manager
Earth and Environment

7.0 References

This study was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives. Specific reference is made to the following documents.

- EXP Services Inc., *Phase One Environmental Site Assessment, 112 Montreal Road, Ottawa, Ontario,* April 4, 2023.
- Ontario Ministry of the Environment, Conservation and Parks, *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996.
- Ontario Ministry of the Environment, Conservation and Parks, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04,* June 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,* July 1, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Management of Excess Soil – A Guide for Best Management Practices,* January 2014.
- Ontario Regulation 153/04, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 347, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 903, made under the *Water Resources Act*, as amended.

8.0 General Limitations

Basis of Report

This report ("Report") is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or 2705460 Ontario Inc. ("the Client") has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Reliance on Information Provided

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to exp. If new information about the environmental conditions at the Site is found, the information should be provided to EXP so that it can be reviewed and revisions to the conclusions and/or recommendations can be made, if warranted.

Standard of Care

The Report has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

Complete Report

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.

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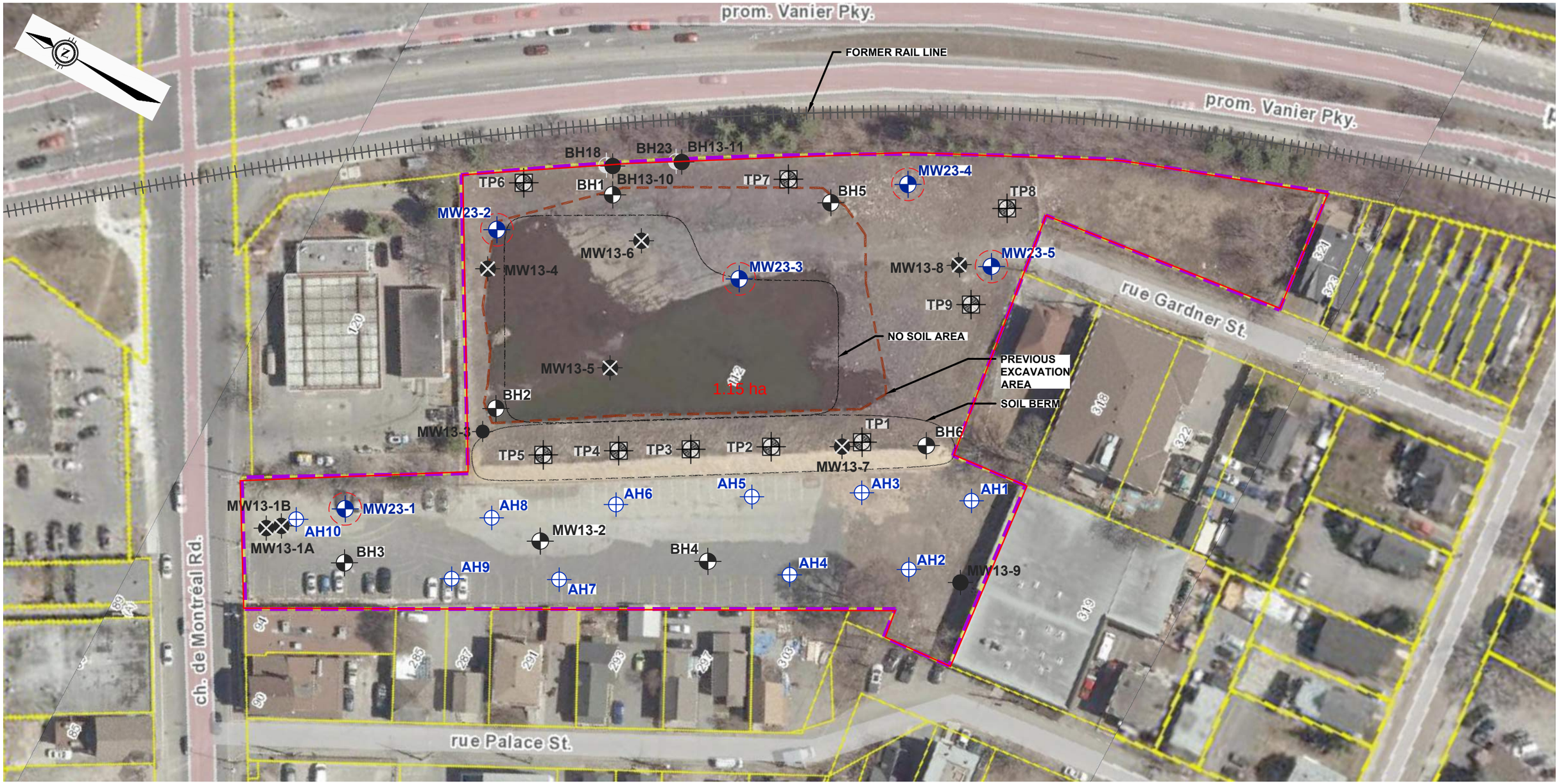
The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

Report Format

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

Appendix A: Figures



LEGEND

PROPERTY BOUNDARY	
BH1	BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
TP4	TEST PIT NO. & LOCATION (*EXP*, 2022)
MW23-1	BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
MW13-3	MONITORING WELL NO. & LOCATION (*EXP*, 2013)
MW13-1A	DECOMMISSIONED MONITORING WELL NO. & LOCATION (*EXP*, 2013)
AH8	AUGER HOLE

0 5m 10m 30m

HORIZONTAL 1:750

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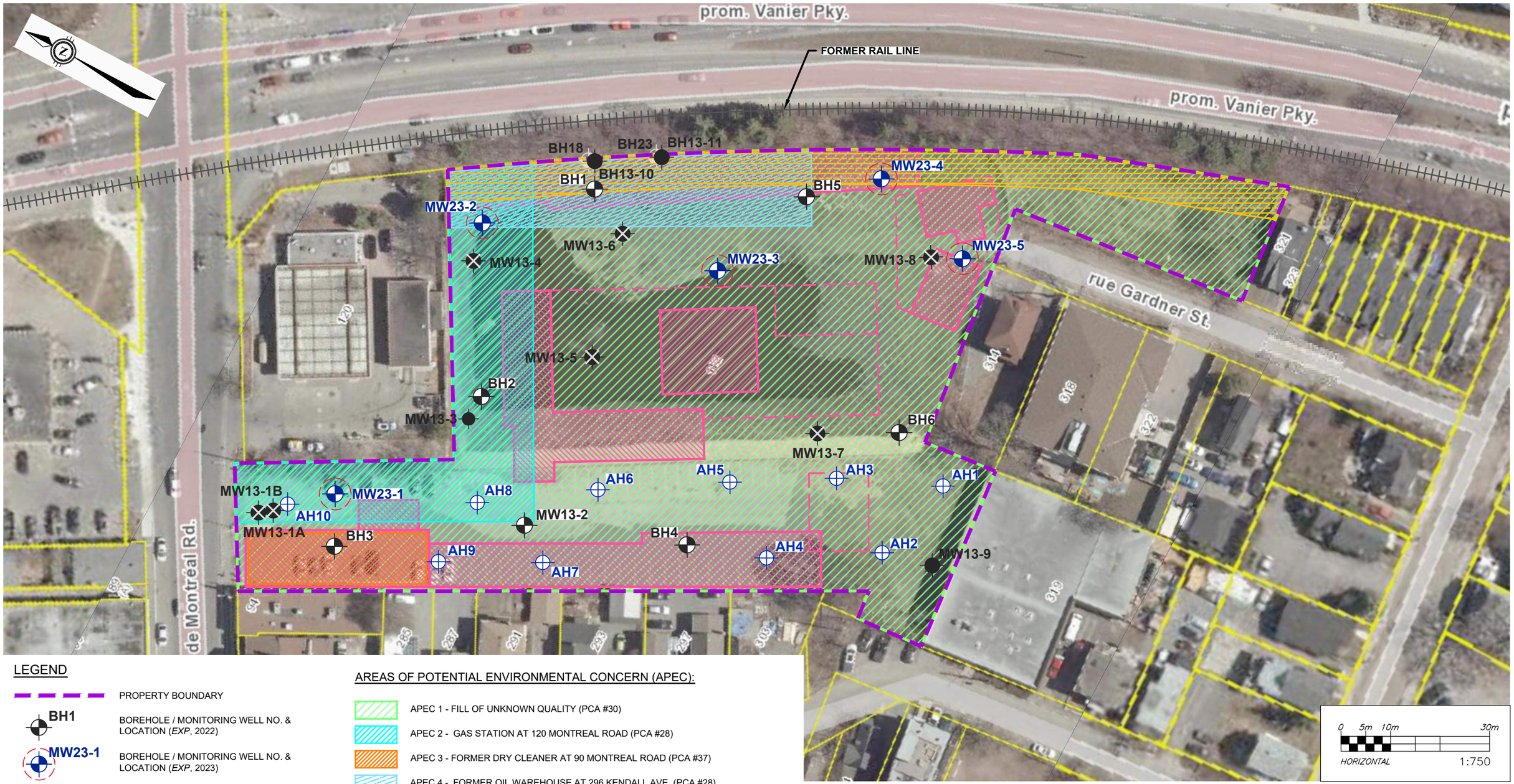
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:750
DRAWN BY: AS	TITLE: BOREHOLE/MONITORING WELL LOCATION PLAN 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 2



LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-3 — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- MW13-1A — DECOMMISSIONED MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- AH8 — AUGER HOLE
- FORMER BUILDINGS (*Removed 2017-2018*)
- FORMER BUILDINGS (*Removed ~70-90ties*)

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

- APEC 1 - FILL OF UNKNOWN QUALITY (PCA #30)
- APEC 2 - GAS STATION AT 120 MONTREAL ROAD (PCA #28)
- APEC 3 - FORMER DRY CLEANER AT 90 MONTREAL ROAD (PCA #37)
- APEC 4 - FORMER OIL WAREHOUSE AT 296 KENDALL AVE. (PCA #28)
- APEC 5 - FORMER GAS STATION AT 138 MONTREAL RD. (PCA #28)
- APEC 6 - FORMER RAIL LINE IN THE VANIER PARKWAY ROW (PCA #46)

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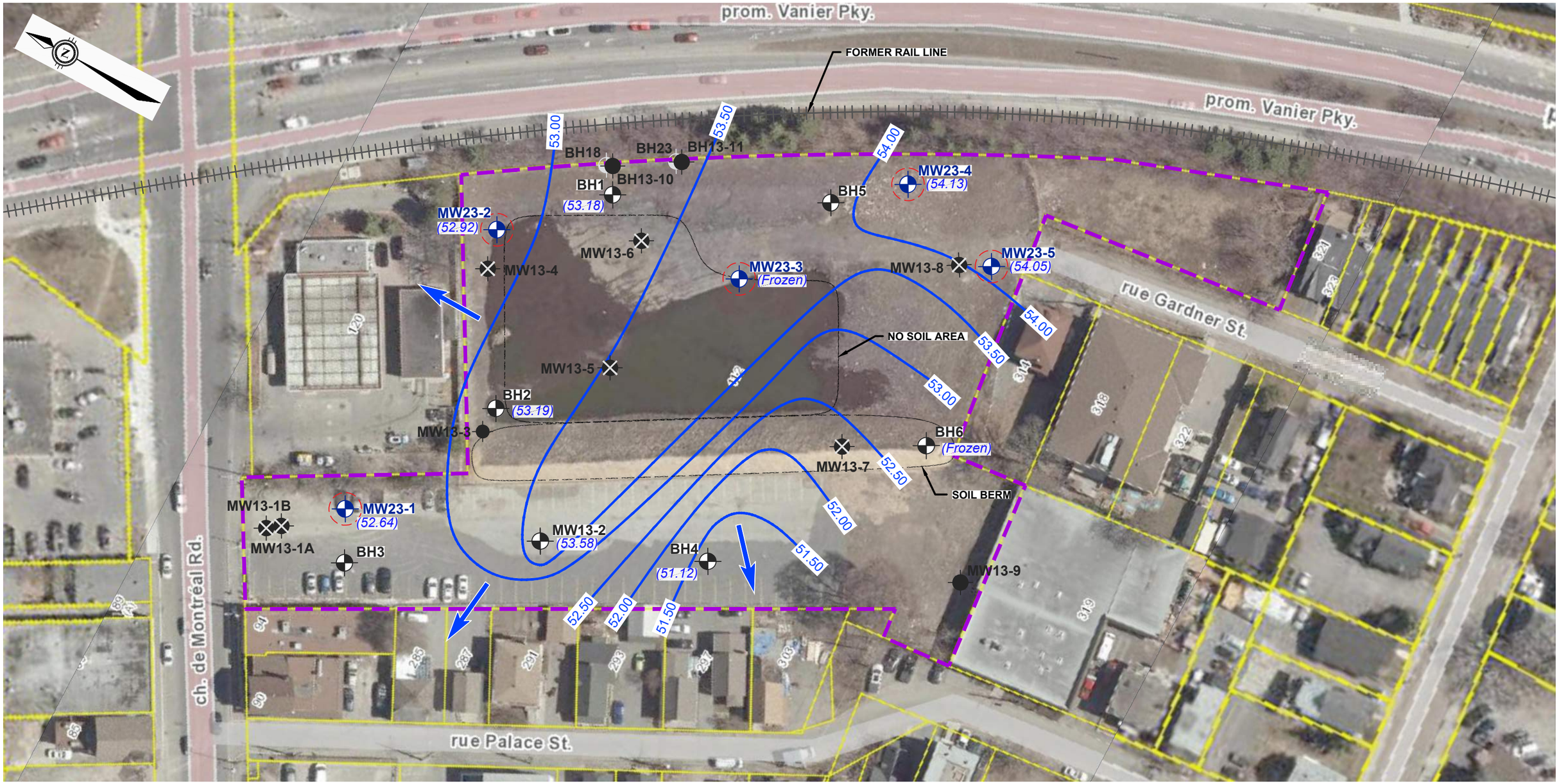
DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:750
DRAWN BY: AS	TITLE: CONCEPTUAL SITE MODEL 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 3



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- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-3 — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- MW13-1A — DECOMMISSIONED MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- (53.18) — GROUNDWATER ELEVATION (m) TAKEN ON FEBRUARY 27, 2023
- INFERRED GROUNDWATER FLOW DIRECTION
- 53.50 — INFERRED GROUNDWATER CONTOUR (metres)

0 5m 10m 30m
HORIZONTAL 1:750

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DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:750
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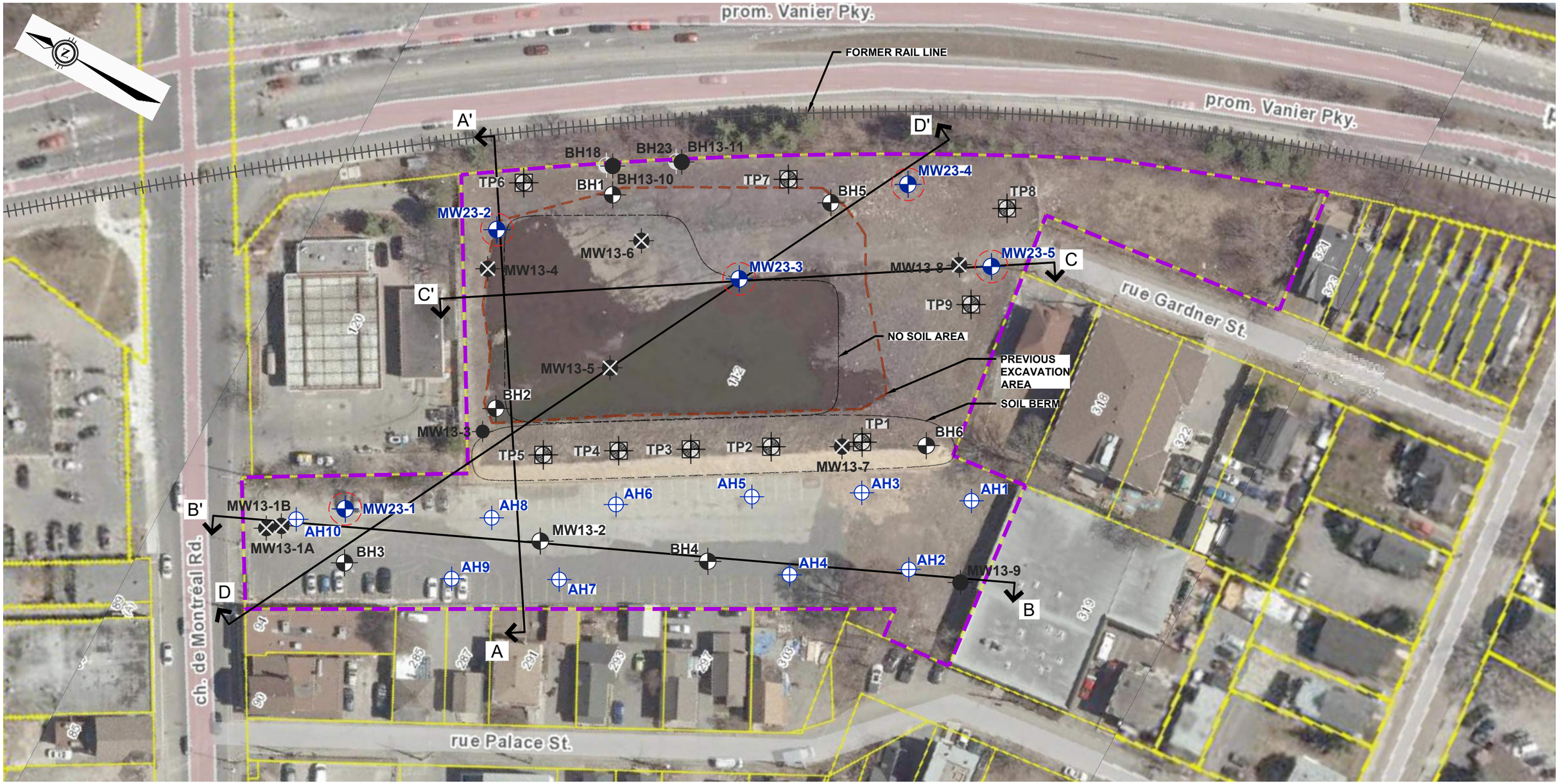

LEGEND

PROPERTY BOUNDARY	
BH1	BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
TP4	TEST PIT NO. & LOCATION (*EXP*, 2022)
MW23-1	BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
MW13-3	MONITORING WELL NO. & LOCATION (*EXP*, 2013)
A A'	SECTION MARK
MW13-1A	DECOMMISSIONED MONITORING WELL NO. & LOCATION (*EXP*, 2013)
AH8	AUGER HOLE

0 5m 10m 30m

HORIZONTAL 1:750

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DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
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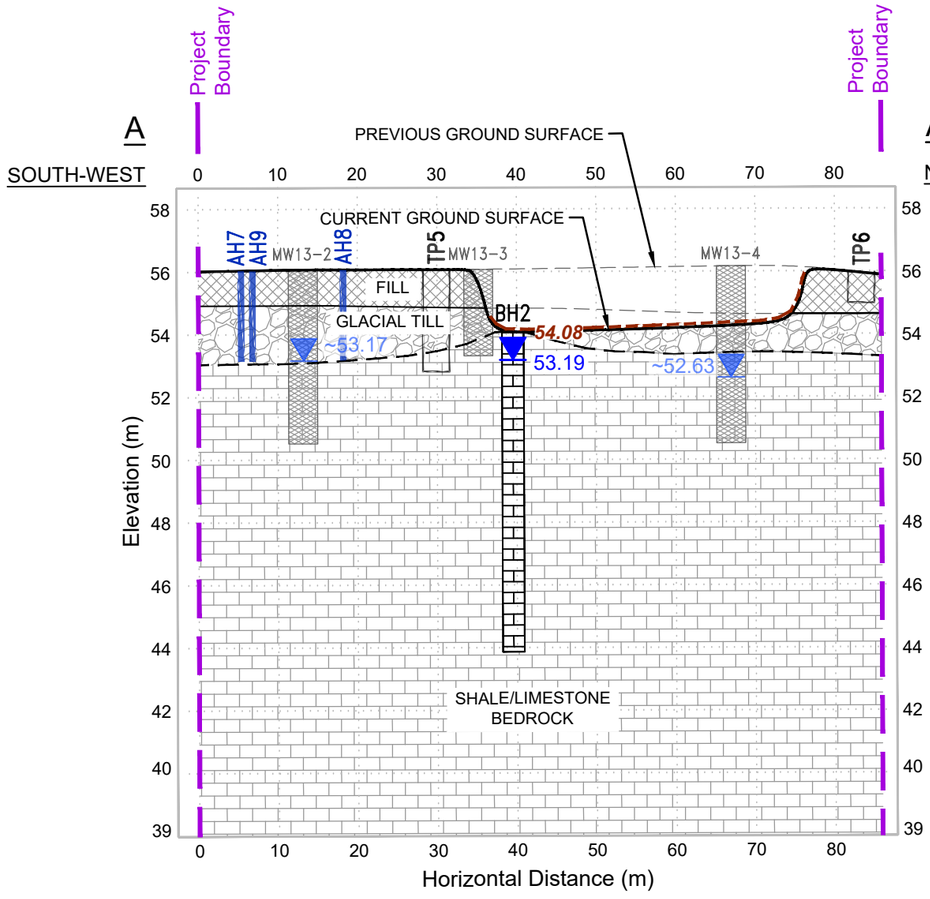
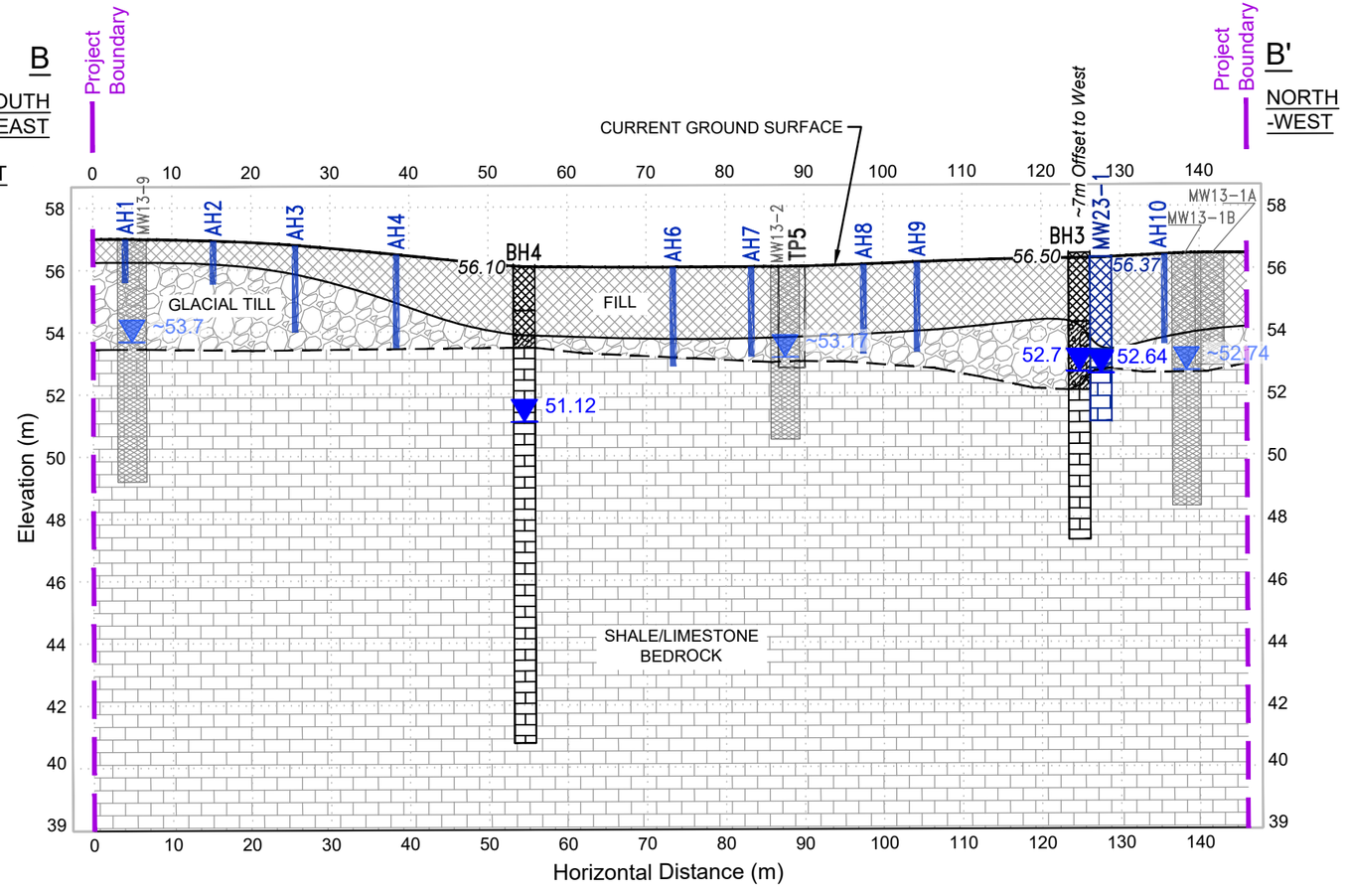
DRAWN BY: AS	TITLE: CROSS SECTION PLAN 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 5



CROSS-SECTION A-A'



CROSS-SECTION B-B'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- 53.3 ▼ RECORDED GROUNDWATER LEVEL (FEB., 2023)
- ~53.17 ▼ GROUNDWATER LEVEL (2013)
- PROPERTY BOUNDARY

0 5m 10m 30m
HORIZONTAL 1:750

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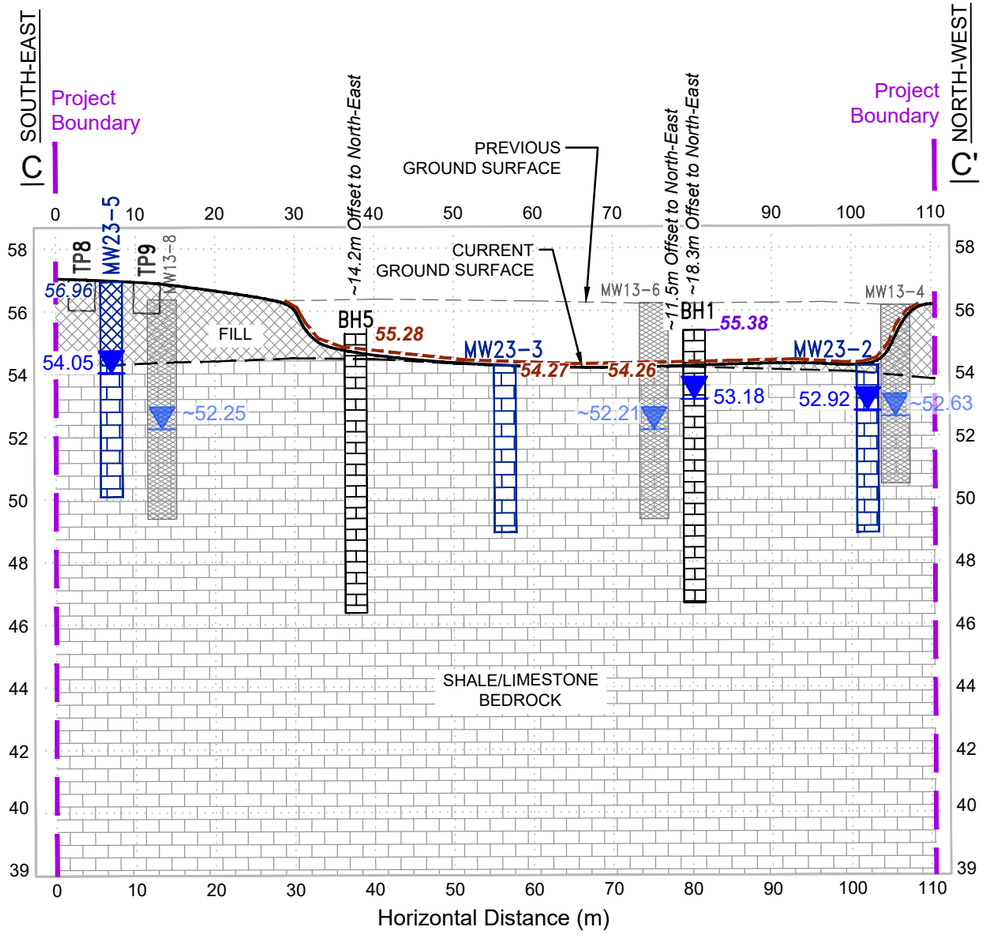
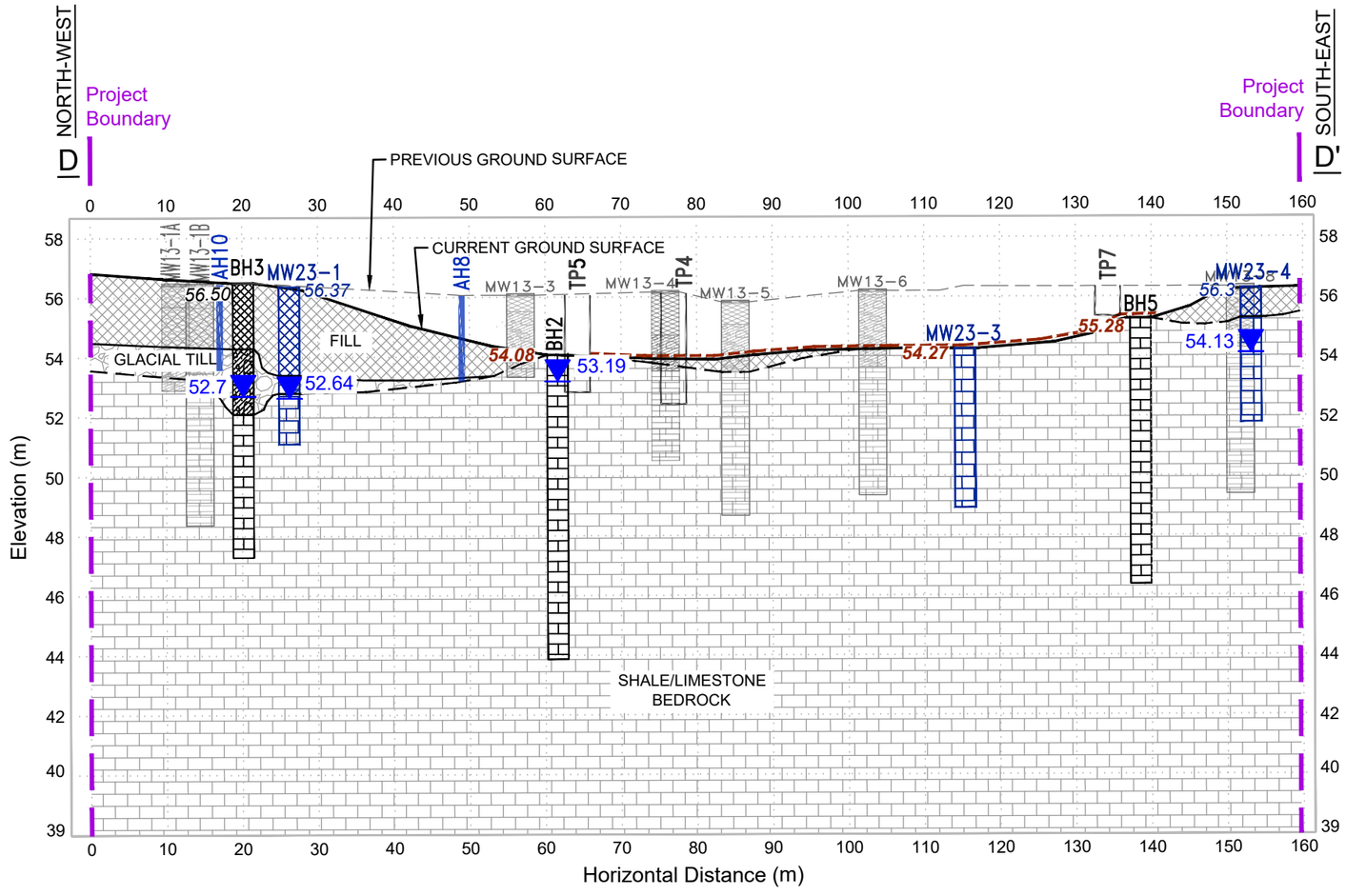
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:750
DRAWN BY: AS	TITLE: CROSS-SECTIONS A-A', B-B' 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 6A



CROSS-SECTION C-C'



CROSS-SECTION D-D'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- 53.3 RECORDED GROUNDWATER LEVEL (FEB., 2023)
- ~53.17 GROUNDWATER LEVEL (2013)
- PROPERTY BOUNDARY

0 5m 10m 30m
HORIZONTAL 1:750

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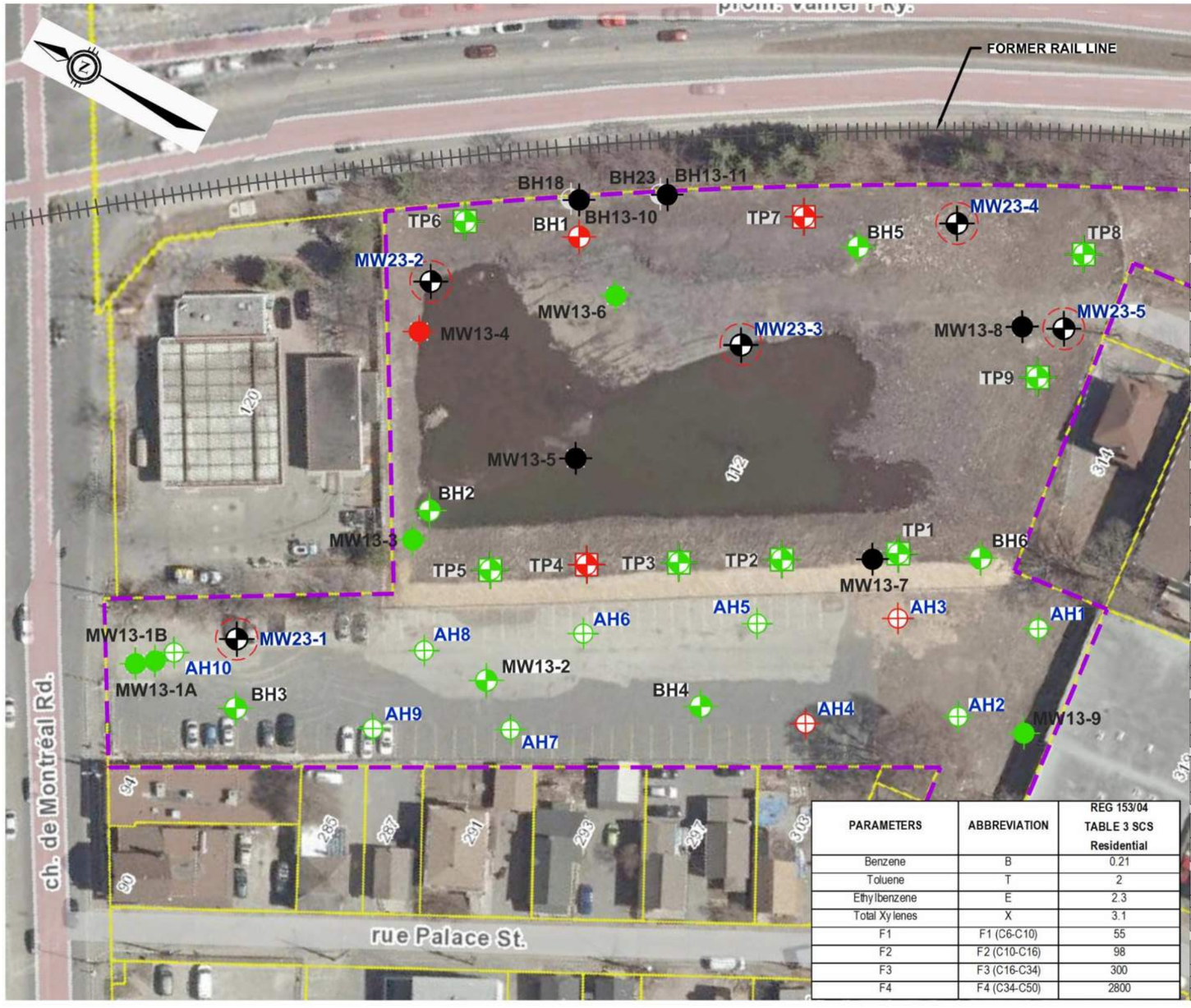
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:750
DRAWN BY: AS	TITLE: CROSS-SECTIONS C-C', D-D' 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 6B



MW1	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS4	1.8 to 2.4	<0.02	<0.2	<0.05	<0.05	<7	<4	81	10

MW2	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS5	2.4 to 3.0	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW3	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW4	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	364	624
DUP		<0.02	<0.2	<0.05	<0.05	<7	14	536	1090

MW6B	Depth (mbgs)	8-Nov-13							
		B	T	E	X	F1	F2	F3	F4
SS1	0.15 to 0.75	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW9	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS5	1.8 to 2.4	<0.02	<0.2	<0.05	0.08	17	<4	<8	<6

AH1	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	10	45	16
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	19	57	109	17

AH2	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	19	183	154
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	13	78	126	<10

AH-3	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	24	75	<10
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	15	111	152	18

AH-4	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	0.37	50	45	58	20
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	36	111	104	10

AH-5	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	31	93	14
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	11	81	131	17

AH-6	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	56	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	28	71	15

AH-7	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	13	20	47	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	41	66	11

AH-8	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	53	18
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	33	139	680

AH-9	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	33	141	1240
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	17	32	139	680
DUP2		<0.02	<0.2	<0.05	<0.03	14	30	114	650

AH-10	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	<5	<10	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	34	63	15
DUP1		<0.02	<0.2	<0.05	<0.03	<10	<5	11	<10

TP1	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP1-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	15	13
TP1-2.5	2.5	<0.02	<0.2	<0.05	<0.03	<10	<5	16	<10
TP1-4.5	4.5	<0.02	<0.2	<0.05	<0.03	<10	<5	22	<10

TP2	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP2-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	28	12
TP2-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	9	32	<10
TP2-3.0	3.0	<0.02	<0.2	<0.05	<0.03	<10	12	34	<10
DUP1		<0.02	<0.2	<0.05	<0.03	<10	5	152	2150
TP2-3.7	3.7	<0.02	<0.2	<0.05	<0.03	<10	8	36	<50

TP3	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP3-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	42	27
TP3-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	<5	36	390
TP3-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	<5	125	1440
TP3-3.5	3.5	<0.02	<0.2	<0.05	<0.03	<10	21	51	<10

TP4	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP4-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	19	1230	15
TP4-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	35	77	10
TP4-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	29	65	20
TP4-3.75	3.75	<0.02	<0.2	<0.05	<0.03	<10	59	112	12

TP5	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP5-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	72	12
TP5-2.0	2.0	<0.02	<0.2	<0.05	<0.03	10	26	141	490
TP5-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	28	68	<10
TP5-3.25	3.25	<0.02	<0.2	<0.05	<0.03	<10	26	74	20

TP6	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP6-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	8	94	30

TP7	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP7-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	37	312	63
Dup3		<0.02	<0.2	<0.05	<0.03	<10	49	522	141

TP8	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP8-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	16	78	29

TP9	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP9-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	30	60	18
Dup2		<0.02	<0.2	<0.05	<0.03	<10	26	71	46

BH-1	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	1.0	<0.02	<0.2	<0.05	<0.03	<10	109	2620	352

BH-2	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	0.3	<0.02	<0.2	<0.05	<0.03	<10	<5	50	470

BH-3	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
	0.8 - 1.4	<0.02	<0.2	<0.05	<0.03	<10	22	65	34

BH-4	Depth (mbgs)	15-Sep-22							
		B	T	E	X	F1	F2	F3	F4
	2.3 - 2.9	<0.02	<0.2	<0.05	<0.03	38	67	77	<10

BH-5	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	0.5	<0.02	<0.2	<0.05	<0.03	<10	5	94	400

BH-6	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	29	<10

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	0.21
Toluene	T	2
Ethylbenzene	E	2.3
Total Xylenes	X	3.1
F1	F1 (C6-C10)	55
F2	F2 (C10-C16)	98
F3	F3 (C16-C34)	300
F4	F4 (C34-C50)	2800

LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-1A — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- AH8 — AUGER HOLE (T0 1.8m)
- SOIL QUALITY EXCEEDS MECP TABLE 3 SCS
- SOIL QUALITY SATISFIES MECP TABLE 3 SCS
- NO SAMPLE

0 5m 10m 30m
HORIZONTAL 1:750

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Ottawa, ON K2B 8H6, Canada

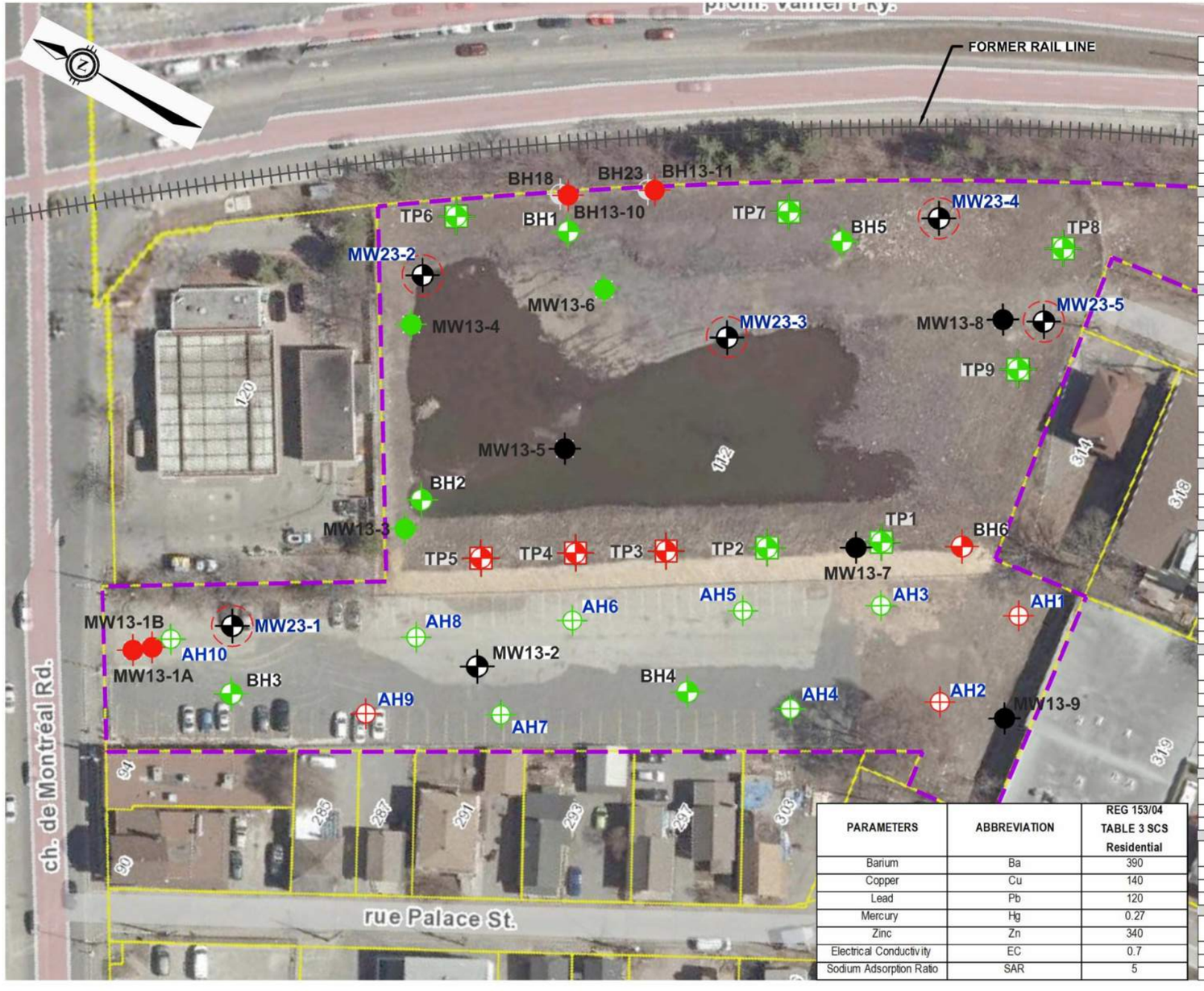
DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED

TITLE: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)
SOIL ANALYTICAL RESULTS – PHC & BTEX
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:750
FIG 7

Filename: \\POTTFS0002\Data\Projects\GeoTechnical\210000\214000\214936-C0_2023- Geo Investigtaion 112 Montreal Road, Ottawa, ON\K - DRAWINGS\OTT-00214936-C0_Env-Ph2.dwg
Last Saved: Apr 13, 2023 10:58 AM Last Plotted: Apr 13, 2023 11:04 AM Plotted by: SeverA



PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Barium	Ba	390
Copper	Cu	140
Lead	Pb	120
Mercury	Hg	0.27
Zinc	Zn	340
Electrical Conductivity	EC	0.7
Sodium Adsorption Ratio	SAR	5

MW1	Depth (mbgs)	23-Oct-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS4	1.8 to 2.4	253	39.8	325	-	177	-	-

MW3	Depth (mbgs)	23-Oct-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.2 to 1.8	72	20.1	12	-	28.1	-	-

MW4	Depth (mbgs)	23-Oct-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.2 to 1.8	88	24.7	14.7	-	58.5	-	-
DUP		77	21.3	11.1	-	55.0	-	-

MW6B	Depth (mbgs)	8-Nov-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS1	0.15 to 0.75	177	55.6	19.8	-	82.3	-	-

BH10	Depth (mbgs)	31-Oct-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
S2	0.6 to 0.9	498	44.8	560	-	428	-	-

BH11	Depth (mbgs)	31-Oct-13						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
S1	0.0 to 0.4	119	61.6	218	-	375	-	-

AH1	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS1	0.0 to 0.6	66	21	34	0.061	78	0.29	1.14
SS2	0.8 to 1.4	170	102	210	0.233	167	0.299	0.938

AH2	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS1	0.0 to 0.6	232	147	396	0.315	259	0.201	0.255
SS2	0.8 to 1.4	69	47	14	0.049	81	0.185	1.48

AH-3	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS2	0.8 to 1.4	94	59	18	0.098	89	0.525	2.21
SS3	1.5 to 2.1	208	37	12	0.038	84	0.494	1.12

AH-4	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.5 to 2.1	107	9	< 5	0.017	49	0.341	0.631
SS4	2.3 to 2.9	298	17	< 5	0.021	82	0.166	0.63

AH-5	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS2	0.8 to 1.4	96	59	23	0.094	89	0.308	2.81
SS3	1.5 to 2.1	184	44	13	0.051	77	0.341	2.28

AH-6	Depth (mbgs)	14-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.5 to 2.1	71	21	9	0.027	40	0.3	2.24
SS4	2.3 to 2.9	84	17	8	0.023	23	0.25	0.787

AH-7	Depth (mbgs)	14-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.5 to 2.1	151	26	10	0.025	48	0.211	1.28
SS4	2.3 to 2.9	70	17	7	0.017	27	0.195	1.11

AH-8	Depth (mbgs)	14-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.5 to 2.1	48	20	8	0.019	30	0.28	2.69
SS4	2.3 to 2.9	67	20	8	0.019	31	0.278	2.67

AH-9	Depth (mbgs)	14-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS1	0.0 to 0.6	133	33	22	0.065	77	0.553	1.87
SS3	1.5 to 2.1	131	31	42	0.07	72	0.892	1.53
DUP2		136	48	52	0.081	91	1.23	1.46

AH-10	Depth (mbgs)	14-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
SS3	1.5 to 2.1	114	22	27	0.038	49	0.569	2.92
SS4	2.3 to 2.9	88	19	7	0.014	36	0.497	2.87
DUP1		96	21	9	0.017	41	0.511	2.67

TP1	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP1-1.0	1.0	96	34	25	0.084	108	0.302	1.5
TP1-2.5	2.5	99	36	16	0.08	84	0.612	1.64
TP1-4.5	4.5	121	48	32	0.103	92	0.479	1.69

TP2	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP2-1.0	1.0	107	38	29	0.108	85	0.247	0.217
TP2-2.0	2.0	176	39	26	0.09	87	0.389	0.435
TP2-3.0	3.0	110	41	35	0.122	100	0.395	0.517
DUP1		155	28	57	0.102	93	0.398	0.446
TP2-3.7	3.7	155	35	25	0.097	83	0.387	1.05

TP3	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP3-1.0	1.0	254	31	26	0.073	70	0.319	0.116
TP3-2.0	2.0	70	32	26	0.115	67	0.393	0.776
TP3-2.75	2.75	127	38	23	0.064	74	0.814	0.523
TP3-3.5	3.5	115	33	15	0.051	63	0.434	0.814

TP4	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP4-1.0	1.0	151	38	22	0.085	67	0.261	0.316
TP4-2.0	2.0	93	27	13	0.036	54	0.504	0.318
TP4-2.75	2.75	124	37	17	0.06	64	0.819	0.34
TP4-3.75	3.75	90	71	14	0.054	62	0.502	0.847

TP5	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP5-1.0	1.0	100	30	51	0.109	91	0.209	0.302
TP5-2.0	2.0	130	31	30	0.083	87	0.283	0.306
TP5-2.75	2.75	126	42	62	0.166	121	0.703	0.514
TP5-3.25	3.25	113	34	43	0.158	90	1	0.278

TP6	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP6-1.0	1.0	157	46	22	0.1	85	0.176	0.444

TP7	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP7-1.0	1.0	112	35	26	0.076	96	0.361	0.14
Dup3		104	47	23	0.075	86	0.38	0.127

TP8	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP8-1.0	1.0	92	34	36	0.096	85	0.22	0.376

TP9	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
TP9-1.0	1.0	86	30	18	0.099	57	0.264	0.546
Dup2		84	29	15	0.071	37	0.301	0.538

BH-1	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	1.0	131	73	89	0.096	261	0.172	0.523

BH-2	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	0.3	90	18	54	0.058	91	0.259	0.44

BH-3	Depth (mbgs)	16-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	0.8 - 1.4	181	13	< 5	0.017	65	0.239	1.22

BH-4	Depth (mbgs)	15-Sep-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	2.3 - 2.9	118	38	26	0.1	96	0.519	0.885

BH-5	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	0.5	97	30	33	0.096	59	0.363	0.517

BH-6	Depth (mbgs)	31-Aug-22						
		Ba	Cu	Pb	Hg	Zn	EC	SAR
	1.0	47	16	6	0.022	22	1	0.132

LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-1A — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- AH8 — AUGER HOLE (T0 1.8m)
- SOIL QUALITY EXCEEDS MECP TABLE 3 SCS
- SOIL QUALITY SATISFIES MECP TABLE 3 SCS
- NO SAMPLE

0 5m 10m 30m
HORIZONTAL 1:750

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DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)

TITLE: SOIL ANALYTICAL RESULTS – METALS
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:750
FIG 8

Filename: \\POTTFSG002\Data\Projects\GeoTechnical\210000\214000\214936-C0_2023- Geo Invesigtaion 112 Montreal Road, Ottawa, ON\K - DRAWINGS\OTT-00214936-C0_Env-Ph2.dwg
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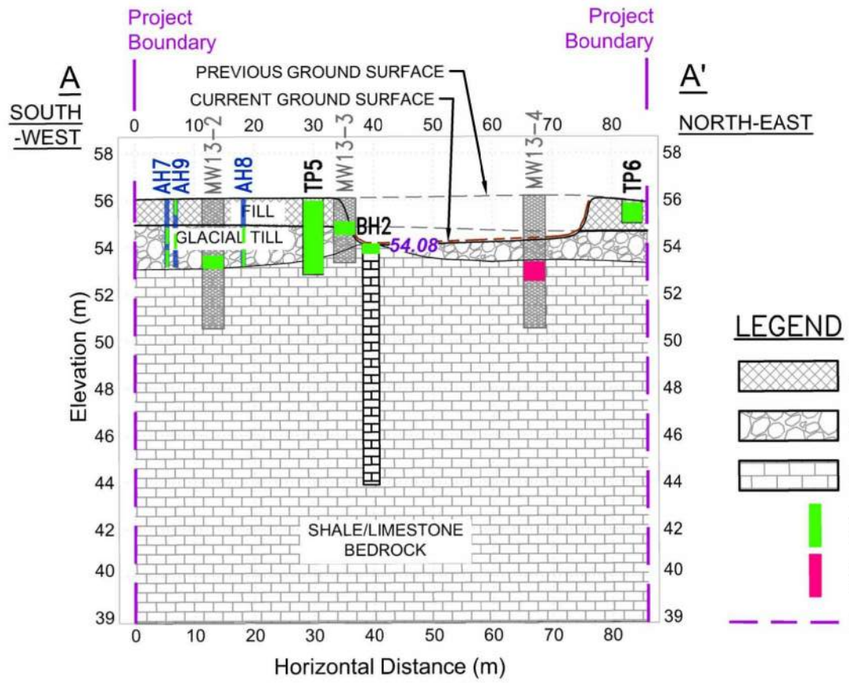
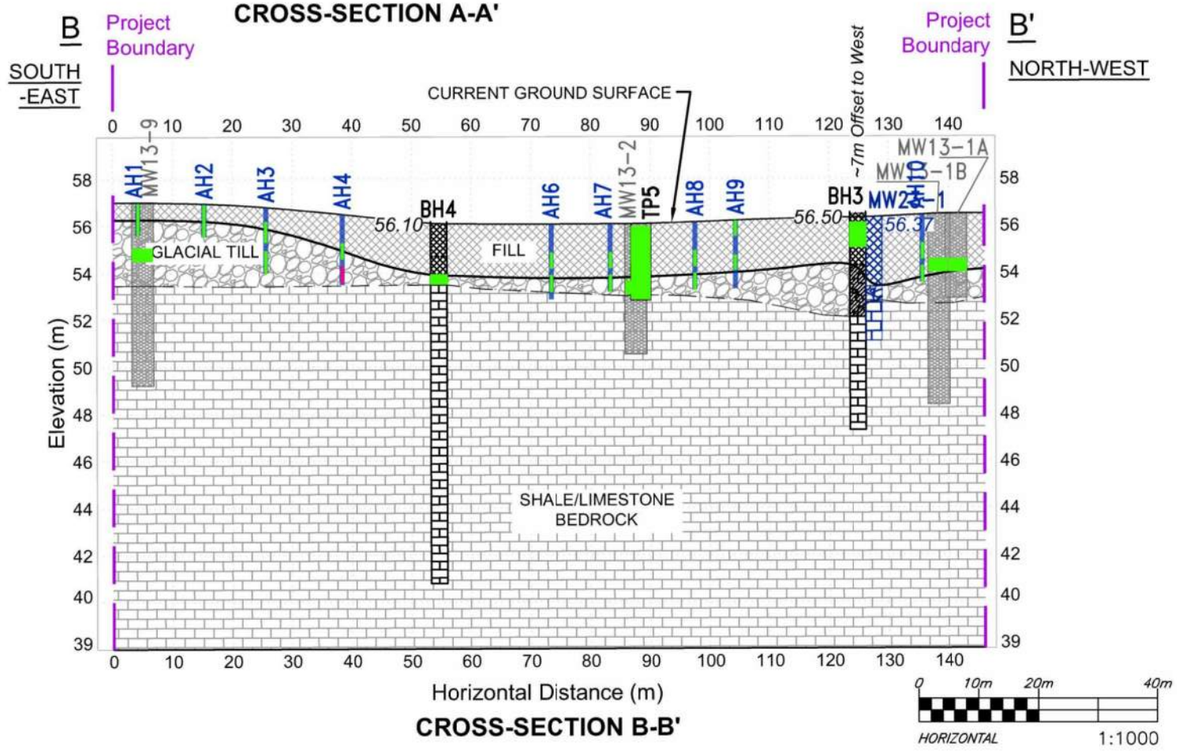


CROSS-SECTION A-A'



CROSS-SECTION B-B'

HORIZONTAL 1:1000

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- SOIL CONCENTRATION MEETS MECP TABLE 3 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 3 SCS
- PROPERTY BOUNDARY

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	0.21
Toluene	T	2
Ethylbenzene	E	2.3
Total Xylenes	X	3.1
F1	F1 (C6-C10)	55
F2	F2 (C10-C16)	98
F3	F3 (C16-C34)	300
F4	F4 (C34-C50)	2800

MW1	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS4	1.8 to 2.4	<0.02	<0.2	<0.05	<0.05	<7	<4	81	10

MW2	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS5	2.4 to 3.0	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW3	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW4	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	364	624
DUP		<0.02	<0.2	<0.05	<0.05	<7	14	536	1090

MW6B	Depth (mbgs)	8-Nov-13							
		B	T	E	X	F1	F2	F3	F4
SS1	0.15 to 0.75	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6

MW9	Depth (mbgs)	23-Oct-13							
		B	T	E	X	F1	F2	F3	F4
SS5	1.8 to 2.4	<0.02	<0.2	<0.05	0.08	17	<4	<8	<6

AH1	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	10	45	16
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	19	57	109	17

AH2	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	19	193	154
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	13	78	126	<10

AH-3	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	24	75	<10
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	15	111	152	18

AH-4	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	0.37	50	45	58	20
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	36	111	104	10

AH-5	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	31	93	14
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	11	81	131	17

AH-6	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	56	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	28	71	15

AH-7	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	13	20	47	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	41	66	11

AH-8	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	53	18
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	33	139	680

AH-9	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	33	141	1240
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	17	32	139	680
DUP2		<0.02	<0.2	<0.05	<0.03	14	30	114	650

AH-10	Depth (mbgs)	14-Sep-22							
		B	T	E	X	F1	F2	F3	F4
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	<5	<10	<10
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	34	63	15
DUP1		<0.02	<0.2	<0.05	<0.03	<10	<5	11	<10

TP1	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP1-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	15	13
TP1-2.5	2.5	<0.02	<0.2	<0.05	<0.03	<10	<5	16	<10
TP1-4.5	4.5	<0.02	<0.2	<0.05	<0.03	<10	<5	22	<10

TP2	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP2-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	28	12
TP2-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	9	32	<10
TP2-3.0	3.0	<0.02	<0.2	<0.05	<0.03	<10	12	34	<10
DUP1		<0.02	<0.2	<0.05	<0.03	<10	5	152	2150
TP2-3.7	3.7	<0.02	<0.2	<0.05	<0.03	<10	8	36	<50

TP3	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP3-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	42	27
TP3-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	<5	36	390
TP3-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	<5	125	1440
TP3-3.5	3.5	<0.02	<0.2	<0.05	<0.03	<10	21	51	<10

TP4	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP4-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	19	1230	15
TP4-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	35	77	10
TP4-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	29	65	20
TP4-3.75	3.75	<0.02	<0.2	<0.05	<0.03	<10	59	112	12

TP5	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP5-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	72	12
TP5-2.0	2.0	<0.02	<0.2	<0.05	<0.03	10	26	141	460
TP5-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	28	68	<10
TP5-3.25	3.25	<0.02	<0.2	<0.05	<0.03	<10	26	74	20

TP6	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP6-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	8	94	30

TP7	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP7-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	37	312	63
Dup3		<0.02	<0.2	<0.05	<0.03	<10	49	522	141

TP8	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP8-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	16	78	29

TP9	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
TP9-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	30	60	18
Dup2		<0.02	<0.2	<0.05	<0.03	<10	26	71	46

BH-1	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	1.0	<0.02	<0.2	<0.05	<0.03	<10	109	2620	352

BH-2	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	0.3	<0.02	<0.2	<0.05	<0.03	<10	<5	50	470

BH-3	Depth (mbgs)	16-Sep-22							
		B	T	E	X	F1	F2	F3	F4
	0.8 - 1.4	<0.02	<0.2	<0.05	<0.03	<10	22	65	34

BH-4	Depth (mbgs)	15-Sep-22							
		B	T	E	X	F1	F2	F3	F4
	2.3 - 2.9	<0.02	<0.2	<0.05	<0.03	38	67	77	<10

BH-5	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	0.5	<0.02	<0.2	<0.05	<0.03	<10	5	94	400

BH-6	Depth (mbgs)	31-Aug-22							
		B	T	E	X	F1	F2	F3	F4
	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	29	<10

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DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)

TITLE: SOIL CROSS-SECTIONS A-A', B-B' – PHC & BTEX
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:1000
FIG 9A

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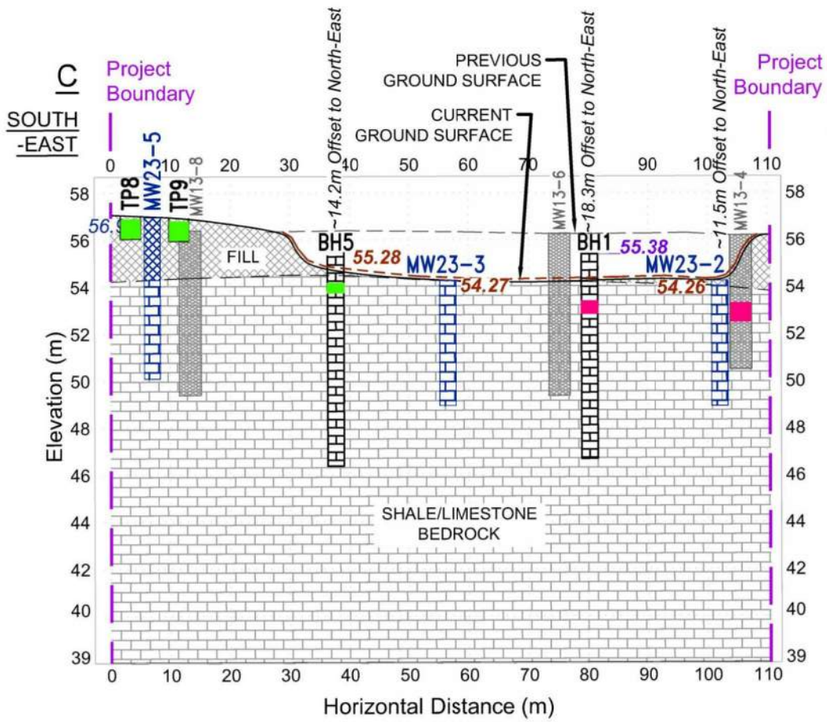
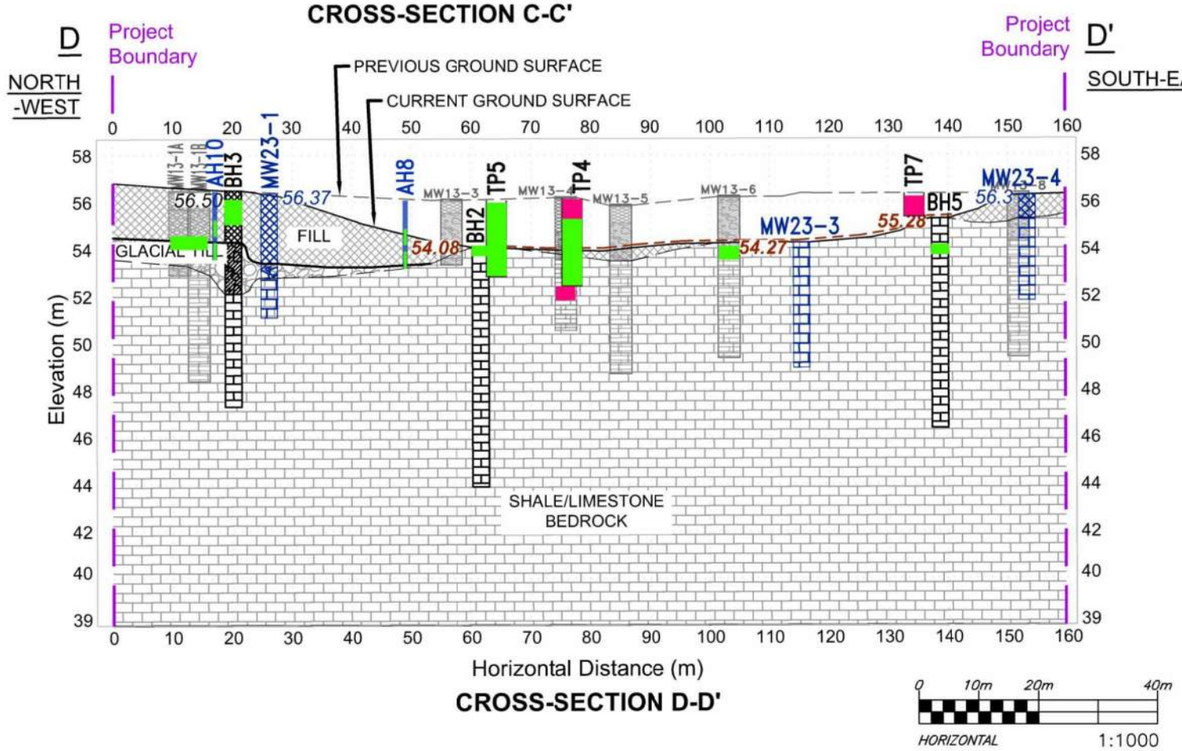


CROSS-SECTION C-C'



CROSS-SECTION D-D'

0 10m 20m 40m

HORIZONTAL 1:1000

C'
NORTH
-WEST

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	0.21
Toluene	T	2
Ethylbenzene	E	2.3
Total Xylenes	X	3.1
F1	F1 (C6-C10)	55
F2	F2 (C10-C16)	98
F3	F3 (C16-C34)	300
F4	F4 (C34-C50)	2800

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- SOIL CONCENTRATION MEETS MECP TABLE 3 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 3 SCS
- PROPERTY BOUNDARY

MW1	Depth (mbgs)	23-Oct-13								
		B	T	E	X	F1	F2	F3	F4	
SS4	1.8 to 2.4	<0.02	<0.2	<0.05	<0.05	<7	<4	81	10	
MW2	Depth (mbgs)	23-Oct-13								
		B	T	E	X	F1	F2	F3	F4	
SS5	2.4 to 3.0	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6	
MW3	Depth (mbgs)	23-Oct-13								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6	
MW4	Depth (mbgs)	23-Oct-13								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.2 to 1.8	<0.02	<0.2	<0.05	<0.05	<7	<4	364	624	
DUP		<0.02	<0.2	<0.05	<0.05	<7	14	536	1090	
MW6B	Depth (mbgs)	8-Nov-13								
		B	T	E	X	F1	F2	F3	F4	
SS1	0.15 to 0.75	<0.02	<0.2	<0.05	<0.05	<7	<4	<8	<6	
MW9	Depth (mbgs)	23-Oct-13								
		B	T	E	X	F1	F2	F3	F4	
SS5	1.8 to 2.4	<0.02	<0.2	<0.05	0.08	17	<4	<8	<6	
AH1	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	10	45	16	
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	19	57	109	17	
AH2	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	19	193	154	
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	13	78	126	<10	
AH-3	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	24	75	<10	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	15	111	152	18	
AH-4	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	0.37	50	45	58	20	
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	36	111	104	10	
AH-5	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS2	0.8 to 1.4	<0.02	<0.2	<0.05	<0.03	<10	31	93	14	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	11	81	131	17	
AH-6	Depth (mbgs)	14-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	56	<10	
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	28	71	15	
AH-7	Depth (mbgs)	14-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	13	20	47	<10	
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	41	66	11	
AH-8	Depth (mbgs)	14-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	28	53	18	
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	33	139	680	
AH-9	Depth (mbgs)	14-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS1	0.0 to 0.6	<0.02	<0.2	<0.05	<0.03	<10	33	141	1240	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	17	32	139	680	
DUP2		<0.02	<0.2	<0.05	<0.03	14	30	114	650	
AH-10	Depth (mbgs)	14-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
SS3	1.5 to 2.1	<0.02	<0.2	<0.05	<0.03	<10	<5	<10	<10	
SS4	2.3 to 2.9	<0.02	<0.2	<0.05	<0.03	<10	34	63	15	
DUP1		<0.02	<0.2	<0.05	<0.03	<10	<5	11	<10	

TP1	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP1-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	15	13	
TP1-2.5	2.5	<0.02	<0.2	<0.05	<0.03	<10	<5	16	<10	
TP1-4.5	4.5	<0.02	<0.2	<0.05	<0.03	<10	<5	22	<10	
TP2	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP2-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	<5	28	12	
TP2-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	9	32	<10	
TP2-3.0	3.0	<0.02	<0.2	<0.05	<0.03	<10	12	34	<10	
DUP1		<0.02	<0.2	<0.05	<0.03	<10	5	152	2150	
TP2-3.7	3.7	<0.02	<0.2	<0.05	<0.03	<10	8	36	<50	
TP3	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP3-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	42	27	
TP3-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	<5	36	350	
TP3-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	<5	125	1440	
TP3-3.5	3.5	<0.02	<0.2	<0.05	<0.03	<10	21	51	<10	
TP4	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP4-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	19	1230	15	
TP4-2.0	2.0	<0.02	<0.2	<0.05	<0.03	<10	35	77	10	
TP4-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	29	65	20	
TP4-3.75	3.75	<0.02	<0.2	<0.05	<0.03	<10	59	112	12	
TP5	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP5-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	72	12	
TP5-2.0	2.0	<0.02	<0.2	<0.05	<0.03	10	26	141	460	
TP5-2.75	2.75	<0.02	<0.2	<0.05	<0.03	<10	28	68	<10	
TP5-3.25	3.25	<0.02	<0.2	<0.05	<0.03	<10	26	74	20	
TP6	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP6-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	8	94	30	
TP7	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP7-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	37	312	63	
Dup3		<0.02	<0.2	<0.05	<0.03	<10	49	522	141	
TP8	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP8-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	16	78	29	
TP9	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
TP9-1.0	1.0	<0.02	<0.2	<0.05	<0.03	<10	30	60	18	
Dup2		<0.02	<0.2	<0.05	<0.03	<10	26	71	46	
BH-1	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
	1.0	<0.02	<0.2	<0.05	<0.03	<10	109	2620	352	
BH-2	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
	0.3	<0.02	<0.2	<0.05	<0.03	<10	<5	50	470	
BH-3	Depth (mbgs)	16-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
	0.8 - 1.4	<0.02	<0.2	<0.05	<0.03	<10	22	65	34	
BH-4	Depth (mbgs)	15-Sep-22								
		B	T	E	X	F1	F2	F3	F4	
	2.3 - 2.9	<0.02	<0.2	<0.05	<0.03	38	67	77	<10	
BH-5	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
	0.5	<0.02	<0.2	<0.05	<0.03	<10	5	94	400	
BH-6	Depth (mbgs)	31-Aug-22								
		B	T	E	X	F1	F2	F3	F4	
	1.0	<0.02	<0.2	<0.05	<0.03	<10	15	29	<10	

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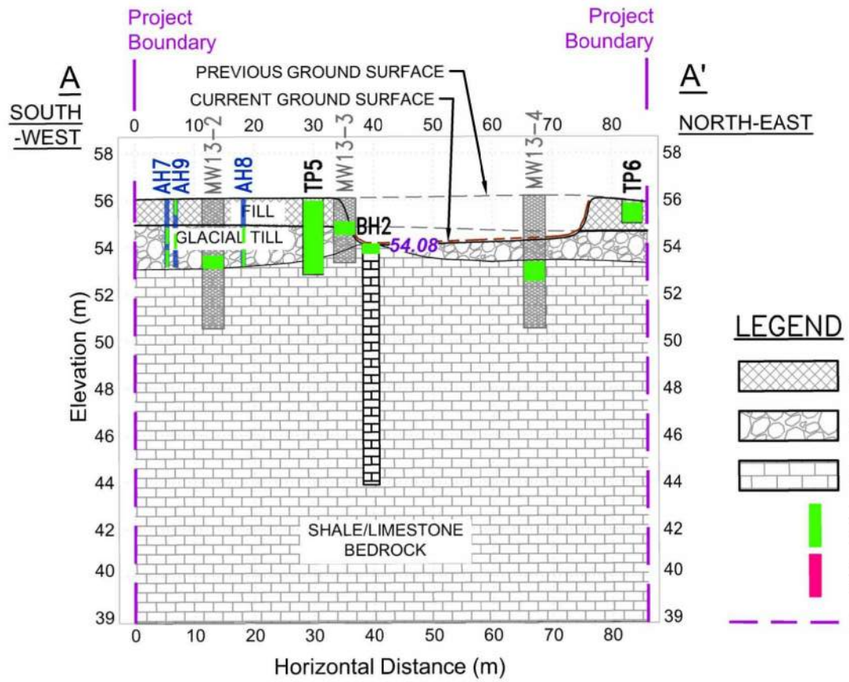
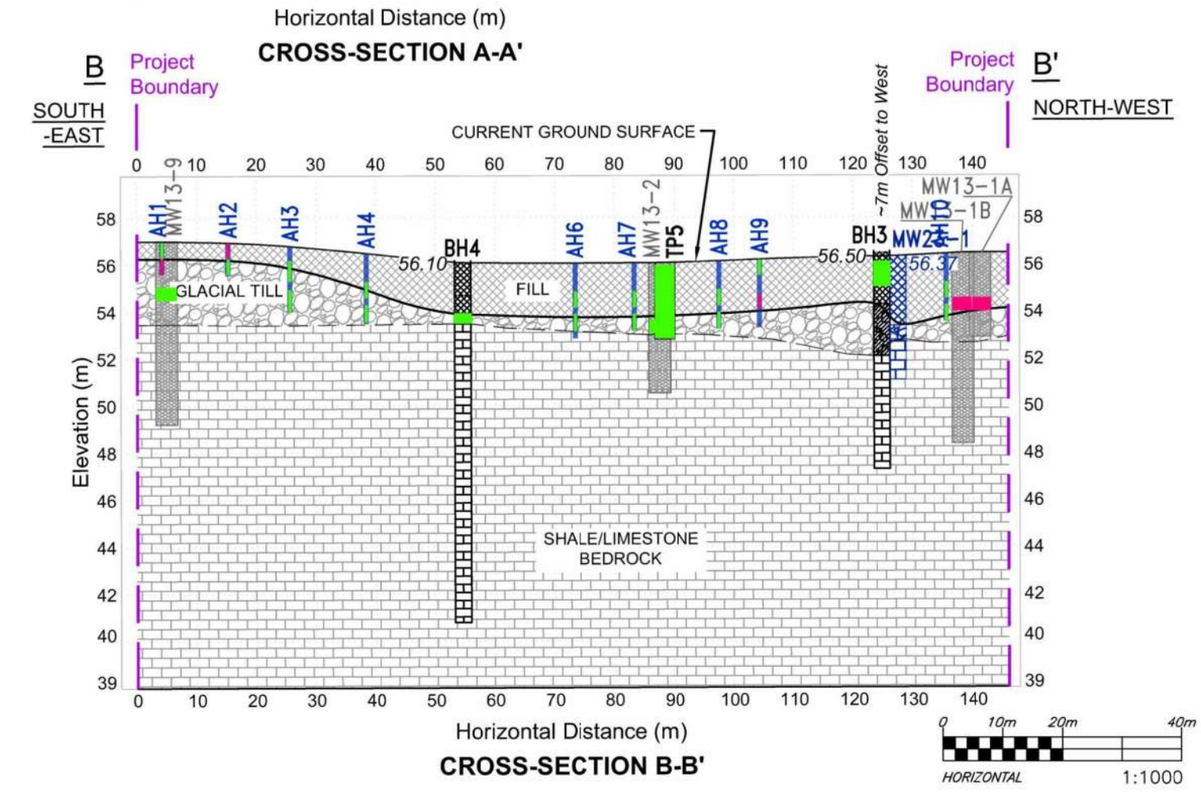
DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED		project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)		scale 1:1000
DRAWN BY: AS	TITLE: SOIL CROSS-SECTIONS C-C', D-D' – PHC & BTEX 112 MONTREAL ROAD, OTTAWA, ONTARIO		FIG 9B

Filename: \\POTTFSG002\Data\Projects\GeoTechnical\210000\214000\214936-C0_2023- Geo Invesigtaion 112 Montreal Road, Ottawa, ON\K - DRAWINGS\OTT-00214936-C0_Env-Ph2.dwg
Last Saved: Apr 13, 2023 10:58 AM Last Plotted: Apr 13, 2023 11:02 AM Plotted by: SeverA



CROSS-SECTION A-A'



CROSS-SECTION B-B'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- SOIL CONCENTRATION MEETS MECP TABLE 3 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 3 SCS
- PROPERTY BOUNDARY

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Barium	Ba	390
Copper	Cu	140
Lead	Pb	120
Mercury	Hg	0.27
Zinc	Zn	340
Electrical Conductivity	EC	0.7
Sodium Adsorption Ratio	SAR	5

MW1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS4	1.8 to 2.4	253	39.8	325	-	177	-	-

MW3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS3	1.2 to 1.8	72	20.1	12	-	28.1	-	-

MW4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS3	1.2 to 1.8	88	24.7	14.7	-	58.5	-	-
DUP		77	21.3	11.1	-	55.0	-	-

MW6B	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		8-Nov-13						
SS1	0.15 to 0.75	177	55.6	19.8	-	82.3	-	-

BH10	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Oct-13						
S2	0.6 to 0.9	498	44.8	560	-	428	-	-

BH11	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Oct-13						
S1	0.0 to 0.4	119	61.6	218	-	375	-	-

AH1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS1	0.0 to 0.6	66	21	34	0.061	78	0.29	1.14
SS2	0.8 to 1.4	170	102	210	0.233	167	0.299	0.938

AH2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS1	0.0 to 0.6	232	147	396	0.315	259	0.201	0.255
SS2	0.8 to 1.4	69	47	14	0.049	81	0.185	1.48

AH-3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS2	0.8 to 1.4	94	59	18	0.098	89	0.525	2.21
SS3	1.5 to 2.1	208	37	12	0.038	84	0.494	1.12

AH-4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS3	1.5 to 2.1	107	9	< 5	0.017	49	0.341	0.631
SS4	2.3 to 2.9	298	17	< 5	0.021	82	0.166	0.63

AH-5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS2	0.8 to 1.4	96	59	23	0.094	89	0.308	2.81
SS3	1.5 to 2.1	184	44	13	0.051	77	0.341	2.28

AH-6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	71	21	9	0.027	40	0.3	2.24
SS4	2.3 to 2.9	84	17	8	0.023	23	0.25	0.787

AH-7	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	151	26	10	0.025	48	0.211	1.28
SS4	2.3 to 2.9	70	17	7	0.017	27	0.195	1.11

AH-8	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	48	20	8	0.019	30	0.28	2.69
SS4	2.3 to 2.9	67	20	8	0.019	31	0.278	2.67

AH-9	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS1	0.0 to 0.6	133	33	22	0.065	77	0.553	1.87
SS3	1.5 to 2.1	131	31	42	0.07	72	0.892	1.53
DUP2		136	48	52	0.081	91	1.23	1.46

AH-10	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	114	22	27	0.038	49	0.569	2.92
SS4	2.3 to 2.9	88	19	7	0.014	36	0.497	2.87
DUP1		96	21	9	0.017	41	0.511	2.67

TP1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP1-1.0	1.0	96	34	25	0.084	108	0.302	1.5
TP1-2.5	2.5	99	36	16	0.08	84	0.612	1.64
TP1-4.5	4.5	121	48	32	0.103	92	0.479	1.69

TP2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP2-1.0	1.0	107	38	29	0.108	85	0.247	0.217
TP2-2.0	2.0	176	39	26	0.09	87	0.389	0.435
TP2-3.0	3.0	110	41	35	0.122	100	0.395	0.517
DUP1		155	28	57	0.102	93	0.398	0.446
TP2-3.7	3.7	155	35	25	0.097	83	0.387	1.05

TP3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP3-1.0	1.0	254	31	26	0.073	70	0.319	0.116
TP3-2.0	2.0	70	32	26	0.115	67	0.393	0.776
TP3-2.75	2.75	127	38	23	0.064	74	0.814	0.523
TP3-3.5	3.5	115	33	15	0.051	63	0.434	0.814

TP4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP4-1.0	1.0	151	38	22	0.085	67	0.261	0.316
TP4-2.0	2.0	93	27	13	0.036	54	0.504	0.318
TP4-2.75	2.75	124	37	17	0.06	64	0.819	0.34
TP4-3.75	3.75	90	71	14	0.054	62	0.502	0.847

TP5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP5-1.0	1.0	100	30	51	0.109	91	0.209	0.302
TP5-2.0	2.0	130	31	30	0.083	87	0.283	0.306
TP5-2.75	2.75	126	42	62	0.166	121	0.703	0.514
TP5-3.25	3.25	113	34	43	0.158	90	1	0.278

TP6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP6-1.0	1.0	157	46	22	0.1	85	0.176	0.444

TP7	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP7-1.0	1.0	112	35	26	0.076	96	0.361	0.14
Dup3		104	47	23	0.075	86	0.38	0.127

TP8	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP8-1.0	1.0	92	34	36	0.096	85	0.22	0.376

TP9	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP9-1.0	1.0	86	30	18	0.099	57	0.264	0.546
Dup2		84	29	15	0.071	37	0.301	0.538

BH-1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	1.0	131	73	89	0.096	261	0.172	0.523

BH-2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	0.3	90	18	54	0.058	91	0.259	0.44

BH-3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
	0.8 - 1.4	181	13	< 5	0.017	65	0.239	1.22

BH-4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		15-Sep-22						
	2.3 - 2.9	118	38	26	0.1	96	0.519	0.885

BH-5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	0.5	97	30	33	0.096	59	0.363	0.517

BH-6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	1.0	47	16	6	0.022	22	1	0.132

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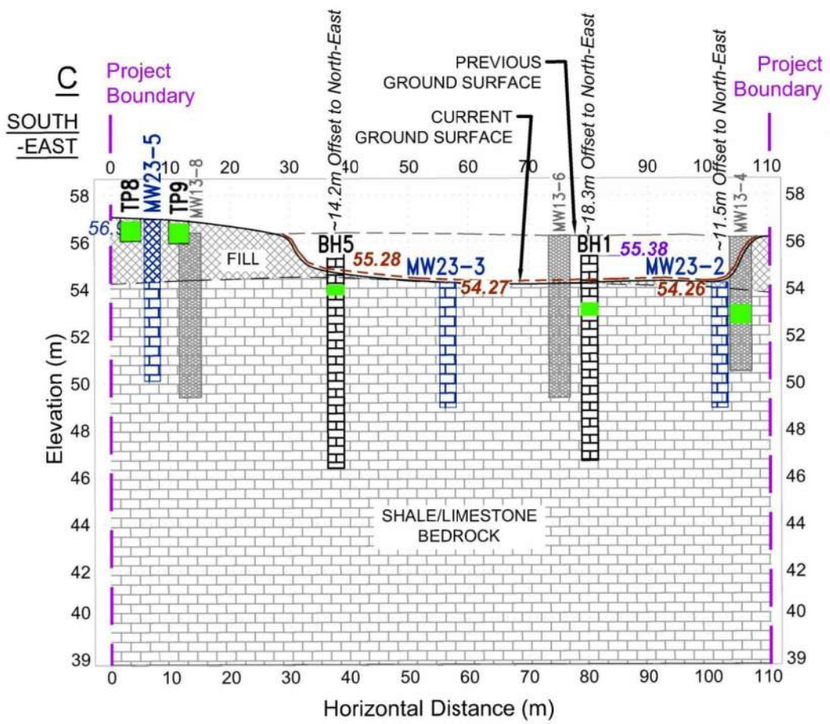
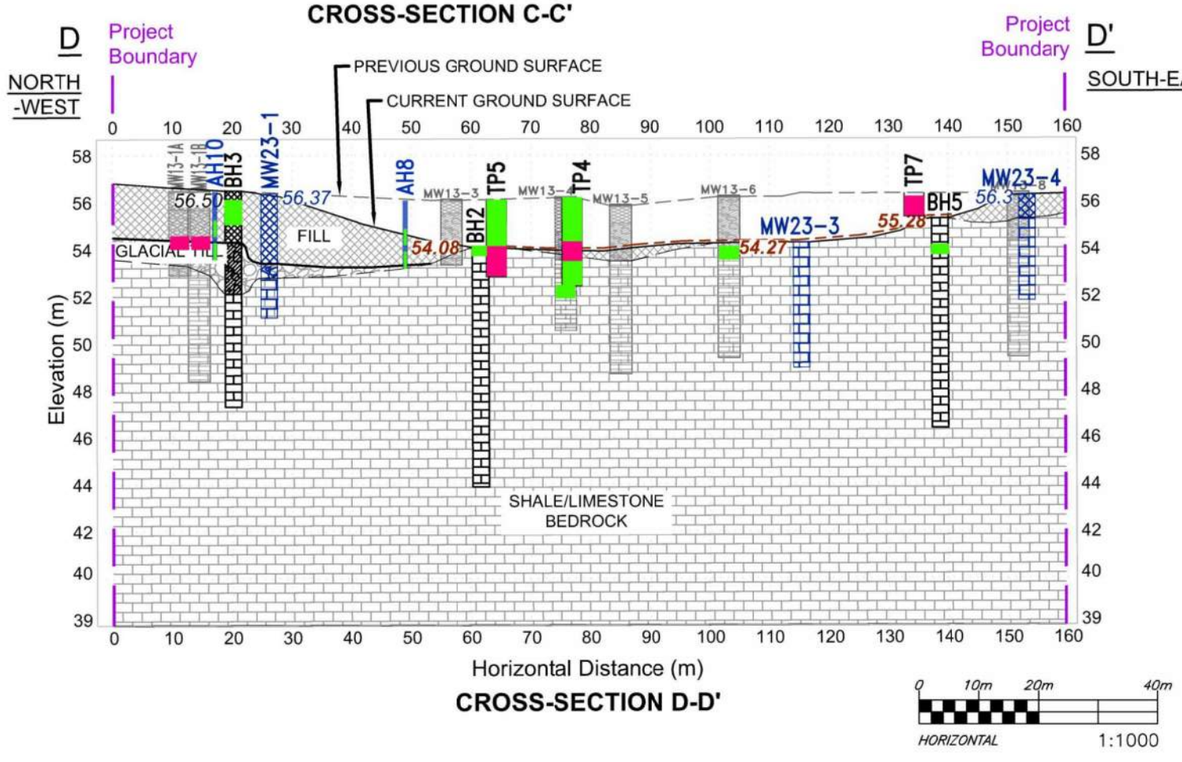
DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:1000
DRAWN BY: AS	TITLE: SOIL CROSS-SECTIONS A-A', B-B' – METALS 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 10A



CROSS-SECTION C-C'



CROSS-SECTION D-D'

0 10m 20m 40m

HORIZONTAL 1:1000

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- SOIL CONCENTRATION MEETS MECP TABLE 3 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 3 SCS
- PROPERTY BOUNDARY

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Barium	Ba	390
Copper	Cu	140
Lead	Pb	120
Mercury	Hg	0.27
Zinc	Zn	340
Electrical Conductivity	EC	0.7
Sodium Adsorption Ratio	SAR	5

MW1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS4	1.8 to 2.4	253	39.8	325	-	177	-	-

MW3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS3	1.2 to 1.8	72	20.1	12	-	28.1	-	-

MW4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		23-Oct-13						
SS3	1.2 to 1.8	88	24.7	14.7	-	58.5	-	-
DUP		77	21.3	11.1	-	55.0	-	-

MW6B	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		8-Nov-13						
SS1	0.15 to 0.75	177	55.6	19.8	-	82.3	-	-

BH10	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Oct-13						
S2	0.6 to 0.9	498	44.8	560	-	428	-	-

BH11	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Oct-13						
S1	0.0 to 0.4	119	61.6	218	-	375	-	-

AH1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS1	0.0 to 0.6	66	21	34	0.061	78	0.29	1.14
SS2	0.8 to 1.4	170	102	210	0.233	167	0.299	0.938

AH2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS1	0.0 to 0.6	232	147	396	0.315	259	0.201	0.255
SS2	0.8 to 1.4	69	47	14	0.049	81	0.185	1.48

AH-3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS2	0.8 to 1.4	94	59	18	0.098	89	0.525	2.21
SS3	1.5 to 2.1	208	37	12	0.038	84	0.494	1.12

AH-4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS3	1.5 to 2.1	107	9	< 5	0.017	49	0.341	0.631
SS4	2.3 to 2.9	298	17	< 5	0.021	82	0.166	0.63

AH-5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
SS2	0.8 to 1.4	96	59	23	0.094	89	0.308	2.81
SS3	1.5 to 2.1	184	44	13	0.051	77	0.341	2.28

AH-6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	71	21	9	0.027	40	0.3	2.24
SS4	2.3 to 2.9	84	17	8	0.023	23	0.25	0.787

AH-7	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	151	26	10	0.025	48	0.211	1.28
SS4	2.3 to 2.9	70	17	7	0.017	27	0.195	1.11

AH-8	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	48	20	8	0.019	30	0.28	2.69
SS4	2.3 to 2.9	67	20	8	0.019	31	0.278	2.67

AH-9	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS1	0.0 to 0.6	133	33	22	0.065	77	0.553	1.67
SS3	1.5 to 2.1	131	31	42	0.07	72	0.892	1.53
DUP2		136	48	52	0.081	91	1.23	1.46

AH-10	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		14-Sep-22						
SS3	1.5 to 2.1	114	22	27	0.038	49	0.569	2.92
SS4	2.3 to 2.9	88	19	7	0.014	36	0.497	2.87
DUP1		96	21	9	0.017	41	0.511	2.67

TP1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP1-1.0	1.0	96	34	25	0.084	108	0.302	1.5
TP1-2.5	2.5	99	36	16	0.08	84	0.612	1.64
TP1-4.5	4.5	121	48	32	0.103	92	0.479	1.69

TP2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP2-1.0	1.0	107	38	29	0.108	85	0.247	0.217
TP2-2.0	2.0	178	39	26	0.09	87	0.389	0.435
TP2-3.0	3.0	110	41	35	0.122	100	0.395	0.517
DUP1		155	28	57	0.102	93	0.398	0.446
TP2-3.7	3.7	155	35	25	0.097	83	0.387	1.05

TP3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP3-1.0	1.0	254	31	26	0.073	70	0.319	0.116
TP3-2.0	2.0	70	32	26	0.115	67	0.393	0.776
TP3-2.75	2.75	127	38	23	0.064	74	0.814	0.523
TP3-3.5	3.5	115	33	15	0.051	63	0.434	0.814

TP4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP4-1.0	1.0	151	38	22	0.085	67	0.261	0.316
TP4-2.0	2.0	93	27	13	0.036	54	0.504	0.318
TP4-2.75	2.75	124	37	17	0.06	64	0.819	0.34
TP4-3.75	3.75	90	71	14	0.054	62	0.502	0.847

TP5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP5-1.0	1.0	100	30	51	0.109	91	0.209	0.302
TP5-2.0	2.0	130	31	30	0.083	87	0.283	0.306
TP5-2.75	2.75	126	42	62	0.166	121	0.703	0.514
TP5-3.25	3.25	113	34	43	0.156	90	1	0.278

TP6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP6-1.0	1.0	157	46	22	0.1	85	0.176	0.444

TP7	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP7-1.0	1.0	112	35	26	0.076	96	0.361	0.14
Dup3		104	47	23	0.075	86	0.38	0.127

TP8	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP8-1.0	1.0	92	34	36	0.096	85	0.22	0.376

TP9	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
TP9-1.0	1.0	86	30	18	0.099	57	0.264	0.546
Dup2		84	29	15	0.071	37	0.301	0.538

BH-1	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	1.0	131	73	89	0.096	251	0.172	0.523

BH-2	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	0.3	90	18	54	0.058	91	0.259	0.44

BH-3	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		16-Sep-22						
	0.8 - 1.4	181	13	< 5	0.017	65	0.239	1.22

BH-4	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		15-Sep-22						
	2.3 - 2.9	118	38	26	0.1	96	0.519	0.885

BH-5	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	0.5	97	30	33	0.096	59	0.363	0.517

BH-6	Depth (mbgs)	Ba	Cu	Pb	Hg	Zn	EC	SAR
		31-Aug-22						
	1.0	47	16	6	0.022	22	1	0.132

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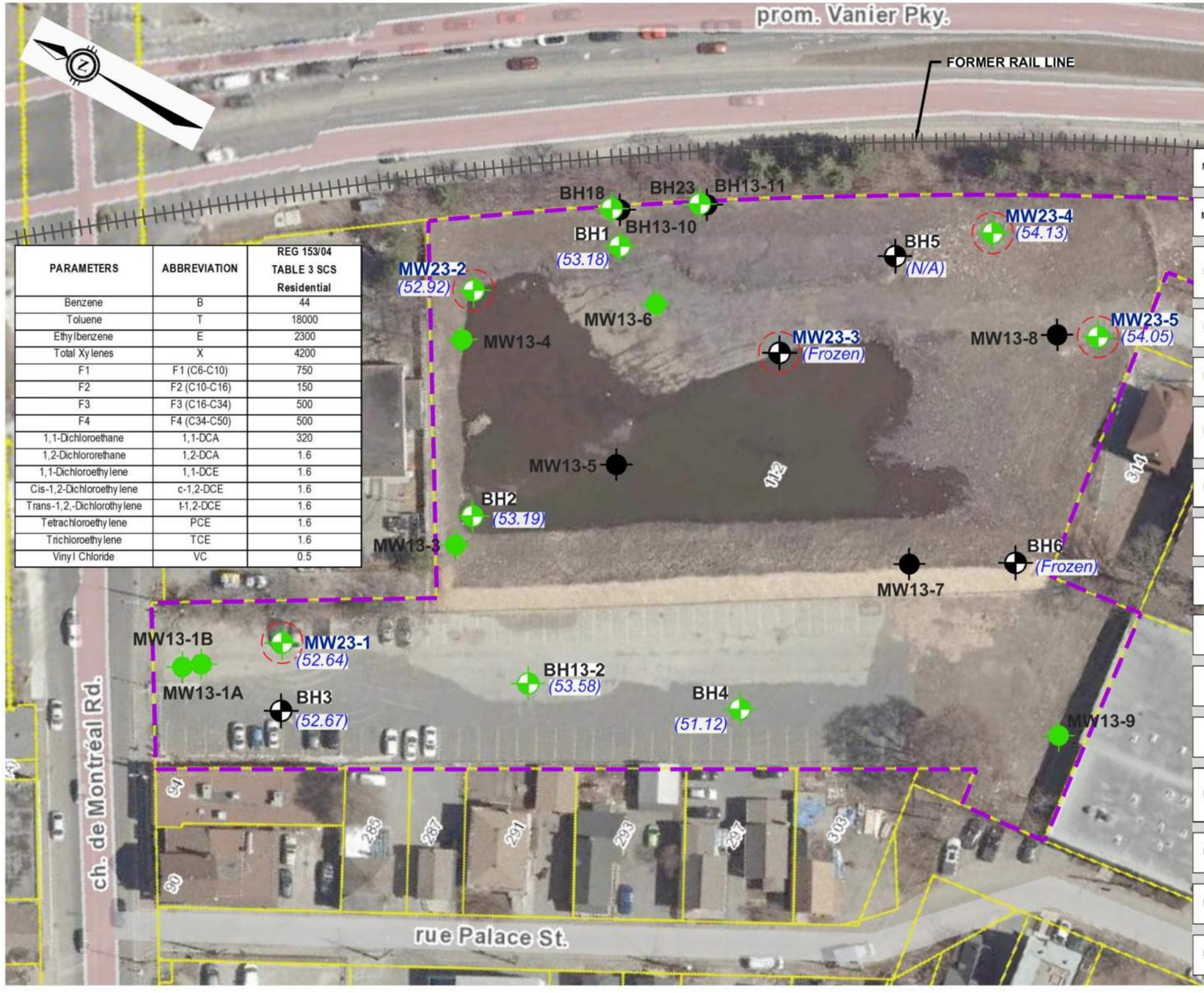
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED		project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)		scale 1:1000
DRAWN BY: AS	TITLE: SOIL CROSS-SECTIONS C-C', D-D' – METALS 112 MONTREAL ROAD, OTTAWA, ONTARIO		FIG 10B



PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	44
Toluene	T	18000
Ethylbenzene	E	2300
Total Xylenes	X	4200
F1	F1 (C6-C10)	750
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
1,1-Dichloroethane	1,1-DCA	320
1,2-Dichlororethane	1,2-DCA	1.6
1,1-Dichloroethylene	1,1-DCE	1.6
Cis-1,2-Dichloroethylene	c-1,2-DCE	1.6
Trans-1,2,-Dichlorothylene	t-1,2-DCE	1.6
Tetrachloroethylene	PCE	1.6
Trichloroethylene	TCE	1.6
Vinyl Chloride	VC	0.5

MW13-1a	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 1.2 to 2.7 m bgs	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

MW13-1b	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 5.0 to 8.1 m bgs	14-Nov-23	<0.5	2.9	7.5	10.2	102	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

MW13-2	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 4.1 to 5.6 m bgs	14-Nov-13	0.7	4.4	3	4.3	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

MW13-3	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 1.3 to 2.8 m bgs	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

MW13-4	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 4.6 to 5.7 m bgs	14-Nov-13	1	8.2	8.7	13.2	156	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

MW13-6	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 3.5 to 6.9 m bgs	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	14-Nov-13 DUP	<0.5	<0.5	<0.5	0.9	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

MW13-9	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 4.7 to 7.8 m bgs	14-Nov-23	<0.5	0.6	0.6	0.9	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

BH18	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval Unknown	19-Nov-23	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

BH23	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval Unknown	19-Nov-23	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

BH-1	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 5.7 to 8.7 m bgs	27-Feb-23	0.9	0.9	<0.5	<1.1	98	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

BH-2	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 7.2 to 10.2 m bgs	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

BH-4	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 12.3 to 15.3 m bgs	27-Feb-23	<0.5	1.7	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

MW23-1	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 4.3 to 7.3m bgs	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	27-Feb-23 Dup	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

MW23-2	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 1.8 to 4.8 m bgs	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

MW23-4	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 1.5 to 4.5 m bgs	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

MW23-5	Date	B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
Screen Interval 3.6 to 6.9 m bgs	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-1A — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- SOIL QUALITY EXCEEDS MECP TABLE 3 SCS
- SOIL QUALITY SATISFIES MECP TABLE 3 SCS
- NO SAMPLE
- (53.18) — GROUNDWATER ELEVATION (m) TAKEN ON FEBRUARY 27, 2023

0 5m 10m 30m
HORIZONTAL 1:750

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DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED

TITLE: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)
GROUNDWATER ANALYTICAL RESULTS – PHC & BTEX
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:750
FIG 11

Filename: \\POTTFS0002\Data\Projects\GeoTechnical\210000\214000\214936-C0_Env-Ph2.dwg
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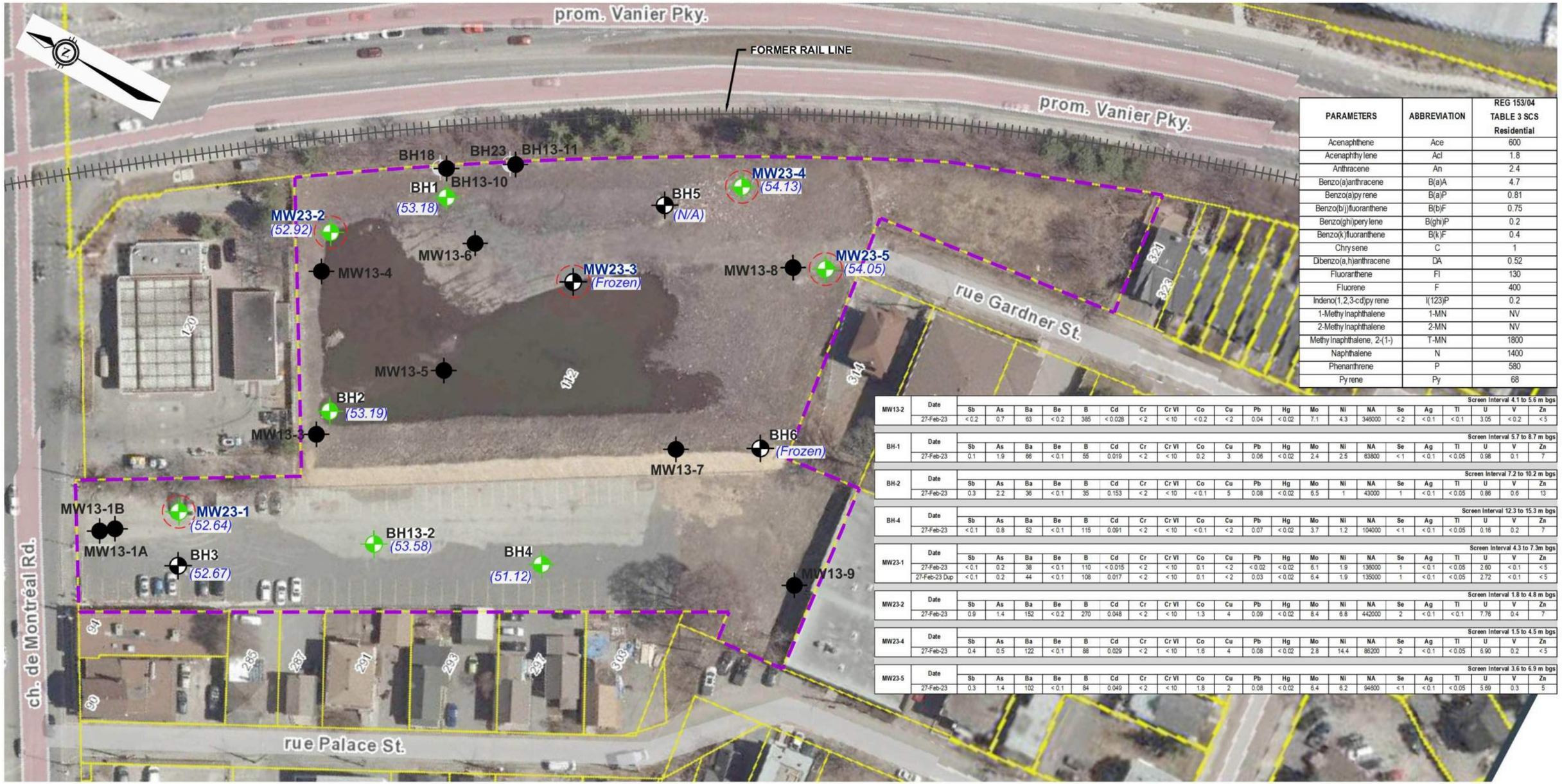

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Acenaphthene	Ace	600
Acenaphthylene	Acl	1.8
Anthracene	An	2.4
Benzo(a)anthracene	B(a)A	4.7
Benzo(a)pyrene	B(a)P	0.81
Benzo(b/j)fluoranthene	B(b)F	0.75
Benzo(ghi)perylene	B(ghi)P	0.2
Benzo(k)fluoranthene	B(k)F	0.4
Chrysene	C	1
Dibenzo(a,h)anthracene	DA	0.52
Fluoranthene	Fl	130
Fluorene	F	400
Indeno(1,2,3-cd)pyrene	I(123)P	0.2
1-Methylnaphthalene	1-MN	NV
2-Methylnaphthalene	2-MN	NV
Methylnaphthalene, 2-(1-)	T-MN	1800
Naphthalene	N	1400
Phenanthrene	P	580
Pyrene	Py	68

MW13-2	Date	Screen Interval 4.1 to 5.6 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	< 0.2	0.7	63	< 0.2	385	< 0.028	< 2	< 10	< 0.2	< 2	0.04	< 0.02	7.1	4.3	346000	< 2	< 0.1	< 0.1	3.05	< 0.2	< 5

BH-1	Date	Screen Interval 5.7 to 8.7 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	0.1	1.9	66	< 0.1	55	0.019	< 2	< 10	0.2	3	0.06	< 0.02	2.4	2.5	63800	< 1	< 0.1	< 0.05	0.98	0.1	7

BH-2	Date	Screen Interval 7.2 to 10.2 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	0.3	2.2	36	< 0.1	35	0.153	< 2	< 10	< 0.1	5	0.08	< 0.02	6.5	1	43000	1	< 0.1	< 0.05	0.86	0.6	13

BH-4	Date	Screen Interval 12.3 to 15.3 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	< 0.1	0.8	52	< 0.1	115	0.091	< 2	< 10	< 0.1	< 2	0.07	< 0.02	3.7	1.2	104000	< 1	< 0.1	< 0.05	0.16	0.2	7

MW23-1	Date	Screen Interval 4.3 to 7.3m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	< 0.1	0.2	38	< 0.1	110	< 0.015	< 2	< 10	0.1	< 2	< 0.02	< 0.02	6.1	1.9	136000	1	< 0.1	< 0.05	2.60	< 0.1	< 5
	27-Feb-23 Dup	< 0.1	0.2	44	< 0.1	108	0.017	< 2	< 10	0.1	< 2	0.03	< 0.02	6.4	1.9	135000	1	< 0.1	< 0.05	2.72	< 0.1	< 5

MW23-2	Date	Screen Interval 1.8 to 4.8 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	0.9	1.4	152	< 0.2	270	0.048	< 2	< 10	1.3	4	0.09	< 0.02	8.4	6.8	442000	2	< 0.1	< 0.1	7.76	0.4	7

MW23-4	Date	Screen Interval 1.5 to 4.5 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	0.4	0.5	122	< 0.1	88	0.029	< 2	< 10	1.6	4	0.08	< 0.02	2.8	14.4	86200	2	< 0.1	< 0.05	6.90	0.2	< 5

MW23-5	Date	Screen Interval 3.6 to 6.9 m bgs																			
		Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
	27-Feb-23	0.3	1.4	102	< 0.1	84	0.049	< 2	< 10	1.8	2	0.08	< 0.02	6.4	6.2	94600	< 1	< 0.1	< 0.05	5.69	0.3	5

LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-1A — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- SOIL QUALITY EXCEEDS MECP TABLE 3 SCS
- SOIL QUALITY SATISFIES MECP TABLE 3 SCS
- NO SAMPLE
- (53.18) GROUNDWATER ELEVATION (m) TAKEN ON FEBRUARY 27, 2023

0 5m 10m 30m
HORIZONTAL 1:750

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2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)

TITLE: GROUNDWATER ANALYTICAL RESULTS – PAH
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:750
FIG 12

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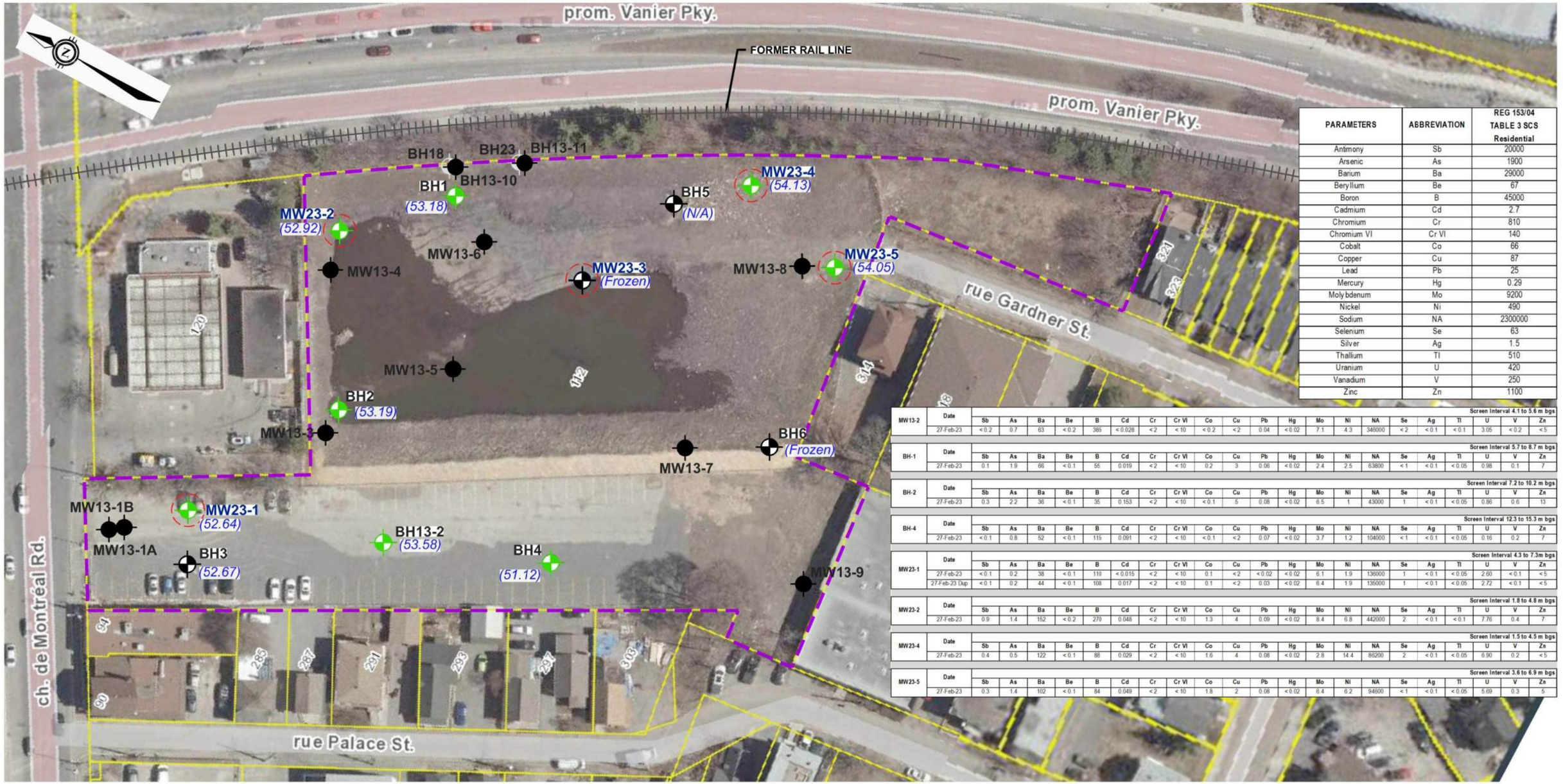
Last Plotted: Apr 10, 2023 3:53 PM
Plotted by: SeverA
2023- Geo Invesigtaion 112 Montreal Road, Ottawa, ON\K -



PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Antimony	Sb	20000
Arsenic	As	1900
Barium	Ba	29000
Beryllium	Be	67
Boron	B	45000
Cadmium	Cd	2.7
Chromium	Cr	810
Chromium VI	Cr VI	140
Cobalt	Co	66
Copper	Cu	87
Lead	Pb	25
Mercury	Hg	0.29
Molybdenum	Mo	9200
Nickel	Ni	490
Sodium	NA	2300000
Selenium	Se	63
Silver	Ag	1.5
Thallium	Tl	510
Uranium	U	420
Vanadium	V	250
Zinc	Zn	1100

MW13-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 4.1 to 5.6 m bgs																				
	27-Feb-23	< 0.2	0.7	63	< 0.2	385	< 0.026	< 2	< 10	< 0.2	< 2	0.04	< 0.02	7.1	4.3	346000	< 2	< 0.1	< 0.1	3.05	< 0.2	< 5

BH-1	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 5.7 to 8.7 m bgs																				
	27-Feb-23	0.1	1.9	66	< 0.1	55	0.019	< 2	< 10	0.2	3	0.06	< 0.02	2.4	2.5	63800	< 1	< 0.1	< 0.05	0.98	0.1	7

BH-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 7.2 to 10.2 m bgs																				
	27-Feb-23	0.3	2.2	36	< 0.1	35	0.153	< 2	< 10	< 0.1	5	0.08	< 0.02	6.5	1	43000	1	< 0.1	< 0.05	0.86	0.6	13

BH-4	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 12.3 to 15.3 m bgs																				
	27-Feb-23	< 0.1	0.8	52	< 0.1	115	0.091	< 2	< 10	< 0.1	< 2	0.07	< 0.02	3.7	1.2	104000	< 1	< 0.1	< 0.05	0.16	0.2	7

MW23-1	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 4.3 to 7.3m bgs																				
	27-Feb-23	< 0.1	0.2	38	< 0.1	110	< 0.015	< 2	< 10	0.1	< 2	< 0.02	< 0.02	6.1	1.9	136000	1	< 0.1	< 0.05	2.60	< 0.1	< 5
	27-Feb-23 Dup	< 0.1	0.2	44	< 0.1	108	0.017	< 2	< 10	0.1	< 2	0.03	< 0.02	6.4	1.9	135000	1	< 0.1	< 0.05	2.72	< 0.1	< 5

MW23-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 1.8 to 4.8 m bgs																				
	27-Feb-23	0.9	1.4	152	< 0.2	270	0.048	< 2	< 10	1.3	4	0.09	< 0.02	8.4	6.8	442000	2	< 0.1	< 0.1	7.76	0.4	7

MW23-4	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 1.5 to 4.5 m bgs																				
	27-Feb-23	0.4	0.5	122	< 0.1	88	0.029	< 2	< 10	1.6	4	0.08	< 0.02	2.8	14.4	86200	2	< 0.1	< 0.05	6.90	0.2	< 5

MW23-5	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
		Screen Interval 3.6 to 6.9 m bgs																				
	27-Feb-23	0.3	1.4	102	< 0.1	84	0.049	< 2	< 10	1.8	2	0.08	< 0.02	6.4	6.2	94600	< 1	< 0.1	< 0.05	5.69	0.3	5

LEGEND

- PROPERTY BOUNDARY
- BH1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2022)
- TP4 — TEST PIT NO. & LOCATION (*EXP*, 2022)
- MW23-1 — BOREHOLE / MONITORING WELL NO. & LOCATION (*EXP*, 2023)
- MW13-1A — MONITORING WELL NO. & LOCATION (*EXP*, 2013)
- SOIL QUALITY EXCEEDS MECP TABLE 3 SCS
- SOIL QUALITY SATISFIES MECP TABLE 3 SCS
- NO SAMPLE
- (53.18) GROUNDWATER ELEVATION (m) TAKEN ON FEBRUARY 27, 2023

0 5m 10m 30m
HORIZONTAL 1:750

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Ottawa, ON K2B 8H6, Canada

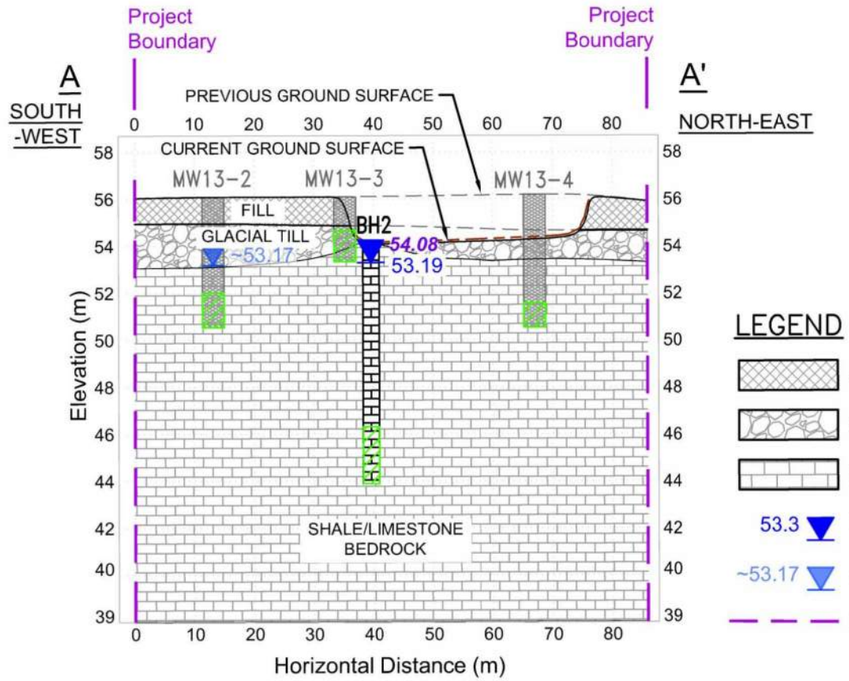
DATE: APRIL 2023
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: 2705460 ONTARIO INCORPORATED

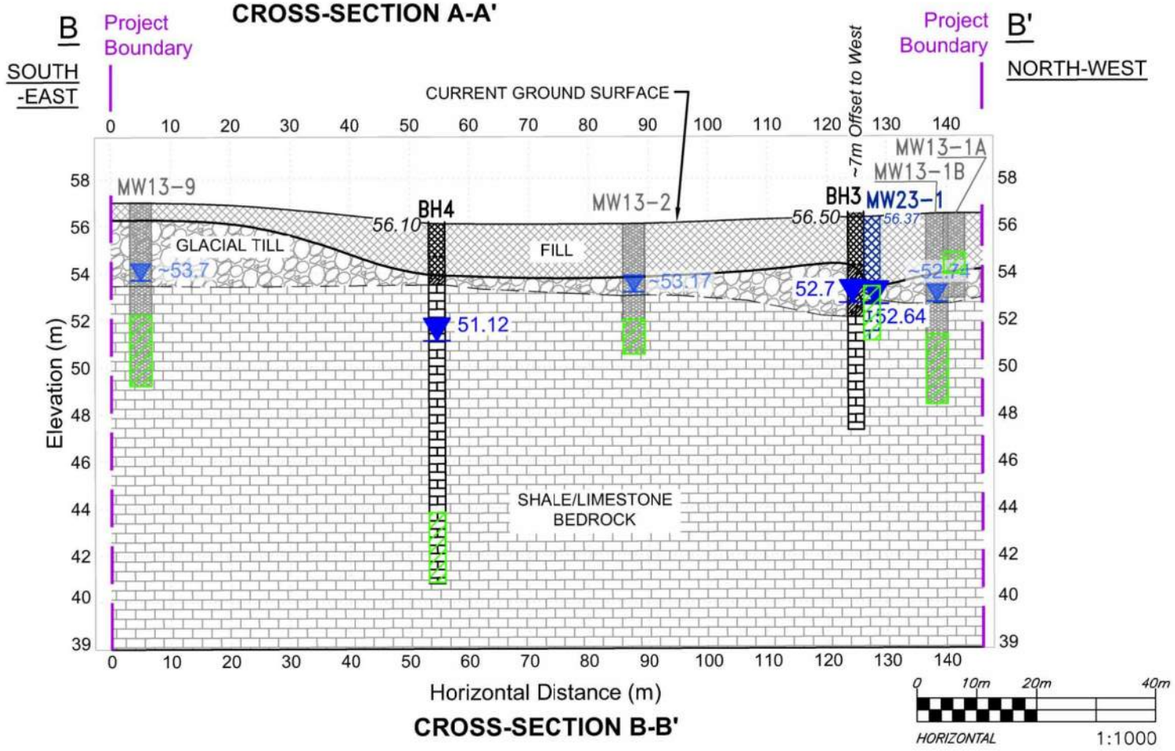
TITLE: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)
GROUNDWATER ANALYTICAL RESULTS – METALS
112 MONTREAL ROAD, OTTAWA, ONTARIO

project no. OTT-00214936-C0
scale 1:750
FIG 13

Filename: \\POTTFS6002\Data\Projects\GeoTechnical\210000\214000\214936-C0_Env-Ph2.dwg
Last Saved: Apr 10, 2023 3:41 PM Last Plotted: Apr 10, 2023 3:54 PM Plotted by: SeverA
2023- Geo Invesigtaion 112 Montreal Road, Ottawa, ONTK -



CROSS-SECTION A-A'



CROSS-SECTION B-B'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- 53.3 RECORDED GROUNDWATER LEVEL (FEB., 2023)
- ~53.17 GROUNDWATER LEVEL (2013)
- PROPERTY BOUNDARY
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 3 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 3 SCS

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	44
Toluene	T	18000
Ethylbenzene	E	2300
Total Xylenes	X	4200
F1	F1 (C6-C10)	750
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
1,1-Dichloroethane	1,1-DCA	320
1,2-Dichlrorethane	1,2-DCA	1.6
1,1-Dichloroethylene	1,1-DCE	1.6
Cis-1,2-Dichloroethylene	c-1,2-DCE	1.6
Trans-1,2,-Dichlorothylene	t-1,2-DCE	1.6
Tetrachloroethylene	PCE	1.6
Trichloroethylene	TCE	1.6
Vinyl Chloride	VC	0.5

MW13-1a	Date	Screen Interval 1.2 to 2.7 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW13-1b	Date	Screen Interval 5.0 to 8.1 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-23	<0.5	2.9	7.5	10.2	102	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW13-2	Date	Screen Interval 4.1 to 5.6 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-13	0.7	4.4	3	4.3	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW13-3	Date	Screen Interval 1.3 to 2.8 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW13-4	Date	Screen Interval 4.6 to 5.7 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-13	1	8.2	8.7	13.2	156	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW13-6	Date	Screen Interval 3.5 to 6.9 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-13	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	14-Nov-13 DUP	<0.5	<0.5	<0.5	0.9	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW13-9	Date	Screen Interval 4.7 to 7.8 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	14-Nov-23	<0.5	0.6	0.6	0.9	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH18	Date	Screen Interval Unknown															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	19-Nov-23	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH23	Date	Screen Interval Unknown															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	19-Nov-23	<0.5	<0.5	<0.5	<0.5	<200	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-1	Date	Screen Interval 5.7 to 8.7 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	0.9	0.9	<0.5	<1.1	98	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
BH-2	Date	Screen Interval 7.2 to 10.2 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
BH-4	Date	Screen Interval 12.3 to 15.3 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	1.7	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW23-1	Date	Screen Interval 4.3 to 7.3m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	27-Feb-23 Dup	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW23-2	Date	Screen Interval 1.8 to 4.8 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW23-4	Date	Screen Interval 1.5 to 4.5 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
MW23-5	Date	Screen Interval 3.6 to 6.9 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	27-Feb-23	<0.5	<0.5	<0.5	<1.1	<25	<50	<400	<400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

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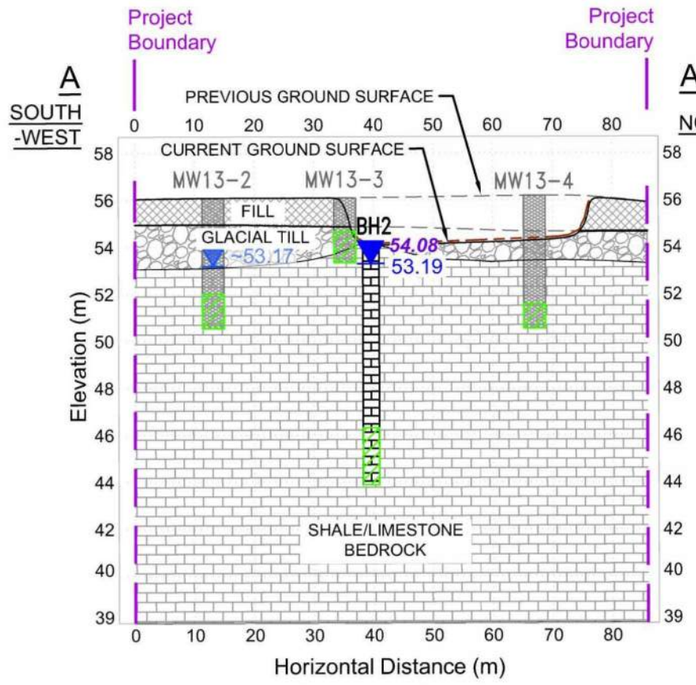
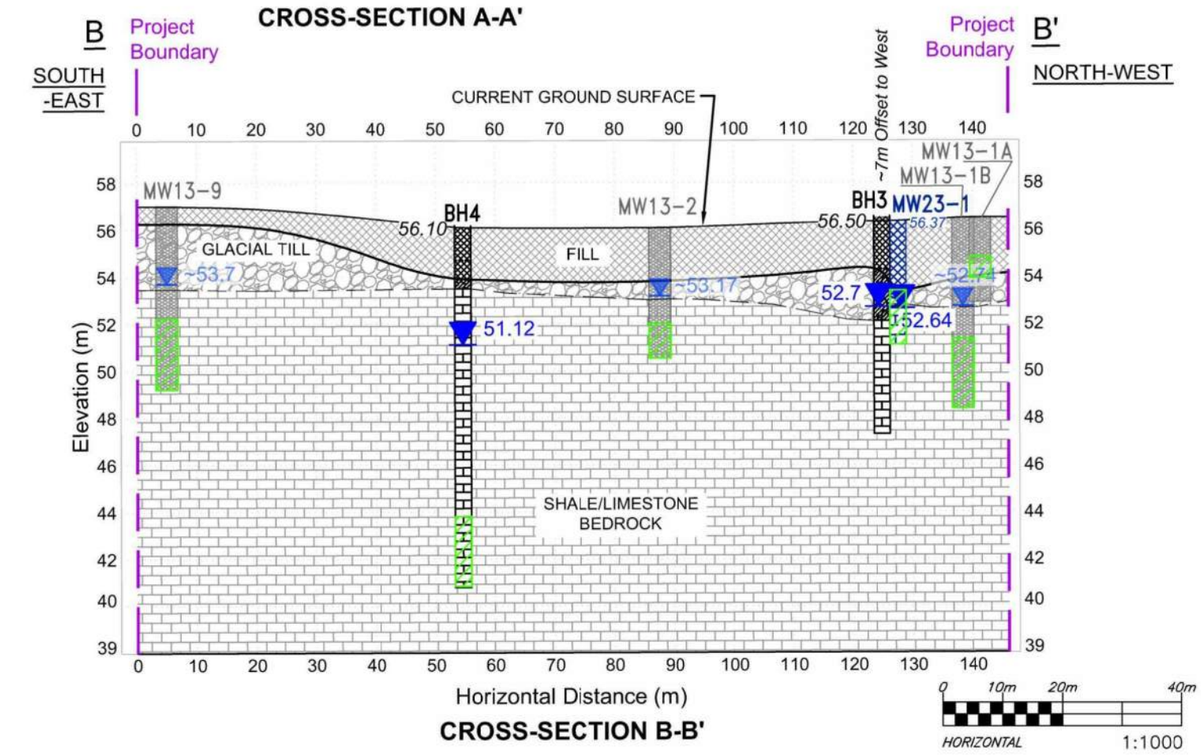
DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:1000
DRAWN BY: AS	TITLE: GROUNDWATER CROSS-SECTIONS A-A', B-B' – PHC & BTEX 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 14



CROSS-SECTION A-A'



CROSS-SECTION B-B'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 3 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 3 SCS
- 53.3 ▼ RECORDED GROUNDWATER LEVEL (FEB., 2023)
- ~53.17 ▼ GROUNDWATER LEVEL (2013)
- PROPERTY BOUNDARY

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Acenaphthene	Ace	600
Acenaphthylene	Acl	1.8
Anthracene	An	2.4
Benzo(a)anthracene	B(a)A	4.7
Benzo(a)pyrene	B(a)P	0.81
Benzo(b/j)fluoranthene	B(b)F	0.75
Benzo(ghi)perylene	B(ghi)P	0.2
Benzo(k)fluoranthene	B(k)F	0.4
Chrysene	C	1
Dibenzo(a,h)anthracene	DA	0.52
Fluoranthene	Fl	130
Fluorene	F	400
Indeno(1,2,3-cd)pyrene	I(123)P	0.2
1-Methylnaphthalene	1-MN	NV
2-Methylnaphthalene	2-MN	NV
Methylnaphthalene, 2-(1-)	T-MN	1800
Naphthalene	N	1400
Phenanthrene	P	580
Pyrene	Py	68

MW13-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 4.1 to 5.6 m bgs	27-Feb-23	< 0.2	0.7	63	< 0.2	385	< 0.028	< 2	< 10	< 0.2	< 2	0.04	< 0.02	7.1	4.3	346000	< 2	< 0.1	< 0.1	3.05	< 0.2	< 5

BH-1	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 5.7 to 8.7 m bgs	27-Feb-23	0.1	1.9	66	< 0.1	55	0.019	< 2	< 10	0.2	3	0.06	< 0.02	2.4	2.5	63800	< 1	< 0.1	< 0.05	0.98	0.1	7

BH-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 7.2 to 10.2 m bgs	27-Feb-23	0.3	2.2	36	< 0.1	35	0.153	< 2	< 10	< 0.1	5	0.08	< 0.02	6.5	1	43000	1	< 0.1	< 0.05	0.86	0.6	13

BH-4	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 12.3 to 15.3 m bgs	27-Feb-23	< 0.1	0.8	52	< 0.1	115	0.091	< 2	< 10	< 0.1	< 2	0.07	< 0.02	3.7	1.2	104000	< 1	< 0.1	< 0.05	0.16	0.2	7

MW23-1	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 4.3 to 7.3m bgs	27-Feb-23	< 0.1	0.2	38	< 0.1	110	< 0.015	< 2	< 10	0.1	< 2	< 0.02	< 0.02	6.1	1.9	138000	1	< 0.1	< 0.05	2.60	< 0.1	< 5
	27-Feb-23 Dup	< 0.1	0.2	44	< 0.1	108	0.017	< 2	< 10	0.1	< 2	0.03	< 0.02	6.4	1.9	135000	1	< 0.1	< 0.05	2.72	< 0.1	< 5

MW23-2	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 1.8 to 4.8 m bgs	27-Feb-23	0.9	1.4	152	< 0.2	270	0.048	< 2	< 10	1.3	4	0.09	< 0.02	8.4	6.8	442000	2	< 0.1	< 0.1	7.76	0.4	7

MW23-4	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 1.5 to 4.5 m bgs	27-Feb-23	0.4	0.5	122	< 0.1	88	0.029	< 2	< 10	1.6	4	0.08	< 0.02	2.8	14.4	86200	2	< 0.1	< 0.05	6.90	0.2	< 5

MW23-5	Date	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
Screen Interval 3.6 to 6.9 m bgs	27-Feb-23	0.3	1.4	102	< 0.1	84	0.049	< 2	< 10	1.8	2	0.08	< 0.02	6.4	6.2	94600	< 1	< 0.1	< 0.05	5.69	0.3	5

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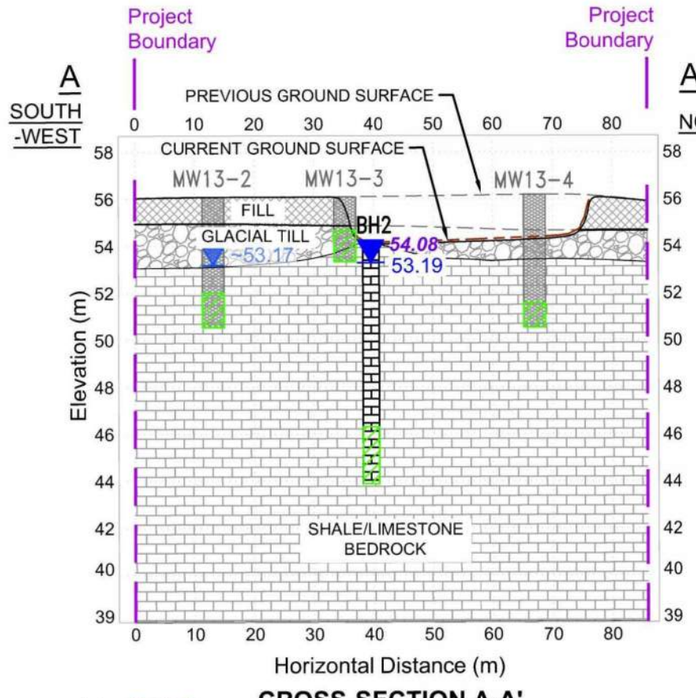
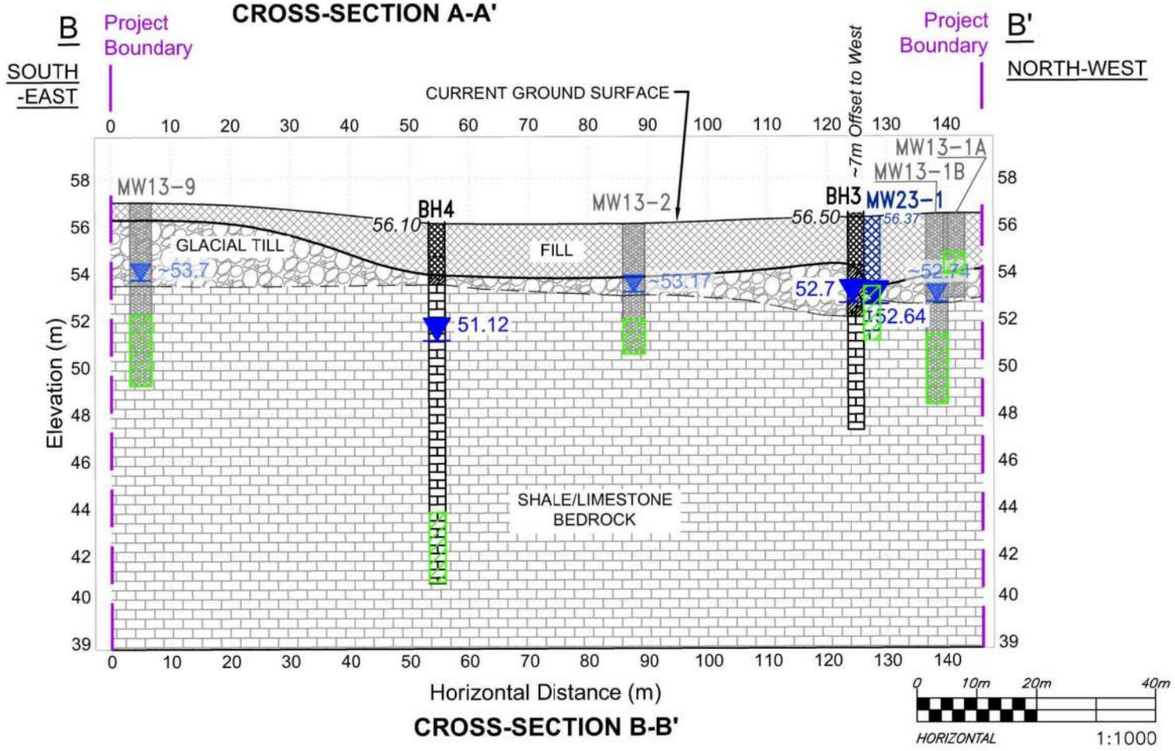
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:1000
DRAWN BY: AS	TITLE: GROUNDWATER CROSS-SECTIONS A-A', B-B' – PAH 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 15



CROSS-SECTION A-A'



CROSS-SECTION B-B'

LEGEND

- FILL
- GLACIAL TILL
- LIMESTONE BEDROCK
- 53.3 RECORDED GROUNDWATER LEVEL (FEB., 2023)
- ~53.17 GROUNDWATER LEVEL (2013)
- PROPERTY BOUNDARY
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 3 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 3 SCS

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Antimony	Sb	20000
Arsenic	As	1900
Barium	Ba	29000
Beryllium	Be	67
Boron	B	45000
Cadmium	Cd	2.7
Chromium	Cr	810
Chromium VI	Cr VI	140
Cobalt	Co	66
Copper	Cu	87
Lead	Pb	25
Mercury	Hg	0.29
Molybdenum	Mo	9200
Nickel	Ni	490
Sodium	NA	2300000
Selenium	Se	63
Silver	Ag	1.5
Thallium	Tl	510
Uranium	U	420
Vanadium	V	250
Zinc	Zn	1100

Date	Screen Interval 4.1 to 5.6 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	< 0.2	0.7	63	< 0.2	385	< 0.028	< 2	< 10	< 0.2	< 2	0.04	< 0.02	7.1	4.3	346000	< 2	< 0.1	< 0.1	3.05	< 0.2	< 5

Date	Screen Interval 5.7 to 8.7 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	0.1	1.9	66	< 0.1	55	0.019	< 2	< 10	0.2	3	0.06	< 0.02	2.4	2.5	63800	< 1	< 0.1	< 0.05	0.98	0.1	7

Date	Screen Interval 7.2 to 10.2 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	0.3	2.2	36	< 0.1	35	0.153	< 2	< 10	< 0.1	5	0.08	< 0.02	6.5	1	43000	1	< 0.1	< 0.05	0.86	0.6	13

Date	Screen Interval 12.3 to 15.3 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	< 0.1	0.8	52	< 0.1	115	0.091	< 2	< 10	< 0.1	< 2	0.07	< 0.02	3.7	1.2	104000	< 1	< 0.1	< 0.05	0.16	0.2	7

Date	Screen Interval 4.3 to 7.3m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	< 0.1	0.2	38	< 0.1	110	< 0.015	< 2	< 10	0.1	< 2	< 0.02	< 0.02	6.1	1.9	136000	1	< 0.1	< 0.05	2.60	< 0.1	< 5
27-Feb-23 Dup	< 0.1	0.2	44	< 0.1	108	0.017	< 2	< 10	0.1	< 2	0.03	< 0.02	6.4	1.9	135000	1	< 0.1	< 0.05	2.72	< 0.1	< 5

Date	Screen Interval 1.8 to 4.8 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	0.9	1.4	152	< 0.2	270	0.048	< 2	< 10	1.3	4	0.09	< 0.02	8.4	6.8	442000	2	< 0.1	< 0.1	7.76	0.4	7

Date	Screen Interval 1.5 to 4.5 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	0.4	0.5	122	< 0.1	88	0.029	< 2	< 10	1.6	4	0.08	< 0.02	2.8	14.4	86200	2	< 0.1	< 0.05	6.90	0.2	< 5

Date	Screen Interval 3.6 to 6.9 m bgs																			
	Sb	As	Ba	Be	B	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	NA	Se	Ag	Tl	U	V	Zn
27-Feb-23	0.3	1.4	102	< 0.1	84	0.049	< 2	< 10	1.8	2	0.08	< 0.02	6.4	6.2	94600	< 1	< 0.1	< 0.05	5.69	0.3	5

exp Services Inc. www.exp.com
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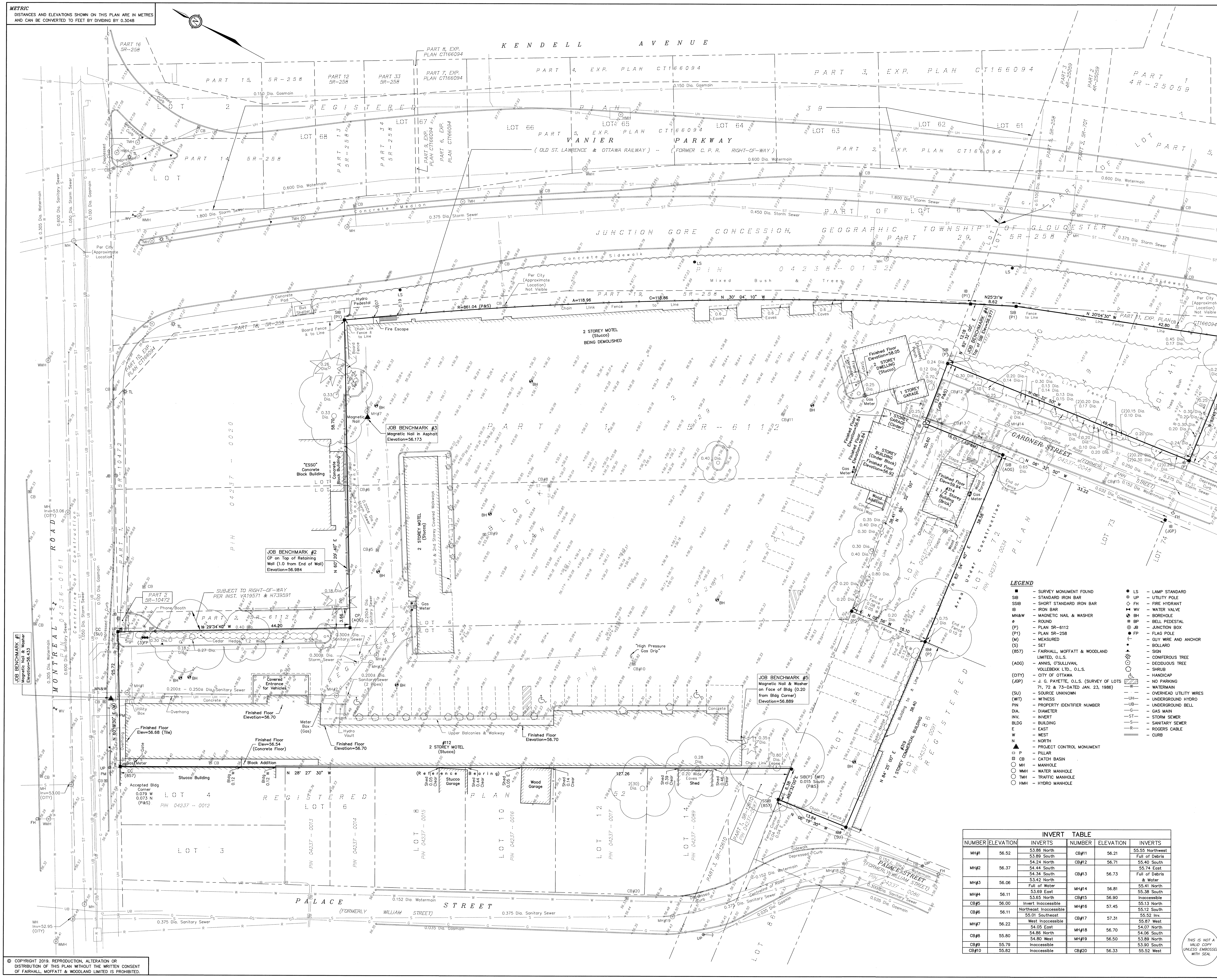
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: APRIL 2023	CLIENT: 2705460 ONTARIO INCORPORATED	project no. OTT-00214936-C0
DESIGN: LW / CHECKED: MM	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT (ESA)	scale 1:1000
DRAWN BY: AS	TITLE: GROUNDWATER CROSS-SECTIONS A-A', B-B' – METALS 112 MONTREAL ROAD, OTTAWA, ONTARIO	FIG 16

Appendix B: Survey Plan



TOPOGRAPHIC SURVEY OF
LOT 5 AND PART OF LOTS 6 AND 7
BLOCK 2
REGISTERED PLAN 29
AND
LOTS 71 & 88 and
PART OF LOTS 40 & 41
REGISTERED PLAN 49
CITY OF OTTAWA

SCALE 1 : 250

0 5 10 20 25 metres

FAIRHALL, MOFFATT & WOODLAND LIMITED
ONTARIO LAND SURVEYORS

LEGEND

- ■ – SURVEY MONUMENT FOUND
- SIB – STANDARD IRON BAR
- SSIB – SHORT STANDARD IRON BAR
- IB – IRON BAR
- MN&W – MAGNETIC NAIL & WASHER
- ø – ROUND
- (P) – PLAN 5R-6112
- (P1) – PLAN 5R-258
- (M) – MEASURED
- (S) – SET
- (857) – FAIRHALL, MOFFATT & WOODLAND LIMITED, O.L.S.
- (AOG) – ANNIS, O'SULLIVAN, VOLLEBEKK LTD., O.L.S.
- (CITY) – CITY OF OTTAWA
- (JGP) – J. G. PAYETTE, O.L.S. (SURVEY OF LOTS 71, 72 & 73–DATED JAN. 23, 1986)
- (SU) – SOURCE UNKNOWN
- (WIT) – WITNESS
- PIN – PROPERTY IDENTIFIER NUMBER
- DIA. – DIAMETER
- INV. – INVERT
- BLDG – BUILDING
- E – EAST
- W – WEST
- N – NORTH
- ▲ – PROJECT CONTROL MONUMENT
- P – PILLAR
- CB – CATCH BASIN
- MH – MANHOLE
- WMH – WATER MANHOLE
- TMH – TRAFFIC MANHOLE
- HMH – HYDRO MANHOLE
- LS – LAMP STANDARD
- UP – UTILITY POLE
- FH – FIRE HYDRANT
- WV – WATER VALVE
- BH – BOREHOLE
- BP – BELL PEDESTAL
- JB – JUNCTION BOX
- FP – FLAG POLE
- – GUY WIRE AND ANCHOR
- – BOLLARD
- – SIGN
- – CONIFEROUS TREE
- – DECIDUOUS TREE
- – SHRUB
- – HANDICAP
- – NO PARKING
- —W— – WATERMAIN
- – OVERHEAD UTILITY WIRES
- —UH— – UNDERGROUND HYDRO
- —UB— – UNDERGROUND BELL
- —G— – GAS MAIN
- —ST— – STORM SEWER
- —S— – SANITARY SEWER
- —R— – ROGERS CABLE
- ═ – CURB

ELEVATION NOTES

1. ELEVATIONS SHOWN HEREON ARE REFERRED TO GEODETIC DATUM.
2. ELEVATIONS FOR MANHOLE COVERS AND CATCH BASINS HAVE TO BE INDEPENDENTLY CONFIRMED BEFORE THEY CAN BE ACCEPTED FOR FINAL DESIGN OR CONSTRUCTION PURPOSES.
3. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED AND THAT THEIR RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THIS DRAWING.

UTILITY NOTES

1. THIS DRAWING CANNOT BE ACCEPTED AS ACKNOWLEDGING ALL OF THE UNDERGROUND UTILITIES AND IT WILL BE THE RESPONSIBILITY OF THE USER TO CONTACT THE RESPECTIVE UTILITY AUTHORITIES FOR CONFIRMATION OR LOCATION.
2. UNDERGROUND UTILITIES, AS REPORTED ON THIS DRAWING, ARE NOT BASED ON AN ACTUAL 'FIELD LOCATE' BY THE RESPECTIVE UTILITY AGENCIES BUT HAVE BEEN COMPILED FROM DATA OBTAINED FROM THE FOLLOWING SOURCE:
   a) CITY OF OTTAWA PUBLIC UTILITIES REGISTRY
3. BEFORE ANY WORK INVOLVING PROBING, EXCAVATING, ETC., A FIELD LOCATION OF UNDERGROUND PLANT BY THE PERTINENT UTILITY AUTHORITY IS MANDATORY.

NOTES

1. BEARINGS ARE ASTRONOMIC AND ARE DERIVED FROM THE WESTERLY LIMIT OF PART 1, PLAN 5R-6112 SHOWN AS HAVING A BEARING OF N 28°27'30" W.
2. REVISION: JULY 16, 2014 – ADDED UTILITIES ALONG VANIER PARKWAY AND INTERSECTION OF VANIER PARKWAY AND MONTREAL ROAD.
3. REVISION: SEPTEMBER 24, 2014 – ADDED TOPOGRAPHIC INFORMATION ALONG VANIER PARKWAY AND INTERSECTION OF VANIER PARKWAY AND MONTREAL ROAD. SURVEYED LOT 71, REGISTERED PLAN 49, WEST OF GARDINER STREET.
4. REVISION: SEPTEMBER 13, 2019 – REMOVED DEMOLISHED BUILDINGS. ADDED IN VINYL FENCE AT SOUTHERLY BOUNDARY. ADDED OVERHEAD UTILITY WIRES AT SOUTHERLY BOUNDARY AND NORTHERLY BOUNDARY.

INVERT TABLE

NUMBER	ELEVATION	INVERTS	NUMBER	ELEVATION	INVERTS
MH#1	56.52	53.86 North 53.89 South	CB#11	56.21	55.55 Northwest Full of Debris
MH#2	56.37	54.24 North 54.44 South 54.34 South	CB#12	56.71	55.40 South
			CB#13	56.73	55.74 East Full of Debris & Water
MH#3	56.06	53.42 North Full of Water	MH#14	56.81	55.41 North 55.38 South
MH#4	56.11	53.69 East 53.65 North	CB#15	56.90	Inaccessible
CB#5	56.00	Invert Inaccessible	MH#16	57.45	55.13 North 55.12 South
CB#6	56.11	Northeast Inaccessible 55.01 Southeast	CB#17	57.31	55.52 Inv. 55.87 West
MH#7	56.22	West Inaccessible 54.05 East	MH#18	56.70	54.07 North 54.06 South
CB#8	55.80	54.86 North 54.80 West	MH#19	56.50	53.89 North 53.90 South
CB#9	55.79	Inaccessible			
CB#10	55.82	Inaccessible	CB#20	56.33	55.52 West

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON SEPTEMBER 13, 2019.

2019/10/04
DATE

JOHN H. GUTRI
ONTARIO LAND SURVEYOR

Fairhall Moffatt & Woodland LIMITED
ONTARIO LAND SURVEYORS
OTTAWA
Surveying and Land Information Services
100–600 TERRY FOX DRIVE, KANATA, ONTARIO K2L 4B6
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JOB No. Z27300
E 370053, N 5032955
REFERENCE No. 21(b)–49, 15(b)–29
S:\JOBS\Z27300\DWG 2019-09-16
z273_topo-rev.dwg

Appendix C: Sampling and Analysis Plan

1 Introduction

This appendix presents the Sampling and Analysis Plan (SAAP) that was developed in support of the Phase Two Environmental Site Assessment (ESA) for the property located at 112 Montreal Road in Ottawa, Ontario (hereinafter referred to as the 'site'). The SAAP presents the procedures and measures that will be undertaken during field investigative activities to characterize the site conditions and meet the data quality objectives of the Phase Two ESA.

The SAAP presents the sampling program proposed for the site, the recommended procedures and protocols for sampling and related field activities, the data quality objectives, and the quality assurance/ quality control measures that will be undertaken to provide for the collection of accurate, reproducible and representative data. These components are described in further detail below.

2 Field Sampling Program

The field sampling program was developed to provide for the collection of samples of the soil and groundwater for chemical analysis of petroleum hydrocarbons (PHC), benzene, toluene, ethylbenzene and xylenes (collectively known as 'BTEX'), polycyclic aromatic hydrocarbons (PAH), volatile organic compounds (VOC) and/or metals. The soil sampling media is to consist of the overburden materials. The soil sampling will be location-specific to assess for the potential contaminants of concern (PCOC) based on the identification of potential areas of potential environmental concern identified in a Phase One ESA completed by EXP.

Each of the groundwater samples will be submitted for analysis of PHC, PHA, VOC and metals. The monitoring well network is to comprise of five new monitoring wells and one existing monitoring well.

Vertical control of the boreholes and monitoring wells will be obtained through the completion of an elevation survey with reference to a geodetic benchmark. Groundwater flow and direction in the bedrock aquifer will also be determined through groundwater level measurements and the elevations established in the site elevation survey.

3 Field Methods

To meet the requirements of the field sampling program, the following field investigative methods will be undertaken:

- Borehole Drilling;
- Test Pit Excavation;
- Auger Hole Installation;
- Soil Sampling;
- Monitoring Well Installation;
- Groundwater Level Measurements;
- Elevation Survey; and,
- Groundwater Sampling.

Prior to any subsurface work, utility clearances will be obtained from public and private locators, as required. The borehole drilling program will be conducted by a licensed driller under the oversight of EXP field staff.

The field investigative methods will be performed following the procedures and protocols set out in EXP's standard operating procedures and are outlined below:

3.1 Borehole Drilling

Boreholes will be advanced at the site in conjunction with a geotechnical investigation to facilitate the collection of soil samples for chemical analysis and geologic characterization; and, for the installation of groundwater monitoring wells. A total eleven (11) boreholes are proposed to be advanced at the site, to provide for the collection of samples of the surficial and overburden materials beneath the site. The borehole locations were selected to assess the areas of potential environmental concern and PCOC related impacts to the soils and the groundwater. Soil samples will be collected from six of the boreholes and submitted for analysis of BTEX, PHC, and metals.

3.2 Test Pit Excavation

A total of nine test pits will be excavated into the on-site berm to facilitate the collection of soil samples for chemical analysis. The test pit locations were selected to assess the soil quality of the berm, which runs north-south through the centre of the site. One to two soil samples will be collected from each test pit location and submitted for analysis of BTEX, PHC, and metals.

3.3 Auger Hole Installation

Auger holes will be installed on the site in conjunction with the geotechnical investigation. A total of ten auger holes is proposed to be advanced at the site, up to a maximum depth of approximately 3 m below grade, to provide for the collection of samples of the surficial and overburden materials beneath the site. The borehole locations were selected to assess the areas of potential environmental concern and PCOC related impacts to the on-site soil. Two soil samples will be collected from each auger hole location and submitted for analysis of BTEX, PHC, and metals.

3.4 Soil Sampling

Soil samples will be collected for chemical analysis and geologic property characterization. The soil samples will be collected using 5 cm diameter, 60 cm long, stainless steel split-spoon sampling devices at continuous intervals. The split spoon sampling devices will be attached to drill rods and advanced into the soil by means of a standard penetrating hammer. Upon retrieval from the boreholes, the split-spoon samplers will be placed on a flat surface and disassembled by drilling personnel to provide access of the recovered cores. Geologic and sampling details of the recovered cores will be logged and the samples will be assessed for the potential presence of non-aqueous phase liquids. Samples for chemical analysis will be selected on the basis of visual and olfactory evidence of impacts and at specific intervals to define the lateral and vertical extent of known impacts.

Recommended volumes of soil samples selected for chemical analysis will be collected into pre-cleaned, laboratory supplied, analytical test group specific containers. The samples will be placed into clean insulated coolers chilled with ice for storage and transport. Samples intended for analysis of BTEX and PHC F1-F2 will be collected into 40 ml vials. The samples will be assigned unique identification numbers, and the date, time, location, and requested analyses for each sample will be documented in a bound field note book. The samples will be submitted to the

contract laboratory within analytical test group holding times under Chain of Custody (COC) protocols. New disposable chemical resistant gloves will be used for each soil core to prevent sample cross-contamination.

3.5 Monitoring Well Installation

It is proposed that nine (9) of the boreholes will be instrumented as a groundwater monitoring well installed with slotted screens, installed in the bedrock. The monitoring wells will be constructed using 51 mm diameter, Schedule 40, PVC riser pipe and number 10 slot size (0.25 mm) well screens. The base of the well screens will be sealed with threaded flush PVC end caps. All well pipe connections will be factory machined threaded flush couplings. The annular space around the well screens will be backfilled with silica sand, to an average height of 0.3 m above the top of the screen. Granular bentonite will be placed in the borehole annulus from the top of the sand pack to approximately 0.3 m below grade. The monitoring wells will be completed with either a flush-mounted protective steel casing or above ground protective casings cemented into place.

3.6 Monitoring Well Development

The newly installed monitoring wells will be developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance hydraulic communication with the surrounding formation waters.

Standing water volumes will be determined by means of an electronic water level meter. Prior to collecting groundwater samples, the monitoring wells will be developed using low flow sampling techniques to reduce the amount of sediment in the samples. Well development details will be documented on a well development log sheet or in a bound hard cover notebook. All development waters will be collected and stored in labeled, sealed containers.

3.7 Groundwater Level Measurements

Groundwater level measurements will be recorded for the monitoring wells to determine groundwater flow and direction in the water table aquifer beneath the site. Water levels will be measured with respect to the top of the casing by means of an electronic water level meter. The water levels will be recorded on water level log sheets. The water level meter probe will be decontaminated between monitoring well locations.

3.8 Elevation Survey

An elevation survey will be conducted to obtain vertical control of all monitoring well locations. The top of casing and ground surface elevation of each monitoring well location will be surveyed against a known geodetic benchmark, or if unavailable, against a suitable arbitrary benchmark. Elevations measured against using a high precision GPS unit and a benchmark with an assigned elevation will be recorded as meters above mean sea level (m AMSL). The elevation survey will be accurate to within ± 0.5 cm.

3.9 Groundwater Sampling

Groundwater samples will be collected from the newly installed monitoring wells and one existing monitoring wells and submitted for chemical analysis. The wells will be sampled using a “low flow” technique whereby the wells are continuously purged using an electric pump (equipped with dedicated tubing) and parameters within the purged water are monitored using a groundwater chemistry multi-meter at 3-minute intervals. These parameters include: pH, conductivity, temperature, and salinity. Once these parameters are found to deviate less than 10% over three testing events, equilibrium is deemed to have occurred and a sample of the groundwater will be

collected. The purge water will also be continuously monitored for visual and olfactory evidence of petroleum and solvent impact (sheen and odour).

Recommended groundwater sample volumes will be collected into pre-clean laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples will be placed in an insulated cooler chilled with ice for storage and transport. Each VOC vial will be inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space is present. All groundwater samples will be assigned unique identification numbers, and the date, time, project number, company name, location and requested analyses for each sample will be documented in a bound hard cover notebook. The samples will be submitted to the contractual laboratory within analytical test group holding times under COC protocols. New disposable chemical resistant gloves will be used for each sampling location to prevent sample cross-contamination.

It is proposed that a total of ten (10) groundwater samples be submitted for analysis of PHC, VOC, PAH, and metals.

4 Field Quality Assurance/Quality Control Program

The objective of the field quality assurance/quality control (QA/QC) program is to obtain soil and groundwater samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA. The objectives of the QA/QC program will be achieved through the implementation of procedures for the collection of unbiased (i.e. non-contaminated) samples, sample documentation and the collection of appropriate QC samples to provide a measure of sample reproducibility and accuracy. The field QA/QC measures will comprise:

- Decontamination Protocols;
- Equipment Calibration;
- Sample Preservation;
- Sample Documentation; and,
- Field Quality Control Samples.

Details on the field QA/QC measures are provided below.

4.1 Decontamination Protocols

Decontamination protocols will be followed during field sampling where non-dedicated sampling equipment is used to prevent sample cross contamination. The split spoon soil sampling device will be cleaned/decontaminated between sampling intervals in according with SOP requirements. For the monitoring well installation, well components are not to come into contact with the ground surface prior to insertion into boreholes. Electronic water level meters will be decontaminated between monitoring well locations during well development, and purging activities. For hydraulic conductivity tests, the electronic water level meters will be decontaminated between sampling locations. All decontamination fluids will be collected and stored in sealed, labeled containers.

4.2 Equipment Calibration

All equipment requiring calibration will be calibrated in the field according to manufacturer's requirements using analytical grade reagents, or by the supplier prior to conducting field activities, and subsequently checked in the

field. The calibration of all pre-calibrated instruments will be checked in the field using analytical grade reagents and re-calibrated as required. For multiple day sampling events, equipment calibration will be checked prior to the beginning of sampling activities. All calibration data will be documented in a bound hard cover notebook.

4.3 Sample Preservation

All samples will be preserved using appropriate analytical test group specific reagents, as required, and upon collection placed in pre-chilled insulated coolers packed with ice for storage and transport.

4.4 Sample Documentation

All samples will be assigned a unique identification number, which is to be recorded along with the date, time, project number, company name, location and requested analysis in a bound field notebook. All samples will be handled and transported following COC protocols.

4.5 Field Quality Control

Field quality controls samples will be collected to evaluate the accuracy and reproducibility of the field sampling procedures. For soil and groundwater sampling, one (1) field duplicate is to be collected for every ten (10) samples submitted for chemical analysis. The field duplicate samples will be assessed by calculating the relative percent difference and comparing to the analytical test group specific acceptance criteria.

Appendix D: Borehole Logs

Log of Borehole 13-1A

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 3

Page. 1 of 1

Date Drilled: 'October 23, 2013 / November 7, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample ⊠
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	56.5 / 56.4	0	43	×		
		FILL Crushed limestone, sand and gravel, grey, moist, (dense)	55.7	1	9	×		
		FILL Sand, silt and gravel with some brick debris, some boulders and cobbles, dark grey with black and lighter patches, moist (loose to very loose)			5	×		
			54.2	2	4	×		
			53.8		13	×		19.2
		GLACIAL TILL Some silt with cobbles, trace clay, brown, wet (compact to very dense)		3	69	×		21.6
			52.9					
		Borehole Terminated at 3.6 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
Completion	Dry	
7 Days	2.4	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole 13-1B

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 4

Page. 1 of 1

Date Drilled: 'October 23, 2013 / November 7, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample ⊠ | Auger Sample ◧ | SPT (N) Value ○ | Dynamic Cone Test —— | Shelby Tube ■ | Shear Strength by Vane Test +S

Combustible Vapour Reading □ | Natural Moisture Content × | Atterberg Limits ⊢○ | Undrained Triaxial at % Strain at Failure ⊕ | Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	56.48 / 56.4	0	20 40 60 80 / 50 100 150 200	250 500 750 / 20 40 60		
		FILL Crushed limestone, sand and gravel, grey, moist, (dense)	55.7					
		FILL Sand, silt and gravel with some brick debris, some boulders and cobbles, dark grey with black and lighter patches, moist (loose to very loose)		1				
				2				
			53.9					
		SAND AND GRAVEL TILL Some silt, cobbles, trace clay, brown, wet (compact to very dense)	53.5	3			Run 1	
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (poor to excellent quality)	52.58	4			Run 2	
				5			Run 3	
				6				
				7			Run 4	
			48.4	8			Run 5	
		Borehole Terminated at 8.1 m						

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
12 Days	3.9	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	3 - 3.41	100	38
2	3.41 - 4.45	88	85
3	4.45 - 5.98	100	77
4	5.98 - 7.5	92	87
5	7.5 - 8.06	100	100

Log of Borehole 13-2

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 5

Page. 1 of 1

Date Drilled: 'October 24, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	56.13	0				
		FILL Sand and gravel, grey, moist, (compact)	56.0					
		SANDY GRAVELLY TILL Some silt, shale fragments present, brown/grey to dark grey, moist (compact)	55.2	1	26			
		- Boulders and cobbles at 2.3 m depth			12, 18			
				2	22			
			53.3		50/51mm			
		LIMESTONE BEDROCK Grey aphanitic to medium grained shaley partings along bedding planes, stratification flat to gently dipping, mainly medium bedding, principal joints near vertical and moderately to widely spread, (excellent quality)	53.23	3				
				4			Run 1	
				5			Run 2	
			50.5					
		Borehole Terminated at 5.6 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
26 days	2.9	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	3.05 - 4.32	100	100
2	4.32 - 5.64	100	100

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole 13-3

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 6

Page. 1 of 1

Date Drilled: 'October 23, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 100 mm	56.13	0				
		FILL	56.0					
		Sand, silt and gravel with some brick debris, brown grey and orange, moist (compact)	55.5		10			
		SANDY GRAVELLY TILL		1	6			
		Some silt, shale fragments, brown/grey to dark grey, moist to wet, (loose to very dense)			9			
		- Boulders and cobbles at 1.8 m depth		2	60			
			53.73		50/25mm			
		Auger Refusal at 2.8 m Depth, Borehole Terminated	53.3					

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
Completion	Dry	
1 Day	Dry	
27	2.4	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole 13-4

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 7

Page. 1 of 1

Date Drilled: 'October 24, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 19 mm	56.23	0				
		FILL Sand, silt and gravel with trace organics, clay and wood debris, dark brownish grey and white, moist, (compact to loose)	56.1		31			
				1	5			
			54.7		12			
		SANDY GRAVELLY TILL Some silt, shale fragments, brown/grey to dark grey, moist (compact) - Boulders and cobbles at 2.2 m depth		2	50/50mm			
			53.5					
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (excellent quality)	53.13	3				Run 1
				4				
				5				Run 2
			50.5					
		Auger Refusal at 2.7 m Depth, Borehole Terminated at 5.7 m						

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
26 Days	3.1	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.69 - 4.35	95	95
2	4.35 - 5.74	98	96

Log of Borehole 13-5

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 8

Page. 1 of 1

Date Drilled: 'November 7, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	55.89	0	5			16.9
		FILL Sand and gravel, dark brown, moist, (loose)	55.8					
		SANDY GRAVELLY TILL Some silt, shale fragments, brown/grey to dark grey, moist (compact)	55.1	1	34			
		- Boulders and cobbles at 2.3 m depth		2	41			
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (fair to excellent quality)	53.5	3				Run 1
			52.39	4				Run 2
				5				Run 3
				6				Run 4
			48.7	7				
		Auger Refusal at 2.4 m Depth, Borehole Terminated at 7.2 m						

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Piezometer with a 13mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
7 Days	3.5	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.42 - 2.78	85	64
2	2.78 - 4.3	100	100
3	4.3 - 5.74	93	93
4	5.74 - 7.24	100	98

Log of Borehole 13-6

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 9

Page. 1 of 1

Date Drilled: 'October 24, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample ⊠
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth
		ASPHALT ~ 50 mm	56.26	0
		FILL Crushed limestone, sand and gravel, grey, moist, (loose)	56.2	
		SANDY GRAVELLY TILL Some silt, cobbles, dark brown grey, moist, (compact to dense)	56.1	
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (excellent quality)	53.7	1
			52.16	2
				3
				4
				5
				6
		Auger Refusal at 2.6 m Depth, Borehole Terminated at 6.9 m	49.4	

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

6
15
12
50/130mm

SAMPLES: Run 1, Run 2, Run 3

Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
26 days	4.1	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.64 - 3.86	100	100
2	3.86 - 5.49	100	97
3	5.49 - 6.91	100	98

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole 13-7

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 10

Page. 1 of 1

Date Drilled: 'November 7, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample ⊠ | Auger Sample ◧ | SPT (N) Value ○ | Dynamic Cone Test —— | Shelby Tube ■ | Shear Strength by Vane Test +S

Combustible Vapour Reading □ | Natural Moisture Content × | Atterberg Limits ⊢○ | Undrained Triaxial at % Strain at Failure ⊕ | Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	56.24	0				
		FILL Crushed limestone, sand and gravel, grey, moist, (loose)	56.1					
		SANDY GRAVELLY TILL Some silt, brown and black, moist, (loose to very dense)	56.0		5, 7			21.1
		- Boulders and cobbles at 1.5 m depth		1	50/130mm			19.3
				2	50/25mm			
			53.6					
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (excellent quality)	53.54	3				Run 1
				4				
				5				Run 2
				6				
			48.9	7				Run 3
		Auger Refusal at 2.6 m Depth, Borehole Terminated at 7.3 m						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Piezometer with a 13mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
12 Days	2.7	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.64 - 4.22	98	98
2	4.22 - 5.74	93	93
3	5.74 - 7.27	100	100

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole 13-8

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 11

Page. 1 of 1

Date Drilled: 'November 7, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASPHALT ~ 50 mm	56.4	0	9			
		FILL crushed limestone, sand and gravel, grey, moist, (loose)	56.3					
		FILL Sand and gravel with silt, dark brown, moist (loose to very dense)	56.2	1	65			
		SANDY GRAVELLY TILL Some silt gravel with boulders and cobbles, trace clay, dark brown/grey, moist, (dense)	55.0	2	34			23.2
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (excellent quality)	54.3	3				Run 1
				4				Run 2
			52.2	5				Run 3
				6				Run 4
		Auger Refusal at 2.1 m Depth, Borehole Terminated at 7.0 m	49.4	7				

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Piezometer with a 13mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
12 Days	4.2	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.24 - 2.75	89	89
2	2.75 - 4.25	100	100
3	4.25 - 5.77	100	100
4	5.77 - 7.02	100	100

Log of Borehole 13-9

Project No: OTT-00214936-A0

Project: Preliminary Geotechnical Investigation

Location: 112 Montreal Road, Ottawa Ontario

Figure No. 12

Page. 1 of 1

Date Drilled: 'October 23, 2013

Drill Type: CME-75 (Truck Mount)

Datum: Geodetic

Logged by: MAD Checked by: MGM/SA

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth
		ASPHALT ~ 50 mm	57.01	0
		FILL Crushed limestone, sand and gravel, grey, moist, (compact)	56.9 / 56.8	
		FILL Sand and gravel with silt, brick debris, dark grey with black and white, moist (loose compact)	56.1	1
		SANDY GRAVELLY TILL Some silt, shale fragments throughout, dark brown/grey, moist, (compact to dense)		2
			53.7	3
		LIMESTONE BEDROCK Shaley partings along bedding planes, stratification flat to gently dipping, principal joints near vertical and moderately to widely spread, (fair to excellent quality)	53.61	4
				5
				6
				7
			49.2	
		Auger Refusal at 3.3 m Depth, Borehole Terminated at 7.8 m		

Standard Penetration Test N Value: 15, 6, 12, 29, 40, 50/100mm

Shear Strength (kPa): 20 40 60 80 / 50 100 150 200

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

SAMPLES: Run 1, Run 2, Run 3

Natural Unit Wt. kN/m³

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A Monitoring Well with a 51mm diameter casing was installed in the borehole upon completion.
3. Field work was supervised by an exp representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
Completion	3.2	
1 Day	3.4	
27 Days	3.4	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	3.28 - 4.71	73	61
2	4.71 - 6.23	59	53
3	6.23 - 7.78	100	100

LOG OF BOREHOLE LOGS OF BOREHOLES_GEO.GPJ TROW OTTAWA.GDT 11/22/22

Log of Borehole BH-01

Project No: OTT-00214936-C0
Project: Proposed Development
Location: 112 Montreal Road, Ottawa, ON
Date Drilled: 'September 15, 2022
Drill Type: CME-75 Track-Mounted Drill Rig
Datum: Geodetic Elevation
Logged by: J.E. Checked by: D.W.

Figure No. 4
Page. 1 of 1

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test (S)
Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa (20 40 60 80 / 50 100 150 200)	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 20 40 60	SAMPLES	Natural Unit Wt. kN/m³
		LIMESTONE AND SHALE BEDROCK Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey, (strong to very strong)	55.38	0				
			54.91				RUN1	26.2
				1				26.4
							RUN2	
				2				26.5
				3			RUN3	
				4				26.5
							RUN4	
				5				
				6			RUN5	
								26.6
				7				
				8			RUN6	
			46.7					26.5
		Borehole Terminated at 8.7 m Depth						

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	0.5	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0 - 1.2	100	63
2	1.2 - 2.7	100	88
3	2.7 - 4.2	100	92
4	4.2 - 5.7	100	92
5	5.7 - 7.2	100	100
6	7.2 - 8.7	100	81

LOG OF BOREHOLE GINT NOV 30 2022 OTT-00214936-C0 112 MONTREAL ROAD.GPJ TROW OTTAWA.GDT 1/13/23

Log of Borehole BH-02

Project No: OTT-00214936-C0

Project: Proposed Development

Location: 112 Montreal Road, Ottawa, ON

Date Drilled: 'September 15, 2022

Drill Type: CME-75 Track-Mounted Drill Rig

Datum: Geodetic Elevation

Logged by: J.E. Checked by: D.W.

Figure No. 5

Split Spoon Sample ⊠ | Auger Sample ▮▯ | SPT (N) Value ○ | Dynamic Cone Test —— | Shelby Tube ■ | Shear Strength by Vane Test +S

Combustible Vapour Reading □ | Natural Moisture Content × | Atterberg Limits —⊖— | Undrained Triaxial at % Strain at Failure ⊕ | Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth
		LIMESTONE AND SHALE BEDROCK	54.08	0
		Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey	53.3	1
				2
				3
				4
				5
				6
				7
				8
				9
				10

Standard Penetration Test N Value: 20 40 60 80

Shear Strength: 50 100 150 200 kPa

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

SAMPLES: RUN1 RUN2 RUN3 RUN4 RUN5 RUN6 RUN7

Natural Unit Wt. kN/m³

Continued Next Page

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	0.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0 - 1.2	92	64
2	1.2 - 2.7	104	99
3	2.7 - 4.2	100	97
4	4.2 - 5.7	99	97
5	5.7 - 7.3	98	91
6	7.3 - 8.7	104	89
7	8.7 - 10.2	100	96

Log of Borehole BH-02

Project No: OTT-00214936-C0

Project: Proposed Development

Figure No. 5

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
			44.08	0	20 40 60 80 / 50 100 150 200	250 500 750 / 20 40 60		
			43.9	10				
		Borehole Terminated at 10.2 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	0.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0 - 1.2	92	64
2	1.2 - 2.7	104	99
3	2.7 - 4.2	100	97
4	4.2 - 5.7	99	97
5	5.7 - 7.3	98	91
6	7.3 - 8.7	104	89
7	8.7 - 10.2	100	96

LOG OF BOREHOLE GINT NOV 30 2022 OTT-00214936-C0 112 MONTREAL ROAD.GPJ TROW OTTAWA.GDT 1/13/23

Log of Borehole BH-03

Project No: OTT-00214936-C0

Project: Proposed Development

Location: 112 Montreal Road, Ottawa, ON

Date Drilled: 'September 15, 2022

Drill Type: CME-75 Track-Mounted Drill Rig

Datum: Geodetic Elevation

Logged by: J.E. Checked by: D.W.

Figure No. 6

Page. 1 of 1

Split Spoon Sample
Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Shear Strength by Vane Test

Combustible Vapour Reading
Natural Moisture Content
Atterberg Limits
Undrained Triaxial at % Strain at Failure
Shear Strength by Penetrometer Test

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		FILL Sand and gravel with construction debris (concrete), brown, moist, (loose to dense)	56.5	0	19		SS1	
				1	5		SS2	
				2	37		SS3	
			54.3					
		GLACIAL TILL Sand, with gravel, brown, moist, (very loose to compact)		3	10		SS4	
					1 then 50/0 mm		SS5	
			52.67	4				
			52.1					26.3
		LIMESTONE AND SHALE BEDROCK Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey, (medium strong to very strong)		5			RUN1	
				6				26.3
							RUN2	
				7				26.3
				8			RUN3	
				9			RUN4	26.3
			47.3					
		Borehole Terminated at 9.2 m Depth						

LOG OF BOREHOLE GINT NOV 30 2022 OTT-00214936-C0 112 MONTREAL ROAD.GPJ TROW OTTAWA.GDT 1/13/23

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	3.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	4.4 - 5.7	100	59
2	5.7 - 7.2	98	73
3	7.2 - 8.7	99	90
4	8.7 - 9.2	100	98

Log of Borehole BH-04

Project No: OTT-00214936-C0

Project: Proposed Development

Location: 112 Montreal Road, Ottawa, ON

Date Drilled: 'September 14, 2022

Drill Type: CME-75 Track-Mounted Drill Rig

Datum: Geodetic Elevation

Logged by: J.E. Checked by: D.W.

Figure No. 7

Page. 1 of 2

Split Spoon Sample ⊠ | Auger Sample ▮▯ | SPT (N) Value ○ | Dynamic Cone Test ——— | Shelby Tube ■ | Shear Strength by Vane Test +S

Combustible Vapour Reading □ | Natural Moisture Content ✕ | Atterberg Limits |—○—| Undrained Triaxial at % Strain at Failure ⊕ | Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth
		FILL Sand and gravel with construction debris (concrete), brown, moist, (compact)	56.1	0
		FILL Silty sand and gravel, concrete and metal fragments, grey, moist	54.7	1
		GLACIAL TILL Sand, with gravel, brown, moist, (loose)	53.9	2
		LIMESTONE AND SHALE BEDROCK Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey, (strong)	53.5	3
▽			50.56	4
				5
				6
				7
				8
				9
				10

Standard Penetration Test N Value: 20 40 60 80

Shear Strength kPa: 50 100 150 200

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

16

11 then 50/125 mm

50/75 mm

5 then 50/50 mm

SAMPLES	Natural Unit Wt. kN/m³
SS1	
SS2	
SS3	
SS4	
RUN1	25.5
RUN2	
RUN3	
RUN4	
RUN5	25.8

Continued Next Page

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	5.5	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.6 - 4.2	95	67
2	4.2 - 5.7	97	97
3	5.7 - 7.2	100	88
4	7.2 - 8.7	100	78
5	8.7 - 10.2	100	88
6	10.2 - 11.7	100	91
7	11.7 - 13.3	100	90
8	13.3 - 14.8	100	95
9	14.8 - 15.3	100	91

LOG OF BOREHOLE GINT NOV 30 2022 OTT-00214936-C0 112 MONTREAL ROAD.GPJ TROW OTTAWA.GDT 1/13/23

Log of Borehole BH-04

Project No: OTT-00214936-C0

Project: Proposed Development

Figure No. 7

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa (20 40 60 80 / 50 100 150 200)	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 20 40 60	SAMPLES	Natural Unit Wt. kN/m³
		LIMESTONE AND SHALE BEDROCK Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey, (strong) *(continued)*	46.1	10				
				11			RUN6	
				12			RUN7	
				13				
				14			RUN8	
				15			RUN9	
		Borehole Terminated at 15.3 m Depth	40.8					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	5.5	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.6 - 4.2	95	67
2	4.2 - 5.7	97	97
3	5.7 - 7.2	100	88
4	7.2 - 8.7	100	78
5	8.7 - 10.2	100	88
6	10.2 - 11.7	100	91
7	11.7 - 13.3	100	90
8	13.3 - 14.8	100	95
9	14.8 - 15.3	100	91

Log of Borehole BH-05

Project No: OTT-00214936-C0

Project: Proposed Development

Location: 112 Montreal Road, Ottawa, ON

Date Drilled: 'September 15, 2022

Drill Type: CME-75 Track-Mounted Drill Rig

Datum: Geodetic Elevation

Logged by: J.E. Checked by: D.W.

Figure No. 8

Page. 1 of 1

Split Spoon Sample ⊠
Auger Sample ▮▯
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits —○—
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth
		LIMESTONE AND SHALE BEDROCK Ranging from limstone with shaley partings along bedding planes to shale with limestone partings along the bedding planes, unweathered to slightly weathered, grey, (strong to very strong)	55.28	0
				1
				2
				3
				4
				5
				6
				7
				8
			46.4	
		Borehole Terminated at 8.9 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

SAMPLES

Natural Unit Wt. kN/m³
RUN1
25.8
RUN2
RUN3
26.1
RUN4
25.3
RUN5
RUN6

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled with soil cuttings upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0 - 1.4	91	57
2	1.4 - 2.9	100	88
3	2.9 - 4.4	97	71
4	4.4 - 5.9	98	66
5	5.9 - 7.4	87	87
6	7.4 - 8.9	97	90

LOG OF BOREHOLE GINT NOV 30 2022 OTT-00214936-C0 112 MONTREAL ROAD.GPJ TROW OTTAWA.GDT 1/13/23

Log of Borehole BH-06

Project No: OTT-00214936-C0

Project: Proposed Development

Location: 112 Montreal Road, Ottawa, ON

Date Drilled: 'September 22, 2022

Drill Type: CME-75 Track-Mounted Drill Rig

Datum: Geodetic Elevation

Logged by: J.E. Checked by: D.W.

Figure No. 9

Page. 1 of 2

Split Spoon Sample ⊠
Auger Sample ▮▯
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○⊣
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		FILL Sand and gravel with construction debris, grey, moist	55.84	0			SS1	26.1
			55.29					
		LIMESTONE BEDROCK Shaley partings along bedding planes, unweathered to slightly weathered, grey, (medium strong to strong)	55.1	1			RUN1	
				2			RUN2	27.6
				3				25.5
				4			RUN3	
				5			RUN4	25.5
				6				25.2
				7			RUN5	
				8				26.3
				9			RUN6	
				10				26.4

Continued Next Page

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	0.6	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0.8 - 1.7	84	69
2	1.7 - 3.2	100	65
3	3.2 - 4.7	91	72
4	4.7 - 6.2	100	98
5	6.2 - 7.7	99	99
6	7.7 - 9.2	100	100
7	9.2 - 10.7	99	99
8	10.7 - 12.2	100	100

Log of Borehole BH-06

Project No: OTT-00214936-C0

Project: Proposed Development

Figure No. 9

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value / Shear Strength kPa (20 40 60 80 / 50 100 150 200)	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 20 40 60	SAMPLES	Natural Unit Wt. kN/m³
		LIMESTONE BEDROCK Shaley partings along bedding planes, unweathered to slightly weathered, grey, (medium strong to strong) *(continued)*	45.84	10			RUN7	
				11				26.3
							RUN8	
			43.6	12				
		Borehole Terminated at 12.2 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 32 mm diameter well installed as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report OTT-00214936-C0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
'October 24, 2022	0.6	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	0.8 - 1.7	84	69
2	1.7 - 3.2	100	65
3	3.2 - 4.7	91	72
4	4.7 - 6.2	100	98
5	6.2 - 7.7	99	99
6	7.7 - 9.2	100	100
7	9.2 - 10.7	99	99
8	10.7 - 12.2	100	100

Log of Borehole MW23-1

Project No: OTT-00214936
Project: Phase II ESA
Location: 112 Montreal Road, Ottawa
Date Drilled: February 10th, 2023
Drill Type: GEO GM 100
Datum: Assumed
Logged by: MR Checked by: MM

Figure No. ____
Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits |—○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Assumed m	Depth
		ASPHALT	56.37	0
		FILL	56.3	
		Sand and gravel, brown, moist		1
				2
			53.4	3
		GLACIAL TILL Sand with gravel, brown.		
			52.8	4
		BEDROCK Fair to poor quality		5
				6
			49.1	7
		Borehole Terminated at 7.31 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60
SAMPLES
Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 50mm PVC monitoring well was installed upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-00214936

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
17 days	3.7	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE BH LOGS 112 MONTREAL RD-MR-FEB 10 2023.GPJ TROW OTTAWA.GDT 4/5/23

Log of Borehole MW23-2

Project No: OTT-00214936

Project: Phase II ESA

Location: 112 Montreal Road, Ottawa

Figure No. _____

Page. 1 of 1

Date Drilled: February 9th, 2023

Drill Type: GEO GM 100

Datum: Assumed

Logged by: MR Checked by: MM

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits |—○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Assumed m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		BEDROCK	54.26	0	20 40 60 80 / 50 100 150 200 kPa	250 500 750 / 20 40 60		
				1				
				2				
				3				
				4				
			49.5					
		Borehole Terminated at 4.83 m Depth						

LOG OF BOREHOLE BH LOGS 112 MONTREAL RD-MR-FEB 10 2023.GPJ TROW OTTAWA.GDT 4/5/23

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50mm PVC monitoring well was installed upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-00214936

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
17 days	1.3	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

Log of Borehole MW23-3

Project No: OTT-00214936
Project: Phase II ESA
Location: 112 Montreal Road, Ottawa
Date Drilled: February 9th, 2023
Drill Type: GEO GM 100
Datum: Assumed
Logged by: MR Checked by: MM

Figure No. ____
Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits |—○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Assumed m	Depth
		BEDROCK	54.27	0
				1
				2
				3
				4
			49.8	
		Borehole Terminated at 4.76 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60
SAMPLES
Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 50mm PVC monitoring well was installed upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-00214936

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
17 days		

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE BH LOGS 112 MONTREAL RD-MR-FEB 10 2023.GPJ TROW OTTAWA.GDT 4/5/23

Log of Borehole MW23-4

Project No: OTT-00214936
Project: Phase II ESA
Location: 112 Montreal Road, Ottawa
Date Drilled: February 10th, 2023
Drill Type: GEO GM 100
Datum: Assumed
Logged by: MR Checked by: MM

Figure No. ____
Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits |—○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Assumed m	Depth
		TOPSOIL	56.3	0
		FILL	56.2	
		Sand and gravel, brown, wet		
			55.3	1
		BEDROCK		2
				3
				4
			51.8	
		Borehole Terminated at 4.57 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60
SAMPLES
Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 50mm PVC monitoring well was installed upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-00214936

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
17 days	2.2	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE BH LOGS 112 MONTREAL RD-MR-FEB 10 2023.GPJ TROW OTTAWA.GDT 4/5/23

Log of Borehole MW23-5

Project No: OTT-00214936
Project: Phase II ESA
Location: 112 Montreal Road, Ottawa
Date Drilled: February 9th, 2023
Drill Type: GEO GM 100
Datum: Assumed
Logged by: MR Checked by: MM

Figure No. ____
Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits |—○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Assumed m	Depth
		TOPSOIL	56.96	0
		FILL	56.9	
		Sand and gravel, brown, wet		1
				2
			54.3	
		BEDROCK		3
				4
				5
				6
			50.1	
		Borehole Terminated at 6.94 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60
SAMPLES
Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 50mm PVC monitoring well was installed upon completion.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-00214936

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
17 days	2.9	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE BH LOGS 112 MONTREAL RD-MR-FEB 10 2023.GPJ TROW OTTAWA.GDT 4/5/23

Appendix E: Analytical Summary Tables

Table 1 - Analytical Results in Soil - PHC and BTEX
112 Montreal Road, Ottawa, Ontario
OTT-00214936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2013 Samples							2022 Samples										
			MW1 SS4	MW2 SS5	MW3 SS3	MW4 SS3	MW4 SS30 (Dup. MW4)	MW6B SS1	MW9 SS5	AH1-SS1	AH1-SS2	AH2-SS1	AH2-SS2	AH3-SS2	AH3-SS3	AH4-SS3	AH4-SS4	AH5-SS2	AH5-SS3	AH6-SS3
Sampling Date			23-Oct-13	24-Oct-13	23-Oct-13	24-Oct-13	24-Oct-13	8-Nov-13	23-Oct-13	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22	14-Sep-22	14-Sep-22
Sample Depth (mbgs)			1.8 - 2.4	2.4 - 3.0	1.2 - 1.8	1.2 - 1.8	1.2 - 1.8	0.15 - 0.75	1.8 - 2.4	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	2.3 - 2.9	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1
Petroleum Hydrocarbons																				
F1 PHC (C6-C10)	µg/g	55	<7	<7	<7	<7	<7	<7	17	< 10	19	< 10	13	< 10	15	50	36	< 10	11	< 10
F2 PHC (C10-C16)	µg/g	98	<4	<4	<4	<4	14	<4	<4	10	57	19	78	24	111	45	111	31	81	28
F3 PHC (C16-C34)	µg/g	300	81	<8	<8	364	536	<8	<8	45	109	193	126	75	152	58	104	93	131	56
F4 PHC (C34-C50)	µg/g	2800	10	<6	<6	624	1090	<6	<6	16	17	154	< 10	< 10	18	20	10	14	17	< 10
F4 PHC (C34-C50) Gravimetric	µg/g	2800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds																				
Benzene	µg/g	0.21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	µg/g	2.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Xylenes	µg/g	3.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.08	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.37	< 0.03	< 0.03	< 0.03	< 0.03

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 1 - Analytical Results in Soil - PHC and BTEX
112 Montreal Road, Ottawa, Ontario
OTT-00214936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2022 Samples																
			AH6-SS4	AH7-SS3	AH7-SS4	AH8-SS3	AH8-SS4	AH9-SS1	AH9-SS3	DUP2 (Dup. AH9-SS3)	AH10-SS3	AH10-SS4	DUP1 (Dup. AH10-SS4)	TP1-1.0	TP1-2.5	TP1-4.5	TP2-1.0	TP2-2.0	TP2-3.0	Dup1 (Dup TP2 3.0)
Sampling Date			14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
Sample Depth (mbgs)			2.3 - 2.9	1.5 - 2.1	2.3 - 2.9	1.5 - 2.1	2.3 - 2.9	0.0 - 0.6	1.5 - 2.1	1.5 - 2.1	1.5 - 2.1	2.3 - 2.9	2.3 - 2.9	1.0	2.5	4.5	1.0	2.0	3.0	3.0
Petroleum Hydrocarbons																				
F1 PHC (C6-C10)	µg/g	55	< 10	13	< 10	< 10	< 10	< 10	17	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
F2 PHC (C10-C16)	µg/g	98	28	20	41	28	33	33	32	30	< 5	34	< 5	< 5	< 5	< 5	< 5	9	12	5
F3 PHC (C16-C34)	µg/g	300	71	47	66	53	139	141	139	114	< 10	63	11	15	16	22	28	32	34	152
F4 PHC (C34-C50)	µg/g	2800	15	< 10	11	18	198	270	153	132	< 10	15	< 10	13	< 10	< 10	12	< 10	< 10	431
F4 PHC (C34-C50) Gravimetric	µg/g	2800	-	-	-	-	680	1240	680	650	-	-	-	-	-	-	-	-	-	2150
Volatile Organic Compounds																				
Benzene	µg/g	0.21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	µg/g	2.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Xylenes	µg/g	3.1	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 1 - Analytical Results in Soil - PHC and BTEX
112 Montreal Road, Ottawa, Ontario
OTT-00214936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2022 Samples																	
			TP2-3.7	TP3-1.0	TP3-2.0	TP3-2.75	TP3-3.50	TP4-1.0	TP4-2.0	TP4-2.75	TP4-3.75	TP5-1.0	TP5-2.0	TP5-2.75	TP5-3.25	TP6-1.0	TP7-1.0	Dup3 (Dup TP7-1.0)	TP8-1.0	TP9-1.0
Sampling Date			31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
Sample Depth (mbgs)			3.7	1.0	2.0	2.75	3.5	1.0	2.0	2.75	3.75	1.0	2.0	2.75	3.25	1.0	1.0	1.0	1.0	1.0
Petroleum Hydrocarbons																				
F1 PHC (C6-C10)	µg/g	55	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
F2 PHC (C10-C16)	µg/g	98	8	15	< 5	< 5	21	19	35	29	59	15	26	28	26	8	37	49	16	30
F3 PHC (C16-C34)	µg/g	300	36	42	36	125	51	1230	77	65	112	72	141	68	74	94	312	522	78	60
F4 PHC (C34-C50)	µg/g	2800	32	27	67	299	< 10	15	10	20	12	12	182	< 10	20	30	63	141	29	18
F4 PHC (C34-C50) Gravimetric	µg/g	2800	< 50	-	390	1440	-	-	-	-	-	-	490	-	-	-	-	-	-	-
Volatile Organic Compounds																				
Benzene	µg/g	0.21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	µg/g	2.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Xylenes	µg/g	3.1	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 1 - Analytical Results in Soil - PHC and BTEX
112 Montreal Road, Ottawa, Ontario
OTT-00214936-C0

Sample ID	UNITS	Provincial	2022 Samples						
		MECP Table 3 Residential [1]	Dup2 (Dup TP9-1.0)	BH1	BH2	BH3-SS2	BH4-SS4	BH5	BH6
Sampling Date			**31-Aug-22**	**31-Aug-22**	**31-Aug-22**	**16-Sep-22**	**15-Sep-22**	**31-Aug-22**	**31-Aug-22**
Sample Depth (mbgs)			1.0	1.0	0.3	0.8 - 1.4	2.3 - 2.9	0.5	1.0
Petroleum Hydrocarbons									
F1 PHC (C6-C10)	µg/g	55	< 10	< 10	< 10	< 10	38	< 10	< 10
F2 PHC (C10-C16)	µg/g	98	26	109	< 5	22	67	5	15
F3 PHC (C16-C34)	µg/g	300	71	2620	50	65	77	94	29
F4 PHC (C34-C50)	µg/g	2800	46	352	133	34	< 10	94	< 10
F4 PHC (C34-C50) Gravimetric	µg/g	2800	-	-	470	-	-	400	-
Volatile Organic Compounds									
Benzene	µg/g	0.21	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	µg/g	2.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Xylenes	µg/g	3.1	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 2 - Analytical Results in Soil - Inorganic Parameters
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2013 Samples							2022 Samples										
			MW1 SS4	MW3 SS3	MWBH4 SS3	MW4 SS30 (Dup. MW4)	MW6 SS1	BH10 S2	BH11 S1	AH1-SS1	AH1-SS2	AH2-SS1	AH2-SS2	AH3-SS2	AH3-SS3	AH4-SS3	AH4-SS4	AH5-SS2	AH5-SS3	AH6-SS3
Sampling Date			**23-Oct-13**	**23-Oct-13**	**24-Oct-13**	**24-Oct-13**	**8-Nov-13**	**31-Oct-13**	**31-Oct-13**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**16-Sep-22**	**14-Sep-22**	**14-Sep-22**
Sample Depth (mbgs)			1.8 - 2.4	1.2 - 1.8	1.2 - 1.8	1.2 - 1.8	0.15 - 0.75	0.6 - 0.9	0.0 - 0.4	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	2.3 - 2.9	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1
Metals																				
Antimony	µg/g	7.5	1.9	<1.0	<1.0	<1.0	3.8	<1.0	<1.0	< 0.5	2	3.4	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	µg/g	18	6.0	5.8	4.1	3.9	3.9	5.7	7.6	3.8	6.1	8.3	6.3	10.8	7	2.3	2.9	7.4	8	4.1
Barium	µg/g	390	253	71.7	87.8	77	177	**498**	119	66	170	232	69	94	208	107	298	96	184	71
Beryllium	µg/g	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.3	0.5	0.6	0.6	0.9	0.6	0.4	0.5	0.8	0.7	0.4
Boron (Total)	µg/g	120	7.2	6.7	7.6	7.8	6.1	6.7	4.8	5.5	7.5	9.6	8.3	7	10.2	11.2	13.9	7.2	10.3	5.9
Boron (Hot Water Soluble)	µg/g	1.5	NA	NA	NA	NA	NA	NA	NA	0.07	0.12	0.13	0.04	0.02	< 0.02	0.06	0.04	0.04	< 0.02	< 0.02
Cadmium	µg/g	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.7	< 0.5	< 0.5	0.60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium (Total)	µg/g	160	20.4	11.9	15.8	14.3	21.9	26	23	11	19	24	18	22	21	17	17	22	21	13
Chromium VI	µg/g	8	NA	NA	NA	NA	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cobalt	µg/g	22	8.3	6.9	6.4	5.8	10.8	5.3	6.1	6	9	12	13	15	12	6	9	13	12	10
Copper	µg/g	140	39.8	20.1	24.7	21.3	55.6	44.8	61.6	21	102	**147**	47	59	37	9	17	59	44	21
Lead	µg/g	120	**325**	12	14.7	11.1	19.8	**560**	**218**	34	**210**	**396**	14	18	12	< 5	< 5	23	13	9
Mercury	µg/g	0.27	NA	NA	NA	NA	NA	NA	NA	0.061	0.233	**0.315**	0.049	0.098	0.038	0.017	0.021	0.094	0.051	0.027
Molybdenum	µg/g	6.9	1.6	2.7	1.6	<1.0	1.1	1.6	1.3	1	3	3	3	4	4	1	2	3	4	3
Nickel	µg/g	100	27.3	22.7	32.0	29.6	58.4	46.1	35.9	20	35	38	48	71	42	14	25	58	47	27
Selenium	µg/g	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.7	0.9	1.1	1.5	1.4	1.6	0.6	0.7	1.3	1.2	0.8
Silver	µg/g	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.2	0.3	0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	µg/g	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.2	0.3	0.4	0.3	0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Uranium	µg/g	23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	1.5	1.6	1.7	2.4	2.1	1.5	2	1.9	2.7	1.1
Vanadium	µg/g	86	22.3	20.4	18.6	16.8	24.3	28.3	32.1	17	28	30	25	33	26	16	21	32	25	21
Zinc	µg/g	340	177	28.1	58.5	55.0	82.3	**428**	**375**	78	167	259	81	89	84	49	82	89	77	40
Inorganic Parameters																				
Conductivity	µg/g	0.7	-	-	-	-	-	-	-	0.29	0.299	0.201	0.185	0.525	0.494	0.341	0.166	0.308	0.341	0.3
Sodium Adsorption Ratio	µg/g	5	-	-	-	-	-	-	-	1.14	0.938	0.255	1.48	2.21	1.12	0.631	0.63	2.81	2.28	2.24
Cyanide	µg/g	0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 2 - Analytical Results in Soil - Inorganic Parameters
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2022 Samples																
			AH6-SS4	AH7-SS3	AH7-SS4	AH8-SS3	AH8-SS4	AH9-SS1	AH9-SS3	DUP2 (Dup. AH9-SS3)	AH10-SS3	AH10-SS4	DUP1 (Dup. AH10-SS4)	TP1-1.0	TP1-2.5	TP1-4.5	TP2-1.0	TP2-2.0	TP2-3.0	Dup1 (Dup TP2 3.0)
Sampling Date			14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
Sample Depth (mbgs)			2.3 - 2.9	1.5 - 2.1	2.3 - 2.9	1.5 - 2.1	2.3 - 2.9	0.0 - 0.6	1.5 - 2.1	1.5 - 2.1	1.5 - 2.1	2.3 - 2.9	2.3 - 2.9	1.0	2.5	4.5	1.0	2.0	3.0	3.0
Metals																				
Antimony	µg/g	7.5	< 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	0.6	< 0.5	< 0.5	< 0.5	0.6
Arsenic	µg/g	18	3.5	4.7	3.6	4	3.5	6.7	6.2	6.3	4.1	2.8	3.5	7.4	6.9	10.3	9.3	7.9	8.6	6.1
Barium	µg/g	390	84	151	70	48	67	133	131	136	114	88	96	96	99	121	107	176	110	155
Beryllium	µg/g	4	0.3	0.4	0.3	0.3	0.3	0.6	0.5	0.5	0.4	0.4	0.4	0.7	0.7	0.8	0.6	0.6	0.7	0.5
Boron (Total)	µg/g	120	6.8	6.5	7.1	6.1	6.9	8.9	9.7	10	6.7	6.1	6.6	7.4	6.9	6.8	6.4	6.9	6.9	7
Boron (Hot Water Soluble)	µg/g	1.5	< 0.02	0.02	0.02	< 0.02	< 0.02	0.06	0.07	0.09	0.05	< 0.02	0.02	0.07	0.07	0.08	0.1	0.04	0.06	0.07
Cadmium	µg/g	1.2	< 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	< 0.5
Chromium (Total)	µg/g	160	12	13	13	13	14	19	29	26	21	19	19	21	21	21	20	18	23	17
Chromium VI	µg/g	8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cobalt	µg/g	22	9	12	8	9	9	10	10	9	10	8	11	9	9	14	10	13	12	8
Copper	µg/g	140	17	26	17	20	20	33	31	48	22	19	21	34	36	46	38	39	41	28
Lead	µg/g	120	8	10	7	8	8	22	42	52	27	7	9	25	16	32	29	26	35	57
Mercury	µg/g	0.27	0.023	0.025	0.017	0.019	0.019	0.065	0.07	0.081	0.038	0.014	0.017	0.084	0.08	0.103	0.108	0.09	0.122	0.102
Molybdenum	µg/g	6.9	2	4	2	3	3	2	2	2	3	< 1	2	2	2	4	2	3	3	2
Nickel	µg/g	100	21	32	20	25	23	40	28	29	34	20	26	44	53	60	48	53	58	32
Selenium	µg/g	2.4	0.6	0.9	0.6	0.7	0.6	1	0.8	0.8	0.5	0.6	1	1.1	1	1.3	1.3	1.2	1.1	1
Silver	µg/g	20	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	µg/g	1	0.2	0.2	0.2	< 0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.4	0.5	0.6	0.5	0.6	0.8	0.4
Uranium	µg/g	23	1.3	1.5	1.3	1.5	1.3	1.8	1.4	2	1	1	1	2.2	2.2	2.7	2.2	2.3	2	1.2
Vanadium	µg/g	86	20	21	20	21	22	25	29	30	30	31	30	26	28	30	29	27	29	24
Zinc	µg/g	340	23	48	27	30	31	77	72	91	49	36	41	108	84	92	85	87	100	93
Inorganic Parameters																				
Conductivity	µg/g	0.7	0.25	0.211	0.195	0.28	0.278	0.553	**0.892**	**1.23**	0.569	0.497	0.511	0.302	0.612	0.479	0.247	0.389	0.395	0.398
Sodium Adsorption Ratio	µg/g	5	0.787	1.28	1.11	2.69	2.67	1.87	1.53	1.46	2.92	2.87	2.67	1.5	1.64	1.69	0.217	0.435	0.517	0.446
Cyanide	µg/g	0.051	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 2 - Analytical Results in Soil - Inorganic Parameters
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial	2022 Samples																
		MECP Table 3 Residential [1]	TP2-3.7	TP3-1.0	TP3-2.0	TP3-2.75	TP3-3.50	TP4-1.0	TP4-2.0	TP4-2.75	TP4-3.75	TP5-1.0	TP5-2.0	TP5-2.75	TP5-3.25	TP6-1.0	TP7-1.0	Dup3 (Dup TP7-1.0)	TP8-1.0	TP9-1.0
Sampling Date			31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
Sample Depth (mbgs)			3.7	1.0	2.0	2.75	3.5	1.0	2.0	2.75	3.75	1.0	2.0	2.75	3.25	1.0	1.0	1.0	1.0	1.0
Metals																				
Antimony	µg/g	7.5	< 0.5	< 0.5	< 0.5	2.1	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	0.7	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	µg/g	18	7.2	5.7	3.7	5.7	4.9	5.7	4.6	5.6	7.5	5.8	7.1	7	8.7	6.8	7	7.6	5.9	6.3
Barium	µg/g	390	155	254	70	127	115	151	93	124	90	100	130	126	113	157	112	104	92	86
Beryllium	µg/g	4	0.6	0.5	0.4	0.6	0.5	0.6	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.8	0.6	0.6	0.5	0.5
Boron (Total)	µg/g	120	7.9	7.3	5.8	8.6	7.3	7.5	7.5	8.2	6.4	6.8	9	7.8	8.6	6.8	7.5	7.3	7.2	6.6
Boron (Hot Water Soluble)	µg/g	1.5	0.05	0.06	0.07	0.08	0.07	0.12	0.06	0.07	0.06	0.08	0.08	0.08	0.07	0.07	0.06	0.05	0.11	0.04
Cadmium	µg/g	1.2	< 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	< 0.5
Chromium (Total)	µg/g	160	18	16	15	17	16	17	17	20	29	18	19	17	18	21	18	18	17	14
Chromium VI	µg/g	8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cobalt	µg/g	22	11	10	7	9	10	10	9	10	12	10	12	11	12	9	10	10	8	10
Copper	µg/g	140	35	31	32	38	33	38	27	37	71	30	31	42	34	46	35	47	34	30
Lead	µg/g	120	25	26	26	23	15	22	13	17	14	51	30	62	43	22	26	23	36	18
Mercury	µg/g	0.27	0.097	0.073	0.115	0.064	0.051	0.085	0.036	0.06	0.054	0.109	0.083	0.166	0.158	0.1	0.076	0.075	0.096	0.099
Molybdenum	µg/g	6.9	3	2	1	3	2	3	2	3	5	2	2	2	3	2	3	3	3	4
Nickel	µg/g	100	44	35	22	33	37	37	26	34	50	33	40	36	40	52	47	45	43	39
Selenium	µg/g	2.4	0.9	1	0.7	1.3	0.9	1.2	0.8	1	1	0.9	1	1	1	1.1	1.2	1.3	0.9	1.7
Silver	µg/g	20	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	µg/g	1	0.5	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.4
Uranium	µg/g	23	1.8	1.9	1	1.8	1.4	1.9	1.4	1.8	1.6	1.4	1.8	1.5	1.6	1.4	2.1	2.2	1.8	2.1
Vanadium	µg/g	86	26	24	22	24	24	26	21	23	26	26	25	24	26	25	24	24	24	24
Zinc	µg/g	340	83	70	67	74	63	67	54	64	62	91	87	121	90	85	96	86	85	57
Inorganic Parameters																				
Conductivity	µg/g	0.7	0.387	0.319	0.393	**0.814**	0.434	0.261	0.504	**0.819**	0.502	0.209	0.283	**0.703**	**1**	0.176	0.361	0.38	0.22	0.264
Sodium Adsorption Ratio	µg/g	5	1.05	0.116	0.776	0.523	0.814	0.316	0.318	0.34	0.847	0.302	0.306	0.514	0.278	0.444	0.14	0.127	0.376	0.546
Cyanide	µg/g	0.051	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 2 - Analytical Results in Soil - Inorganic Parameters
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial	2022 Samples						
		MECP Table 3 Residential [1]	Dup2 (Dup TP9 1.0)	BH1	BH2	BH4-SS4	BH3-SS2	BH5	BH6
Sampling Date			31-Aug-22	31-Aug-22	31-Aug-22	15-Sep-22	16-Sep-22	31-Aug-22	31-Aug-22
Sample Depth (mbgs)			1.0	1.0	0.3	2.3 - 2.9	0.8 - 1.4	0.5	1.0
Metals									
Antimony	µg/g	7.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5
Arsenic	µg/g	18	5.9	9.2	6.4	3.1	7	8.4	3.5
Barium	µg/g	390	84	131	90	181	118	97	47
Beryllium	µg/g	4	0.4	0.8	0.3	0.6	0.6	0.6	0.2
Boron (Total)	µg/g	120	5.6	9	6.1	13.8	7	6.5	4.6
Boron (Hot Water Soluble)	µg/g	1.5	0.04	0.05	0.05	0.06	0.04	0.1	0.02
Cadmium	µg/g	1.2	< 0.5	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium (Total)	µg/g	160	13	24	13	15	21	17	9
Chromium VI	µg/g	8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cobalt	µg/g	22	10	11	8	8	9	11	7
Copper	µg/g	140	29	73	18	13	38	30	16
Lead	µg/g	120	15	89	54	< 5	26	33	6
Mercury	µg/g	0.27	0.071	0.096	0.058	0.017	0.1	0.096	0.022
Molybdenum	µg/g	6.9	4	3	3	1	2	4	2
Nickel	µg/g	100	35	55	20	20	46	48	19
Selenium	µg/g	2.4	1.7	1.2	0.6	0.6	1	0.9	0.6
Silver	µg/g	20	< 0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	µg/g	1	0.3	0.4	0.3	< 0.1	0.3	0.5	0.2
Uranium	µg/g	23	2.1	1.8	0.9	1.7	2.2	2.2	1.8
Vanadium	µg/g	86	22	35	18	19	26	26	16
Zinc	µg/g	340	37	261	91	65	96	59	22
Inorganic Parameters									
Conductivity	µg/g	0.7	0.301	0.172	0.259	0.239	0.519	0.363	**1**
Sodium Adsorption Ratio	µg/g	5	0.538	0.523	0.44	1.22	0.885	0.517	0.132
Cyanide	µg/g	0.051	< 0.05	< 0.05	< 0.05	NA	NA	< 0.05	< 0.05

NOTES:

1	Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)
<RDL	Non-detectable results are shown as "< (RDL)" where RDL represents the
NV	No Value
-	Parameter not analyzed
	Indicates soil exceedance of MECP Table 3 SCS

Table 3 - Analytical Results in Groundwater - PHC and VOC
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2013 Samples									
			MW13-1a	MW13-1b	MW13-2	MW13-3	MW13-4	MW13-6	MW13-60 (Dup MW16-6)	MW13-9	BH18	BH23
Sampling Date			**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**14-Nov-2013**	**19-Nov-2013**	**19-Nov-2013**
Sceen Depth			1.2 to 2.7	5.0 to 8.1	4.1 to 5.6	1.3 to 2.8	4.6 to 5.7	3.5 to 6.9	3.5 to 6.9	4.7 to 7.8	N/A	N/A
Petroleum Hydrocarbons												
F1 PHC (C6-C10)*	µg/L	750	<200	102	<200	<200	156	<200	<200	<200	<200	<200
F2 PHC (C10-C16)	µg/L	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 PHC (C16-C34)	µg/L	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F4 PHC (C34-C50)	µg/L	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds												
Acetone (2-Propanone)	µg/L	130000	<5.0	159	142	<5.0	179	<5.0	<5.0	22.3	<5.0	<5.0
Benzene	µg/L	44	<0.5	<0.5	0.7	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L	85000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L	380	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	µg/L	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	0.79	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	µg/L	630	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	µg/L	2.4	<0.5	3.7	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	82000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	µg/L	4600	<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	9600	<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	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane (FREON 12)	µg/L	4400	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	µg/L	320	<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	1.6	<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	1.6	<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	1.6	<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	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	µg/L	NV	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	NV	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis+trans)	µg/L	5.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	2300	<0.5	7.5	3	<0.5	8.7	<0.5	<0.5	0.6	<0.5	<0.5
Ethylene Dibromide	µg/L	0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexane	µg/L	51	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride(Dichloromethane)	µg/L	610	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl Ethyl Ketone (2-Butanone)	µg/L	470000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	µg/L	140000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl t-butyl ether (MTBE)	µg/L	190	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	µg/L	1300	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	µg/L	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	µg/L	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	18000	<0.5	2.9	4.4	<0.5	8.2	<0.5	<0.5	0.6	<0.5	<0.5
1,1,1-Trichloroethane	µg/L	640	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	µg/L	4.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	µg/L	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane (FREON 11)	µg/L	2500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
p+m-Xylene	µg/L	NV	-	-	-	-	-	-	-	-	-	-
o-Xylene	µg/L	NV	-	-	-	-	-	-	-	-	-	-
Total Xylenes	µg/L	4200	<0.5	10.2	4.3	<0.5	13.2	<0.5	<0.5	0.9	<0.5	<0.5

NOTES:

1	Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)
*	F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result
<RDL	Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.
NV	No Value
-	Parameter not analyzed
	Indicates groundwater exceedance of MECP Table 3 SCS

Table 3 - Analytical Results in Groundwater - PHC and VOC
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	2023 Samples								
			MW13-2	BH-1	BH-2	BH-4	MW23-1	Dup1 (Dup MW23-1)	MW23-2	MW23-4	MW23-5
Sampling Date			**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**27-Feb-23**	**27-Feb-23**	**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**28-Feb-23**
Sceen Depth			4.1 to 5.6	5.7 to 8.7	7.2 to 10.2	12.3 to 15.3	4.3 to 7.3	4.3 to 7.3	1.8 to 4.8	1.5 to 4.5	3.9 to 6.9
Petroleum Hydrocarbons											
F1 PHC (C6-C10)*	µg/L	750	< 25	98	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F2 PHC (C10-C16)	µg/L	150	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
F3 PHC (C16-C34)	µg/L	500	< 400	< 400	< 400	< 400	< 400	< 400	< 400	< 400	< 400
F4 PHC (C34-C50)	µg/L	500	< 400	< 400	< 400	< 400	< 400	< 400	< 400	< 400	< 400
Volatile Organic Compounds											
Acetone (2-Propanone)	µg/L	130000	< 30	60	< 30	< 30	< 30	< 30	< 30	< 30	< 30
Benzene	µg/L	44	< 0.5	0.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	µg/L	85000	< 2	< 2	2	3	< 2	< 2	< 2	< 2	< 2
Bromoform	µg/L	380	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	µg/L	5.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	µg/L	0.79	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chlorobenzene	µg/L	630	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	2.4	< 1	20	20	21	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	µg/L	82000	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,2-Dichlorobenzene	µg/L	4600	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	9600	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane (FREON 12)	µg/L	4400	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	µg/L	320	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	µg/L	NV	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	µg/L	NV	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene (cis+trans)	µg/L	5.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	2300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylene Dibromide	µg/L	0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexane	µg/L	51	< 5	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride(Dichloromethane)	µg/L	610	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methyl Ethyl Ketone (2-Butanone)	µg/L	470000	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	140000	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	190	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	µg/L	1300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane	µg/L	3.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethylene	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	18000	< 0.5	0.9	< 0.5	1.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	640	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	4.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	µg/L	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane (FREON 11)	µg/L	2500	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	µg/L	0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
p+m-Xylene	µg/L	NV	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0
o-Xylene	µg/L	NV	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Xylenes	µg/L	4200	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	1.1	< 1.1

NOTES:

1	Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)
*	F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result
<RDL	Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.
NV	No Value
-	Parameter not analyzed
	Indicates groundwater exceedance of MECP Table 3 SCS

Table 4 - Analytical Results in Groundwater - PAH
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial	2023 Samples								
		MECP Table 3 Residential [1]	MW13-2	BH-1	BH-2	BH-4	MW23-1	Dup1 (Dup MW23-1)	MW23-2	MW23-4	MW23-5
Sampling Date			**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**27-Feb-23**	**27-Feb-23**	**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**28-Feb-23**
Sceen Depth			4.1 to 5.6	5.7 to 8.7	7.2 to 10.2	12.3 to 15.3	4.3 to 7.3	4.3 to 7.3	1.8 to 4.8	1.5 to 4.5	3.9 to 6.9
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	µg/L	600	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/L	1.8	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	µg/L	2.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/L	4.7	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	µg/L	0.81	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/L	0.75	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b+k)fluoranthene	µg/L	NV	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	µg/L	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	µg/L	0.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	µg/L	1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	µg/L	0.52	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/L	130	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/L	400	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	µg/L	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1-Methylnaphthalene	µg/L	NV	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/L	NV	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene, 2-(1-)	µg/L	1800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	µg/L	1400	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/L	580	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	µg/L	68	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates groundwater exceedance of MECP Table 3 SCS

Table 5 - Analytical Results in Groundwater - Inorganic Parameters
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Sample ID	UNITS	Provincial	2023 Samples								
		MECP Table 3 Residential [1]	MW13-2	BH-1	BH-2	BH-4	MW23-1	Dup1 (Dup MW23-1)	MW23-2	MW23-4	MW23-5
Sampling Date			**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**27-Feb-23**	**27-Feb-23**	**27-Feb-23**	**28-Feb-23**	**28-Feb-23**	**28-Feb-23**
Screen Depth			4.1 to 5.6	5.7 to 8.7	7.2 to 10.2	12.3 to 15.3	4.3 to 7.3	4.3 to 7.3	1.8 to 4.8	1.5 to 4.5	3.9 to 6.9
Metals											
Antimony	µg/L	20000	< 0.2	0.1	0.3	< 0.1	< 0.1	< 0.1	0.9	0.4	0.3
Arsenic	µg/L	1900	0.7	1.9	2.2	0.8	0.2	0.2	1.4	0.5	1.4
Barium	µg/L	29000	63	66	36	52	38	44	152	122	102
Beryllium	µg/L	67	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1
Boron	µg/L	45000	385	55	35	115	110	108	270	88	84
Cadmium	µg/L	2.7	< 0.028	0.019	0.153	0.091	< 0.015	0.017	0.048	0.029	0.049
Chromium	µg/L	810	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chromium VI	µg/L	140	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Cobalt	µg/L	66	< 0.2	0.2	< 0.1	< 0.1	0.1	0.1	1.3	1.6	1.8
Copper	µg/L	87	< 2	3	5	< 2	< 2	< 2	4	4	2
Lead	µg/L	25	0.04	0.06	0.08	0.07	< 0.02	0.03	0.09	0.08	0.08
Mercury	µg/L	0.29	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Molybdenum	µg/L	9200	7.1	2.4	6.5	3.7	6.1	6.4	8.4	2.8	6.4
Nickel	µg/L	490	4.3	2.5	1	1.2	1.9	1.9	6.8	14.4	6.2
Sodium	µg/L	2300000	346000	63800	43000	104000	136000	135000	442000	86200	94600
Selenium	µg/L	63	< 2	< 1	1	< 1	1	1	2	2	< 1
Silver	µg/L	1.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Thallium	µg/L	510	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
Uranium	µg/L	420	3.05	0.98	0.86	0.16	2.60	2.72	7.76	6.90	5.69
Vanadium	µg/L	250	< 0.2	0.1	0.6	0.2	< 0.1	< 0.1	0.4	0.2	0.3
Zinc	µg/L	1100	< 5	7	13	7	< 5	< 5	7	< 5	5

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use coarse textured soils)

<RDL Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

NV No Value

\- Parameter not analyzed

Indicates groundwater exceedance of MECP Table 3 SCS

Table 6 - Maximum Concentrations in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Sample Location	Sample Depth (m bgs)	Sampling Date	Maximum Concentration	MECP Table 3 Residential
Petroleum Hydrocarbons					
F1 PHC (C6-C10)	AH-4	1.5 to 2.1	16-Sep-22	50	55
F2 PHC (C10-C16)	AH3, AH-4	1.5 to 2.1	16-Sep-22	111	98
F3 PHC (C16-C34)	BH-1	1.0	31-Aug-22	2620	300
F4 PHC (C34-C50)	TP-2 (Dup 1)	3.0	31-Aug-22	2150	2800
Volatile Organic Compounds					
Benzene	All 2013 and 2022 Sample Locations	0.0 to 2.9	All 2013 and 2022 Dates	< 0.02	0.21
Ethylbenzene	All 2013 and 2022 Sample Locations	0.0 to 2.9	All 2013 and 2022 Dates	< 0.2	2
Toluene	All 2013 and 2022 Sample Locations	0.0 to 2.9	All 2013 and 2022 Dates	< 0.05	2.3
Total Xylenes	AH-4	1.5 to 2.1	16-Sep-22	0.37	3.1
Metals					
Antimony	MW6	0.15 to 0.75	8-Nov-13	3.8	7.5
Arsenic	AH-3	0.8 to 1.4	16-Sep-22	10.8	18
Barium	BH10	0.6 to 0.9	31-Oct-13	498	390
Beryllium	AH-3	0.8 to 1.4	16-Sep-22	0.9	4
Boron (Total)	AH-4	2.3 to 2.9	16-Sep-22	13.9	120
Boron (Hot Water Soluble)	AH-2	0.0 to 0.6	16-Sep-22	0.13	1.5
Cadmium	BH-1	1.0	31-Aug-22	0.9	1.2
Chromium (Total)	AH-9	1.5 to 2.1	14-Sep-22	29	160
Chromium VI	All 2022 Sample Locations	0.0 to 2.9	All 2022 Sample Dates	< 0.2	8
Cobalt	AH-3	0.8 to 1.4	16-Sep-22	15	22
Copper	AH-2	0.0 to 0.6	16-Sep-22	147	140
Lead	BH10	0.6 to 0.9	31-Oct-13	560	120
Mercury	AH-2	0.0 to 0.6	16-Sep-22	0.315	0.27
Molybdenum	TP-4	3.8	31-Aug-22	5	6.9
Nickel	AH-3	0.8 to 1.4	16-Sep-22	71	100
Selenium	TP-9 (and Dup)	1.0	31-Aug-22	1.7	2.4
Silver	AH-1, AH-2	0.0 to 1.4	16-Sep-22	0.3	20
Thallium	TP-2	3.0	31-Aug-22	0.8	1
Uranium	TP-1	4.5	31-Aug-22	2.7	23
Vanadium	BH-1	1.0	31-Aug-22	35	86
Zinc	BH10	0.6 to 0.9	31-Oct-13	428	340
Inorganic Parameters					
Conductivity	AH-9 (Dup)	1.5 to 2.1	14-Sep-22	1.23	0.70
Sodium Adsorption Ratio	AH-10	1.5 to 2.1	14-Sep-22	2.92	5
Cyanide	All 2022 Sample Locations	0.0 to 2.9	All 2022 Sample Dates	<0.05	0.051

NOTES:

1	Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
NV	No Value
-	Parameter not analyzed
m bgs	Metres below ground surface

Table 7 - Maximum Concentrations in Groundwater
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Sample Location	Sample Depth (m bgs)	Sampling Date	Maximum Concentration	MECP Table 3 Residential
Petroleum Hydrocarbons					
F1 PHC (C6-C10)	MW13-4	4.6 to 5.7	14-Nov-13	156	750
F2 PHC (C10-C16)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 50	150
F3 PHC (C16-C34)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	<100	500
F4 PHC (C34-C50)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	<100	500
Volatile Organic Compounds					
Acetone (2-Propanone)	MW13-4	4.6 to 5.7	14-Nov-13	179	130000
Benzene	MW13-4	4.6 to 5.7	14-Nov-13	1	44.000
Bromodichloromethane	BH-4	1.2 to 15.3	14-Nov-13, 27-Feb-23	3	85000
Bromoform	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 5	380
Bromomethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	5.6
Carbon Tetrachloride	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.2	0.79
Chlorobenzene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	630
Chloroform	BH-4	12.3 to 15.3	27-Feb-23	21	2.4
Dibromochloromethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 2	82000
1,2-Dichlorobenzene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	4600
1,3-Dichlorobenzene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	9600
1,4-Dichlorobenzene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	8
Dichlorodifluoromethane (FREON 12)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 2	4400
1,1-Dichloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	320
1,2-Dichloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
1,1-Dichloroethylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
cis-1,2-Dichloroethylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
trans-1,2-Dichloroethylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
1,2-Dichloropropane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	16
cis-1,3-Dichloropropene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	NV
trans-1,3-Dichloropropene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	NV
1,3-Dichloropropene (cis+trans)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	5.2
Ethylbenzene	MW13-4	4.6 to 5.7	14-Nov-13	8.7	2300
Ethylene Dibromide	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.2	0.25
Hexane	BH-1	5.7 to 8.7	27-Feb-23	10	51
Methylene Chloride(Dichloromethane)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 5	610
Methyl Ethyl Ketone (2-Butanone)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 20	470000
Methyl Isobutyl Ketone	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 20	140000
Methyl t-butyl ether (MTBE)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 2	190
Styrene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1300
1,1,1,2-Tetrachloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	3.3
1,1,2,2-Tetrachloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	3.2
Tetrachloroethylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
Toluene	MW13-4	4.6 to 5.7	14-Nov-13	8.2	18000
1,1,1-Trichloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	640
1,1,2-Trichloroethane	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	4.7
Trichloroethylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	1.6
Trichlorofluoromethane (FREON 11)	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 5	2500
Vinyl Chloride	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.2	0.5
p+m-Xylene	MW23-4	1.5 to 4.5	27-Feb-23	1.1	NV
o-Xylene	All 2013 and 2023 Sampling Locations	1.2 to 15.3	14-Nov-13, 27-Feb-23	< 0.5	NV
Total Xylenes	MW13-4	4.6 to 5.7	14-Nov-13	13.2	4200
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	600
Acenaphthylene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	1.8
Anthracene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	2.4
Benzo(a)anthracene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	4.7
Benzo(a)pyrene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.01	0.81
Benzo(b)fluoranthene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	0.75
Benzo(b+k)fluoranthene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.1	NV
Benzo(ghi)perylene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	0.2
Benzo(k)fluoranthene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	0.4
Chrysene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	1
Dibenzo(a,h)anthracene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	0.52
Fluoranthene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	130
Fluorene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	400
Indeno(1,2,3-cd)pyrene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	0.2
1-Methylnaphthalene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	NV
2-Methylnaphthalene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	NV
Methylnaphthalene, 2-(1-)	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 1	1800
Naphthalene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	1400
Phenanthrene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	580
Pyrene	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	68
Metals					
Antimony	MW23-2	1.8 to 4.8	27-Feb-23	0.9	20000
Arsenic	BH-2	7.2 to 10.2	27-Feb-23	2.2	1900
Barium	NW23-2	1.8 to 4.8	27-Feb-23	152	29000
Beryllium	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	<0.1	67
Boron	MW13-2	4.1 to 5.6	27-Feb-23	385	45000
Cadmium	BH-2	7.2 to 10.2	27-Feb-23	0.153	2.7
Chromium	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 2	810
Chromium VI	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 10	140
Cobalt	MW23-5	3.9 to 6.9	27-Feb-23	1.8	66
Copper	BH-2	7.2 to 10.2	27-Feb-23	5	87
Lead	MW23-2	1.8 to 4.8	27-Feb-23	0.09	25
Mercury	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	<0.02	0.29
Molybdenum	MW23-2	1.8 to 4.8	27-Feb-23	8.4	9200
Nickel	MW23-2	1.8 to 4.8	27-Feb-23	14.4	490
Sodium	MW23-2	1.8 to 4.8	27-Feb-23	442000	2300000
Selenium	MW23-2, MW23-4	1.8 to 4.8	27-Feb-23	2	63
Silver	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.1	1.5
Thallium	All 2023 Sampling Locations	1.8 to 15.3	27-Feb-23	< 0.05	510
Uranium	MW23-2	1.8 to 4.8	27-Feb-23	7.76	420
Vanadium	BH-2	7.2 to 10.2	27-Feb-23	0.6	250
Zinc	BH-2	7.2 to 10.2	27-Feb-23	13	1100

NOTES:

1	Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
NV	No Value
-	Parameter not analyzed
m bgs	Metres below ground surface

Table 8 - Relative Percent Differences - PHC and VOC in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW4 SS3	MW4 SS30	RPD (%)	Alert Limit (%)
			24-Oct-2013	24-Oct-2013		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	<7	<7	nc	60
F2 PHC (C10-C16)	ug/g dry	10	<4	14	nc	60
F3 PHC (C16-C34)	ug/g dry	50	364	536	38	60
F4 PHC (C34-C50)	ug/g dry	50	624	1090	54	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.05	< 0.05	nc	100

Parameter	Units	RDL	AH9-SS3	DUP 2	RPD (%)	Alert Limit (%)
			14-Sep-2022	14-Sep-2022		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	17	14	nc	60
F2 PHC (C10-C16)	ug/g dry	10	32	30	nc	60
F3 PHC (C16-C34)	ug/g dry	50	139	114	nc	60
F4 PHC (C34-C50)	ug/g dry	50	153	132	nc	60
F4 PHC (C34-C50)	ug/g dry	50	680	650	5	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.03	< 0.03	nc	100

Parameter	Units	RDL	AH10-SS4	DUP 1	RPD (%)	Alert Limit (%)
			14-Sep-2022	14-Sep-2022		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	< 10	< 10	nc	60
F2 PHC (C10-C16)	ug/g dry	10	34	< 5	nc	60
F3 PHC (C16-C34)	ug/g dry	50	63	11	nc	60
F4 PHC (C34-C50)	ug/g dry	50	15	< 10	nc	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.03	< 0.03	nc	100

Parameter	Units	RDL	TP2-3.0	DUP 1	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	< 10	< 10	nc	60
F2 PHC (C10-C16)	ug/g dry	10	12	5	nc	60
F3 PHC (C16-C34)	ug/g dry	50	34	152	nc	60
F4 PHC (C34-C50)	ug/g dry	50	< 10	431	nc	60
F4 PHC (C34-C50)	ug/g dry	50	-	2150	nc	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.03	< 0.03	nc	100

NOTES:

Analysis by Bureau Veritas Laboratories/Caduceon Environmental Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 8 - Relative Percent Differences - PHC and VOC in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	TP7-1.0	DUP 3	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	< 10	< 10	nc	60
F2 PHC (C10-C16)	ug/g dry	10	37	49	nc	60
F3 PHC (C16-C34)	ug/g dry	50	312	522	50	60
F4 PHC (C34-C50)	ug/g dry	50	63	141	nc	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.03	< 0.03	nc	100

Parameter	Units	RDL	TP9-1.0	DUP 2	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	< 10	< 10	nc	60
F2 PHC (C10-C16)	ug/g dry	10	30	26	nc	60
F3 PHC (C16-C34)	ug/g dry	50	60	71	nc	60
F4 PHC (C34-C50)	ug/g dry	50	18	46	nc	60
BTEX						
Benzene	ug/g dry	0.0060	< 0.02	< 0.02	nc	100
Ethylbenzene	ug/g dry	0.010	< 0.2	< 0.2	nc	100
Toluene	ug/g dry	0.020	< 0.05	< 0.05	nc	100
Xylenes, total	ug/g dry	0.020	< 0.03	< 0.03	nc	100

NOTES:

Analysis by Bureau Veritas Laboratories/Caduceon Environmental Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 9 - Relative Percent Differences - Inorganics in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW4 SS3	MW4 SS30	RPD (%)	Alert Limit (%)
			24-Oct-2013	24-Oct-2013		
Inorganic Parameters						
Antimony	ug/g dry	0.20	<1.0	<1.0	nc	60
Arsenic	ug/g dry	1.0	4.1	3.9	nc	60
Barium	ug/g dry	0.50	87.8	77	13	60
Beryllium	ug/g dry	0.20	<1.0	<1.0	nc	60
Boron (Total)	ug/g dry	5.0	7.6	7.8	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	NA	NA	-	60
Cadmium	ug/g dry	0.10	<0.5	<0.5	nc	60
Chromium	ug/g dry	1.0	15.8	14.3	10	60
Chormium VI	ug/g dry	0.2	NA	NA	-	60
Cobalt	ug/g dry	0.10	6.4	5.8	10	60
Copper	ug/g dry	0.50	24.7	21.3	15	60
Lead	ug/g dry	1.0	14.7	11.1	28	60
Mercury	ug/g dry	0.005	NA	NA	-	60
Molybdenum	ug/g dry	0.50	1.6	<1.0	nc	60
Nickel	ug/g dry	0.50	32	29.6	8	60
Selenium	ug/g dry	0.50	<1.0	<1.0	nc	60
Silver	ug/g dry	0.20	<0.5	<0.5	nc	60
Thallium	ug/g dry	0.050	<1.0	<1.0	nc	60
Uranium	ug/g dry	0.050	<1.0	<1.0	nc	60
Vanadium	ug/g dry	5.0	18.6	16.8	nc	60
Zinc	ug/g dry	5.0	58.5	55	6	60

Parameter	Units	RDL	AH9-SS3	DUP 2	RPD (%)	Alert Limit (%)
			14-Sep-2022	14-Sep-2022		
Inorganic Parameters						
Antimony	ug/g dry	0.20	< 0.5	0.7	nc	60
Arsenic	ug/g dry	1.0	6.2	6.3	2	60
Barium	ug/g dry	0.50	131	136	4	60
Beryllium	ug/g dry	0.20	0.5	0.5	nc	60
Boron (Total)	ug/g dry	5.0	9.7	10	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	0.07	0.09	nc	60
Cadmium	ug/g dry	0.10	< 0.5	< 0.5	nc	60
Chromium	ug/g dry	1.0	29	26	11	60
Chormium VI	ug/g dry	0.2	< 0.2	< 0.2	nc	60
Cobalt	ug/g dry	0.10	10	9	11	60
Copper	ug/g dry	0.50	31	48	43	60
Lead	ug/g dry	1.0	42	52	21	60
Mercury	ug/g dry	0.0	0.07	0.081	15	60
Molybdenum	ug/g dry	0.50	2	2	nc	60
Nickel	ug/g dry	0.50	28	29	4	60
Selenium	ug/g dry	0.50	0.8	0.8	nc	60
Silver	ug/g dry	0.20	< 0.2	< 0.2	nc	60
Thallium	ug/g dry	0.050	0.2	0.2	nc	60
Uranium	ug/g dry	0.050	1.4	2	35	60
Vanadium	ug/g dry	5.0	29	30	3	60
Zinc	ug/g dry	5.0	72	91	23	60

NOTES:

Analysis by Caduceon Environmental Laboratories/Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

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Exceedances of alert limits are shown in **bold**

Table 9 - Relative Percent Differences - Inorganics in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	AH10-SS4	DUP 1	RPD (%)	Alert Limit (%)
			14-Sep-2022	14-Sep-2022		
Inorganic Parameters						
Antimony	ug/g dry	0.20	< 0.5	< 0.5	nc	60
Arsenic	ug/g dry	1.0	2.8	3.5	nc	60
Barium	ug/g dry	0.50	88	96	9	60
Beryllium	ug/g dry	0.20	0.4	0.4	nc	60
Boron (Total)	ug/g dry	5.0	6.1	6.6	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	< 0.02	0.02	nc	60
Cadmium	ug/g dry	0.10	< 0.5	< 0.5	nc	60
Chromium	ug/g dry	1.0	19	19	0	60
Chormium VI	ug/g dry	0.2	< 0.2	< 0.2	nc	60
Cobalt	ug/g dry	0.10	8	11	32	60
Copper	ug/g dry	0.50	19	21	10	60
Lead	ug/g dry	1.0	7	9	25	60
Mercury	ug/g dry	0.005	0.014	0.017	nc	60
Molybdenum	ug/g dry	0.50	< 1	2	nc	60
Nickel	ug/g dry	0.50	20	26	26	60
Selenium	ug/g dry	0.50	0.6	1	nc	60
Silver	ug/g dry	0.20	< 0.2	< 0.2	nc	60
Thallium	ug/g dry	0.050	0.2	0.2	nc	60
Uranium	ug/g dry	0.050	1	1	0	60
Vanadium	ug/g dry	5.0	31	30	3	60
Zinc	ug/g dry	5.0	36	41	13	60

Parameter	Units	RDL	TP2-3.0	DUP 1	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Inorganic Parameters						
Antimony	ug/g dry	0.20	< 0.5	0.6	nc	60
Arsenic	ug/g dry	1.0	8.6	6.1	34	60
Barium	ug/g dry	0.50	110	155	34	60
Beryllium	ug/g dry	0.20	0.7	0.5	nc	60
Boron (Total)	ug/g dry	5.0	6.9	7	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	0.06	0.07	nc	60
Cadmium	ug/g dry	0.10	< 0.5	< 0.5	nc	60
Chromium	ug/g dry	1.0	23	17	30	60
Chormium VI	ug/g dry	0.2	< 0.2	< 0.2	nc	60
Cobalt	ug/g dry	0.10	12	8	40	60
Copper	ug/g dry	0.50	41	28	38	60
Lead	ug/g dry	1.0	35	57	48	60
Mercury	ug/g dry	0.0	0.122	0.102	18	60
Molybdenum	ug/g dry	0.50	3	2	nc	60
Nickel	ug/g dry	0.50	58	32	58	60
Selenium	ug/g dry	0.50	1.1	1	nc	60
Silver	ug/g dry	0.20	< 0.2	< 0.2	nc	60
Thallium	ug/g dry	0.050	0.8	0.4	67	60
Uranium	ug/g dry	0.050	2	1.2	50	60
Vanadium	ug/g dry	5.0	29	24	nc	60
Zinc	ug/g dry	5.0	100	93	7	60

NOTES:

Analysis by Caduceon Environmental Laboratories/Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 9 - Relative Percent Differences - Inorganics in Soil
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	TP7-1.0	DUP 3	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Inorganic Parameters						
Antimony	ug/g dry	0.20	< 0.5	< 0.5	nc	60
Arsenic	ug/g dry	1.0	7	7.6	8	60
Barium	ug/g dry	0.50	112	104	7	60
Beryllium	ug/g dry	0.20	0.6	0.6	nc	60
Boron (Total)	ug/g dry	5.0	7.5	7.3	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	0.06	0.05	nc	60
Cadmium	ug/g dry	0.10	< 0.5	< 0.5	nc	60
Chromium	ug/g dry	1.0	18	18	0	60
Chormium VI	ug/g dry	0.2	< 0.2	< 0.2	nc	60
Cobalt	ug/g dry	0.10	10	10	0	60
Copper	ug/g dry	0.50	35	47	29	60
Lead	ug/g dry	1.0	26	23	12	60
Mercury	ug/g dry	0.005	0.076	0.075	1	60
Molybdenum	ug/g dry	0.50	3	3	0	60
Nickel	ug/g dry	0.50	47	45	4	60
Selenium	ug/g dry	0.50	1.2	1.3	nc	60
Silver	ug/g dry	0.20	< 0.2	< 0.2	nc	60
Thallium	ug/g dry	0.050	0.4	0.4	0	60
Uranium	ug/g dry	0.050	2.1	2.2	5	60
Vanadium	ug/g dry	5.0	24	24	nc	60
Zinc	ug/g dry	5.0	96	86	11	60

Parameter	Units	RDL	TP9-1.0	DUP 2	RPD (%)	Alert Limit (%)
			31-Aug-2022	31-Aug-2022		
Inorganic Parameters						
Antimony	ug/g dry	0.20	< 0.5	< 0.5	nc	60
Arsenic	ug/g dry	1.0	6.3	5.9	7	60
Barium	ug/g dry	0.50	86	84	2	60
Beryllium	ug/g dry	0.20	0.5	0.4	nc	60
Boron (Total)	ug/g dry	5.0	6.6	5.6	nc	60
Born (Hot Water Soluble)	ug/g dry	0.0	0.04	0.04	nc	60
Cadmium	ug/g dry	0.10	< 0.5	< 0.5	nc	60
Chromium	ug/g dry	1.0	14	13	7	60
Chormium VI	ug/g dry	0.2	< 0.2	< 0.2	nc	60
Cobalt	ug/g dry	0.10	10	10	0	60
Copper	ug/g dry	0.50	30	29	3	60
Lead	ug/g dry	1.0	18	15	18	60
Mercury	ug/g dry	0.0	0.099	0.071	33	60
Molybdenum	ug/g dry	0.50	4	4	0	60
Nickel	ug/g dry	0.50	39	35	11	60
Selenium	ug/g dry	0.50	1.7	1.7	nc	60
Silver	ug/g dry	0.20	< 0.2	< 0.2	nc	60
Thallium	ug/g dry	0.050	0.4	0.3	29	60
Uranium	ug/g dry	0.050	2.1	2.1	0	60
Vanadium	ug/g dry	5.0	24	22	nc	60
Zinc	ug/g dry	5.0	57	37	43	60

NOTES:

Analysis by Caduceon Environmental Laboratories/Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 10 - Relative Percent Differences - PHC and VOC in Groundwater
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW13-6	MW13-60	RPD (%)	Alert Limit (%)
			14-Nov-2013	14-Nov-2016		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/L	25	<200	<200	nc	60
F2 PHC (C10-C16)	ug/L	100	<100	<100	nc	60
F3 PHC (C16-C34)	ug/L	100	<100	<100	nc	60
F4 PHC (C34-C50)	ug/L	100	<100	<100	nc	60
Volatiles						
Acetone	ug/L	5.0	<5.0	<5.0	nc	60
Benzene	ug/L	0.5	<0.5	<0.5	nc	60
Bromodichloromethane	ug/L	0.5	<0.5	<0.5	nc	60
Bromoform	ug/L	0.5	<0.5	<0.5	nc	60
Bromomethane	ug/L	0.5	<0.5	<0.5	nc	60
Carbon Tetrachloride	ug/L	0.2	<0.2	<0.2	nc	60
Chlorobenzene	ug/L	0.5	<0.5	<0.5	nc	60
Chloroform	ug/L	0.5	<0.5	<0.5	nc	60
Dibromochloromethane	ug/L	0.5	<0.5	<0.5	nc	60
Dichlorodifluoromethane	ug/L	1.0	<0.5	<0.5	nc	60
1,2-Dichlorobenzene	ug/L	0.5	<0.5	<0.5	nc	60
1,3-Dichlorobenzene	ug/L	0.5	<0.5	<0.5	nc	60
1,4-Dichlorobenzene	ug/L	0.5	<1.0	<1.0	nc	60
1,1-Dichloroethane	ug/L	0.5	<0.5	<0.5	nc	60
1,2-Dichloroethane	ug/L	0.5	<0.5	<0.5	nc	60
1,1-Dichloroethylene	ug/L	0.5	<0.5	<0.5	nc	60
cis-1,2-Dichloroethylene	ug/L	0.5	<0.5	<0.5	nc	60
trans-1,2-Dichloroethylene	ug/L	0.5	<0.5	<0.5	nc	60
1,2-Dichloropropane	ug/L	0.5	<0.5	<0.5	nc	60
cis-1,3-Dichloropropylene	ug/L	0.5	-	-	nc	60
trans-1,3-Dichloropropylene	ug/L	0.5	-	-	nc	60
1,3-Dichloropropene, total	ug/L	0.5	<0.5	<0.5	nc	60
Ethylbenzene	ug/L	0.5	<0.5	<0.5	nc	60
Ethylene dibromide (dibromoethane, 1,2-)	ug/L	0.2	<0.5	<0.5	nc	60
Hexane	ug/L	1.0	<1.0	<1.0	nc	60
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	<5.0	<5.0	nc	60
Methyl Isobutyl Ketone	ug/L	5.0	<5.0	<5.0	nc	60
Methyl tert-butyl ether	ug/L	2.0	<5.0	<5.0	nc	60
Methylene Chloride	ug/L	5.0	<2.0	<2.0	nc	60
Styrene	ug/L	0.5	<0.5	<0.5	nc	60
1,1,1,2-Tetrachloroethane	ug/L	0.5	<0.5	<0.5	nc	60
1,1,2,2-Tetrachloroethane	ug/L	0.5	<0.5	<0.5	nc	60
Tetrachloroethylene	ug/L	0.5	<0.5	<0.5	nc	60
Toluene	ug/L	0.5	<0.5	<0.5	nc	60
1,1,1-Trichloroethane	ug/L	0.5	<0.5	<0.5	nc	60
1,1,2-Trichloroethane	ug/L	0.5	<0.5	<0.5	nc	60
Trichloroethylene	ug/L	0.5	<0.5	<0.5	nc	60
Trichlorofluoromethane	ug/L	1.0	<1.0	<1.0	nc	60
Vinyl Chloride	ug/L	0.5	<0.5	<0.5	nc	60
m/p-Xylene	ug/L	0.5	-	-	nc	60
o-Xylene	ug/L	0.5	-	-	nc	60
Xylenes, total	ug/L	0.5	<0.5	<0.5	nc	60

NOTES:

Analysis by Caduceon Environmental Laboratries/Bureau Veritas Laboratories

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 10 - Relative Percent Differences - PHC and VOC in Groundwater
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW23-1	DUP 1	RPD (%)	Alert Limit (%)
			27-Feb-2023	27-Feb-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/L	25	< 25	< 25	nc	60
F2 PHC (C10-C16)	ug/L	100	< 50	< 50	nc	60
F3 PHC (C16-C34)	ug/L	100	< 400	< 400	nc	60
F4 PHC (C34-C50)	ug/L	100	< 400	< 400	nc	60
Volatiles						
Acetone	ug/L	5.0	< 30	< 30	nc	60
Benzene	ug/L	0.5	< 0.5	< 0.5	nc	60
Bromodichloromethane	ug/L	0.5	< 2	< 2	nc	60
Bromoform	ug/L	0.5	< 5	< 5	nc	60
Bromomethane	ug/L	0.5	< 0.5	< 0.5	nc	60
Carbon Tetrachloride	ug/L	0.2	< 0.2	< 0.2	nc	60
Chlorobenzene	ug/L	0.5	< 0.5	< 0.5	nc	60
Chloroform	ug/L	0.5	< 1	< 1	nc	60
Dibromochloromethane	ug/L	0.5	< 2	< 2	nc	60
Dichlorodifluoromethane	ug/L	1.0	< 0.5	< 0.5	nc	60
1,2-Dichlorobenzene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,3-Dichlorobenzene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,4-Dichlorobenzene	ug/L	0.5	< 2	< 2	nc	60
1,1-Dichloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
1,2-Dichloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
1,1-Dichloroethylene	ug/L	0.5	< 0.5	< 0.5	nc	60
cis-1,2-Dichloroethylene	ug/L	0.5	< 0.5	< 0.5	nc	60
trans-1,2-Dichloroethylene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,2-Dichloropropane	ug/L	0.5	< 0.5	< 0.5	nc	60
cis-1,3-Dichloropropylene	ug/L	0.5	< 0.5	< 0.5	nc	60
trans-1,3-Dichloropropylene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,3-Dichloropropene, total	ug/L	0.5	< 0.5	< 0.5	nc	60
Ethylbenzene	ug/L	0.5	< 0.5	< 0.5	nc	60
Ethylene dibromide (dibromoethane, 1,2-)	ug/L	0.2	< 0.2	< 0.2	nc	60
Hexane	ug/L	1.0	< 5	< 5	nc	60
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	< 5	< 5	nc	60
Methyl Isobutyl Ketone	ug/L	5.0	< 20	< 20	nc	60
Methyl tert-butyl ether	ug/L	2.0	< 20	< 20	nc	60
Methylene Chloride	ug/L	5.0	< 2	< 2	nc	60
Styrene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,1,1,2-Tetrachloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
1,1,2,2-Tetrachloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
Tetrachloroethylene	ug/L	0.5	< 0.5	< 0.5	nc	60
Toluene	ug/L	0.5	< 0.5	< 0.5	nc	60
1,1,1-Trichloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
1,1,2-Trichloroethane	ug/L	0.5	< 0.5	< 0.5	nc	60
Trichloroethylene	ug/L	0.5	< 0.5	< 0.5	nc	60
Trichlorofluoromethane	ug/L	1.0	< 5	< 5	nc	60
Vinyl Chloride	ug/L	0.5	< 0.2	< 0.2	nc	60
m/p-Xylene	ug/L	0.5	< 1.0	< 1.0	nc	60
o-Xylene	ug/L	0.5	< 0.5	< 0.5	nc	60
Xylenes, total	ug/L	0.5	< 1.1	< 1.1	nc	60

NOTES:

Analysis by Caduceon Environmental Laboratries/Bureau Veritas Laboratories
Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.
- means "not analysed"
nc means "not calculable" - one (or both) of the results are <5x RDL
Exceedances of alert limits are shown in **bold**

Table 11 - Relative Percent Differences - PAH in Groundwater
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW23-1	DUP 1	RPD (%)	Alert Limit (%)
			27-Feb-2023	27-Feb-2023		
Polycylic Aromatic Hydrocarbons						
Acenaphthene	ug/L	0.050	< 0.05	< 0.05	nc	60
Acenaphthylene	ug/L	0.050	< 0.05	< 0.05	nc	60
Anthracene	ug/L	0.050	< 0.05	< 0.05	nc	60
Benzo(a)anthracene	ug/L	0.050	< 0.05	< 0.05	nc	60
Benzo(a)pyrene	ug/L	0.050	< 0.01	< 0.01	nc	60
Benzo(b)fluoranthene	ug/L	0.050	< 0.05	< 0.05	nc	60
Benzo(b+k)fluoranthene	ug/L	0.050	< 0.1	< 0.1	nc	60
Benzo(ghi)perylene	ug/L	0.050	< 0.05	< 0.05	nc	60
Benzo(k)fluoranthene	ug/L	0.050	< 0.05	< 0.05	nc	60
Chrysene	ug/L	0.050	< 0.05	< 0.05	nc	60
Dibenzo(a,h)anthracene	ug/L	0.050	< 0.05	< 0.05	nc	60
Fluoranthene	ug/L	0.050	< 0.05	< 0.05	nc	60
Fluorene	ug/L	0.050	< 0.05	< 0.05	nc	60
Indeno(1,2,3-cd)pyrene	ug/L	0.050	< 0.05	< 0.05	nc	60
1-Methylnaphthalene	ug/L	0.050	< 0.05	< 0.05	nc	60
2-Methylnaphthalene	ug/L	0.050	< 0.05	< 0.05	nc	60
Methylnaphthalene, 2-(1-)	ug/L	0.050	< 1	< 1	nc	60
Naphthalene	ug/L	0.050	< 0.05	< 0.05	nc	60
Phenanthrene	ug/L	0.050	< 0.05	< 0.05	nc	60
Pyrene	ug/L	0.050	< 0.05	< 0.05	nc	60

NOTES:

Analysis by Caduceon Environmental Laboratries

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 12 - Relative Percent Differences - Metals in Groundwater
112 Montreal Road, Ottawa, Ontario
OTT-00241936-C0

Parameter	Units	RDL	MW23-1	DUP 1	RPD (%)	Alert Limit (%)
			27-Feb-2023	27-Feb-2023		
Inorganics						
Antimony	ug/L	0.50	< 0.1	< 0.1	nc	40
Arsenic	ug/L	0.10	0.2	0.2	nc	40
Barium	ug/L	1.0	38	44	15	40
Beryllium	ug/L	0.10	< 0.1	< 0.1	nc	40
Boron	ug/L	50	110	108	nc	40
Cadmium	ug/L	0.010	< 0.015	0.017	nc	40
Chromium	ug/L	1.0	< 2	< 2	nc	40
Chromium VI	ug/L	10.0	< 10	< 10	nc	40
Cobalt	ug/L	0.20	0.1	0.1	nc	40
Copper	ug/L	0.20	< 2	< 2	nc	40
Lead	ug/L	0.1	< 0.02	0.03	nc	40
Mercury	ug/L	0.02	< 0.02	< 0.02	nc	40
Molybdenum	ug/L	1.0	6.1	6.4	5	40
Nickel	ug/L	1.0	1.9	1.9	nc	40
Sodium	ug/L	100.0	136000	135000	1	40
Selenium	ug/L	0.10	1	1	0	40
Silver	ug/L	0.020	< 0.1	< 0.1	nc	40
Thallium	ug/L	0.010	< 0.05	< 0.05	nc	40
Uranium	ug/L	0.10	2.6	2.72	5	40
Vanadium	ug/L	5.0	< 0.1	< 0.1	nc	40
Zinc	ug/L	5.0	< 5	< 5	nc	40

NOTES:

Analysis by Bureau Veritas Labratories
Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- means "not analysed"
nc means "not calculable" - one (or both) of the results are <5x RDL
Exceedances of alert limits are shown in **bold**

Appendix F: Laboratory Certificates of Analysis

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Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Mark McCalla

Phone: (613) 688-1899
Fax: (613) 225-7337

Client PO:
Project: OTT00214936A
Custody: 11230

Report Date: 14-Nov-2013
Order Date: 11-Nov-2013
Order #: 1346015

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1346015-01	BH6B-SS1

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	12-Nov-13	14-Nov-13
MOE Metals by ICP-OES, soil Reg 153	based on MOE E3470, ICP-OES	13-Nov-13	13-Nov-13
PHC F1	CWS Tier 1 - P&T GC-FID	12-Nov-13	14-Nov-13
PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	12-Nov-13	14-Nov-13
Solids, %	Gravimetric, calculation	11-Nov-13	11-Nov-13

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

	Client ID:	BH6B-SS1	-	-	-
	Sample Date:	08-Nov-13	-	-	-
	Sample ID:	1346015-01	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	87.3	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	3.8	-	-	-
Barium	1.0 ug/g dry	177	-	-	-
Beryllium	1.0 ug/g dry	<1.0	-	-	-
Boron	1.0 ug/g dry	6.1	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	1.0 ug/g dry	21.9	-	-	-
Cobalt	1.0 ug/g dry	10.8	-	-	-
Copper	1.0 ug/g dry	55.6	-	-	-
Lead	1.0 ug/g dry	19.8	-	-	-
Molybdenum	1.0 ug/g dry	1.1	-	-	-
Nickel	1.0 ug/g dry	58.4	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.5 ug/g dry	<0.5	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	1.0 ug/g dry	24.3	-	-	-
Zinc	1.0 ug/g dry	82.3	-	-	-
Volatiles					
Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	85.4%	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	1.0	ug/g						
Boron	ND	1.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	1.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	1.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	1.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.5	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	1.0	ug/g						
Zinc	ND	1.0	ug/g						
Volatiles									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	*2.65*		*ug/g*		*82.9*	*50-140*			

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	12	7	ug/g dry	12			0.1	40	
F2 PHCs (C10-C16)	311	4	ug/g dry	99			103.0	30	QR-04
F3 PHCs (C16-C34)	1310	8	ug/g dry	1050			22.5	30	
F4 PHCs (C34-C50)	789	6	ug/g dry	838			6.1	30	
Metals									
Antimony	ND	1.0	ug/g dry	ND			0.0	30	
Arsenic	1.93	1.0	ug/g dry	2.07			6.9	30	
Barium	50.2	1.0	ug/g dry	49.5			1.4	30	
Beryllium	ND	1.0	ug/g dry	ND			0.0	30	
Boron	3.34	1.0	ug/g dry	3.44			2.9	30	
Cadmium	ND	0.5	ug/g dry	ND			0.0	30	
Chromium	13.4	1.0	ug/g dry	13.8			3.3	30	
Cobalt	3.19	1.0	ug/g dry	3.27			2.5	30	
Copper	25.3	1.0	ug/g dry	25.6			1.3	30	
Lead	58.7	1.0	ug/g dry	57.7			1.8	30	
Molybdenum	ND	1.0	ug/g dry	ND			0.0	30	
Nickel	6.55	1.0	ug/g dry	6.46			1.3	30	
Selenium	ND	1.0	ug/g dry	ND			0.0	30	
Silver	ND	0.5	ug/g dry	ND			0.0	30	
Thallium	ND	1.0	ug/g dry	ND			0.0	30	
Uranium	1.15	1.0	ug/g dry	ND			0.0	30	
Vanadium	17.6	1.0	ug/g dry	18.2			3.4	30	
Zinc	99.1	1.0	ug/g dry	99.4			0.2	30	
Physical Characteristics									
% Solids	84.9	0.1	% by Wt.	69.5			20.0	25	
Volatiles									
Benzene	ND	0.02	ug/g dry	ND				50	
Ethylbenzene	ND	0.05	ug/g dry	ND			0.0	50	
Toluene	ND	0.05	ug/g dry	ND			0.0	50	
m,p-Xylenes	0.065	0.05	ug/g dry	0.072			9.4	50	
o-Xylene	ND	0.05	ug/g dry	ND			0.0	50	
Surrogate: Toluene-d8	*3.25*		*ug/g dry*	*ND*	*86.1*	*50-140*			

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	207	7	ug/g	ND	103	80-120			
F2 PHCs (C10-C16)	82	4	ug/g	ND	90.9	80-120			
F3 PHCs (C16-C34)	1220	8	ug/g	1050	78.1	60-140			
F4 PHCs (C34-C50)	867	6	ug/g	838	19.4	60-140			QM-06
Metals									
Antimony	212		ug/L	18.7	77.2	70-130			
Arsenic	265		ug/L	41.4	89.6	70-130			
Barium	1180		ug/L	990	76.0	70-130			
Beryllium	204		ug/L	0.18	81.6	70-130			
Boron	269		ug/L	68.7	80.1	70-130			
Cadmium	204		ug/L	ND	81.8	70-130			
Chromium	465		ug/L	277	75.3	70-130			
Cobalt	256		ug/L	65.4	76.2	70-130			
Copper	704		ug/L	512	77.0	70-130			
Lead	1330		ug/L	1150	72.0	70-130			
Molybdenum	199		ug/L	7.56	76.5	70-130			
Nickel	309		ug/L	129	71.9	70-130			
Selenium	191		ug/L	ND	76.5	70-130			
Silver	197		ug/L	ND	79.0	70-130			
Thallium	183		ug/L	ND	73.2	70-130			
Uranium	226		ug/L	ND	90.3	70-130			
Vanadium	551		ug/L	364	75.0	70-130			
Zinc	228		ug/L	ND	91.2	70-130			
Volatiles									
Benzene	2.44	0.02	ug/g	ND	61.0	60-130			
Ethylbenzene	3.53	0.05	ug/g	ND	88.3	60-130			
Toluene	3.93	0.05	ug/g	ND	98.1	60-130			
m,p-Xylenes	8.10	0.05	ug/g	ND	101	60-130			
o-Xylene	4.03	0.05	ug/g	ND	101	60-130			
Surrogate: Toluene-d8	*2.68*		*ug/g*		*83.7*	*50-140*			

Certificate of Analysis

Report Date: 14-Nov-2013
Order Date:11-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Qualifier Notes:

QC Qualifiers :

QM-06 : Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Chain of Custody
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Nº 11230

Page 1 of 1

Client Name: exp	Project Reference: OTT-00214936-A	TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Contact Name: Mark McCulloch / Mark Devlin	Quote #	
Address: 100-2650 Queensview Dr, Ottawa	PO #	Date Required:
Telephone: 613 688 1899	Email Address: Mark.McCulloch@exp.com Mark.Devlin@exp.com	

Criteria: [X] O. Reg. 153/04 (As Amended) Table 3 [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

Paracel Order Number: 1346015

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHC	BTEX	metals,ICP								
1	BH 68-SS1	S		2	Nov 8/13	7:45am	X	X	X							- 250ml + 1 vial	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received by Driver/Depot:	Received at Lab: SUNEZPURN	Verified By:
Relinquished By (Print): Daniel Clark	Date/Time: 11/11/13 9:16AM	Date/Time: NOV 11, 2013 09:45	Date/Time: Nov. 11/13 9:5
Date/Time: Nov 11/13 9:30am	Temperature: ____ °C	Temperature: 3.2 °C	pH Verified [ ] By:

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Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Mark McCalla

Phone: (613) 688-1899
Fax: (613) 225-7337

Client PO:
Project: OTT00214936A
Custody: 13610

Report Date: 6-Nov-2013
Order Date: 31-Oct-2013
Order #: 1344316

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1344316-01	BH10-S2
1344316-02	BH11-S1

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
MOE Metals by ICP-OES, soil Reg 153	based on MOE E3470, ICP-OES	5-Nov-13	5-Nov-13
pH	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	31-Oct-13	1-Nov-13
Solids, %	Gravimetric, calculation	1-Nov-13	1-Nov-13

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A

	Client ID:	BH10-S2	BH11-S1	-	-
	Sample Date:	31-Oct-13	31-Oct-13	-	-
	Sample ID:	1344316-01	1344316-02	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	83.5	78.0	-	-
General Inorganics					
pH	0.05 pH Units	7.22	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	5.7	7.6	-	-
Barium	1.0 ug/g dry	498	119	-	-
Beryllium	1.0 ug/g dry	<1.0	<1.0	-	-
Boron	1.0 ug/g dry	6.7	4.8	-	-
Cadmium	0.5 ug/g dry	0.5	0.7	-	-
Chromium	1.0 ug/g dry	26.0	23.0	-	-
Cobalt	1.0 ug/g dry	5.3	6.1	-	-
Copper	1.0 ug/g dry	44.8	61.6	-	-
Lead	1.0 ug/g dry	560	218	-	-
Molybdenum	1.0 ug/g dry	1.6	1.3	-	-
Nickel	1.0 ug/g dry	46.1	35.9	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.5 ug/g dry	<0.5	<0.5	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	1.0 ug/g dry	28.3	32.1	-	-
Zinc	1.0 ug/g dry	428	375	-	-

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	1.0	ug/g						
Boron	ND	1.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	1.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	1.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	1.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.5	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	1.0	ug/g						
Zinc	ND	1.0	ug/g						

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
pH	8.08	0.05	pH Units	8.07			0.1	10	
Metals									
Antimony	ND	1.0	ug/g dry	ND			0.0	30	
Arsenic	5.13	1.0	ug/g dry	5.65			9.8	30	
Barium	519	10.0	ug/g dry	498			4.1	30	
Beryllium	ND	1.0	ug/g dry	ND			0.0	30	
Boron	6.70	1.0	ug/g dry	6.72			0.4	30	
Cadmium	0.54	0.5	ug/g dry	0.51			6.6	30	
Chromium	26.2	10.0	ug/g dry	26.0			1.1	30	
Cobalt	5.27	1.0	ug/g dry	5.34			1.3	30	
Copper	46.9	10.0	ug/g dry	44.8			4.5	30	
Lead	581	10.0	ug/g dry	560			3.7	30	
Molybdenum	1.64	1.0	ug/g dry	1.61			1.5	30	
Nickel	48.6	10.0	ug/g dry	46.1			5.4	30	
Selenium	ND	1.0	ug/g dry	ND				30	
Silver	ND	0.5	ug/g dry	ND			0.0	30	
Thallium	ND	1.0	ug/g dry	ND				30	
Uranium	ND	1.0	ug/g dry	ND				30	
Vanadium	29.5	10.0	ug/g dry	28.3			4.1	30	
Zinc	447	10.0	ug/g dry	428			4.3	30	
Physical Characteristics									
% Solids	84.5	0.1	% by Wt.	84.1			0.4	25	

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	226		ug/L	ND	90.6	70-130			
Arsenic	229		ug/L	ND	91.6	70-130			
Barium	246		ug/L	ND	98.3	70-130			
Beryllium	232		ug/L	ND	92.6	70-130			
Boron	230		ug/L	ND	92.2	70-130			
Cadmium	234		ug/L	ND	93.8	70-130			
Chromium	239		ug/L	ND	95.5	70-130			
Cobalt	238		ug/L	ND	95.2	70-130			
Copper	241		ug/L	ND	96.4	70-130			
Lead	232		ug/L	ND	92.7	70-130			
Molybdenum	243		ug/L	ND	97.1	70-130			
Nickel	230		ug/L	ND	92.0	70-130			
Selenium	229		ug/L	ND	91.8	70-130			
Silver	228		ug/L	ND	91.2	70-130			
Thallium	244		ug/L	ND	97.5	70-130			
Uranium	247		ug/L	ND	99.0	70-130			
Vanadium	236		ug/L	ND	94.2	70-130			
Zinc	230		ug/L	ND	91.9	70-130			

Certificate of Analysis

Report Date: 06-Nov-2013
Order Date:31-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

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№ 13610

Page 1 of 1

Client Name: exp Services Inc.
Project Reference: OTT-00214936-1
Contact Name: Mark McCalla / Mark Devlin
Quote #
Address: 100-2650 Queensview Dr. Ottawa
PO #
Email Address:
Telephone: (613) 793 3319
TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Date Required:

Criteria: [X] O. Reg. 153/04 (As Amended) Table 3 [X] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 134316

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analyses: metals (ICP)	pH									
1	BH10-S2	S		3	Oct 31, 2013	10:30 am	X	X						250ml + 2 vial			
2	BH11-S1	S		3	Oct 31, 2013	10:00 am	X							V			
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments: Meth vile wasn't needed and can be thrown out.

Method of Delivery: Dadin

Relinquished By (Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Mark Devlin	Date/Time:	Date/Time: Oct 31, 13 11:10	Date/Time: Oct 31 13 2:23
Date/Time: Oct 31, 2013 / 11:10 am	Temperature: ____ °C	Temperature: 6.8 °C	pH Verified [ ] By: N/A

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Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Mark McCalla

Phone: (613) 688-1899
Fax: (613) 225-7337

Client PO:
Project: OTT00214936A0
Custody: 10001

Report Date: 31-Oct-2013
Order Date: 25-Oct-2013
Order #: 1343373

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1343373-01	BH1 SS4
1343373-02	BH2 SS5
1343373-03	BH3 SS3
1343373-04	BH4 SS3
1343373-05	BH4 SS30
1343373-06	BH9 SS5

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	25-Oct-13	30-Oct-13
MOE Metals by ICP-OES, soil Reg 153	based on MOE E3470, ICP-OES	29-Oct-13	29-Oct-13
PHC F1	CWS Tier 1 - P&T GC-FID	25-Oct-13	30-Oct-13
PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	28-Oct-13	28-Oct-13
Solids, %	Gravimetric, calculation	28-Oct-13	28-Oct-13

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	BH1 SS4	BH2 SS5	BH3 SS3	BH4 SS3
	Sample Date:	23-Oct-13	24-Oct-13	23-Oct-13	24-Oct-13
	Sample ID:	1343373-01	1343373-02	1343373-03	1343373-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	81.9	93.1	91.5	80.2
Metals					
Antimony	1.0 ug/g dry	1.9	-	<1.0	<1.0
Arsenic	1.0 ug/g dry	6.0	-	5.8	4.1
Barium	1.0 ug/g dry	253	-	71.7	87.8
Beryllium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Boron	1.0 ug/g dry	7.2	-	6.7	7.6
Cadmium	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Chromium	1.0 ug/g dry	20.4	-	11.9	15.8
Cobalt	1.0 ug/g dry	8.3	-	6.9	6.4
Copper	1.0 ug/g dry	39.8	-	20.1	24.7
Lead	1.0 ug/g dry	325	-	12.0	14.7
Molybdenum	1.0 ug/g dry	1.6	-	2.7	<1.0
Nickel	1.0 ug/g dry	27.3	-	22.7	32.0
Selenium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Silver	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Thallium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Vanadium	1.0 ug/g dry	22.3	-	20.4	18.6
Zinc	1.0 ug/g dry	177	-	28.1	58.5
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	105%	109%	104%	105%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	81	<8	<8	364
F4 PHCs (C34-C50)	6 ug/g dry	10	<6	<6	624

PARACEL LABORATORIES LTD.

Order #: 1343373

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	BH4 SS30	BH9 SS5	-	-
	Sample Date:	24-Oct-13	23-Oct-13	-	-
	Sample ID:	1343373-05	1343373-06	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	87.1	93.5	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	3.9	-	-	-
Barium	1.0 ug/g dry	77.0	-	-	-
Beryllium	1.0 ug/g dry	<1.0	-	-	-
Boron	1.0 ug/g dry	7.8	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	1.0 ug/g dry	14.3	-	-	-
Cobalt	1.0 ug/g dry	5.8	-	-	-
Copper	1.0 ug/g dry	21.3	-	-	-
Lead	1.0 ug/g dry	11.1	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	1.0 ug/g dry	29.6	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.5 ug/g dry	<0.5	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	1.0 ug/g dry	16.8	-	-	-
Zinc	1.0 ug/g dry	55.0	-	-	-
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	0.07	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	0.08	-	-
Toluene-d8	Surrogate	105%	109%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	17	-	-
F2 PHCs (C10-C16)	4 ug/g dry	14	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	536	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	1090	<6	-	-

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	1.0	ug/g						
Boron	ND	1.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	1.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	1.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	1.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.5	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	1.0	ug/g						
Zinc	ND	1.0	ug/g						
Volatiles									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	*7.34*		*ug/g*		*91.8*	*50-140*			

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND				40	
F2 PHCs (C10-C16)	119	4	ug/g dry	127			6.6	30	
F3 PHCs (C16-C34)	107	8	ug/g dry	110			3.2	30	
F4 PHCs (C34-C50)	39	6	ug/g dry	ND			0.0	30	
Metals									
Antimony	ND	1.0	ug/g dry	ND				30	
Arsenic	ND	1.0	ug/g dry	1.22			0.0	30	
Barium	51.6	1.0	ug/g dry	50.9			1.3	30	
Beryllium	ND	1.0	ug/g dry	ND			0.0	30	
Boron	5.33	1.0	ug/g dry	5.56			4.3	30	
Cadmium	ND	0.5	ug/g dry	ND			0.0	30	
Chromium	8.45	1.0	ug/g dry	8.18			3.3	30	
Cobalt	2.95	1.0	ug/g dry	2.83			4.2	30	
Copper	6.39	1.0	ug/g dry	6.60			3.2	30	
Lead	3.39	1.0	ug/g dry	3.74			9.8	30	
Molybdenum	ND	1.0	ug/g dry	ND			0.0	30	
Nickel	4.96	1.0	ug/g dry	4.46			10.6	30	
Selenium	ND	1.0	ug/g dry	ND				30	
Silver	ND	0.5	ug/g dry	ND				30	
Thallium	ND	1.0	ug/g dry	ND				30	
Uranium	ND	1.0	ug/g dry	ND				30	
Vanadium	15.9	1.0	ug/g dry	16.3			2.7	30	
Zinc	14.3	1.0	ug/g dry	13.8			4.2	30	
Physical Characteristics									
% Solids	92.2	0.1	% by Wt.	92.7			0.6	25	
Volatiles									
Benzene	ND	0.02	ug/g dry	ND				50	
Ethylbenzene	ND	0.05	ug/g dry	ND				50	
Toluene	ND	0.05	ug/g dry	ND				50	
m,p-Xylenes	ND	0.05	ug/g dry	ND				50	
o-Xylene	ND	0.05	ug/g dry	ND				50	
Surrogate: Toluene-d8	*5.11*		*ug/g dry*	*ND*	*105*	*50-140*			

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	188	7	ug/g	ND	93.8	80-120			
F2 PHCs (C10-C16)	217	4	ug/g	127	88.3	60-140			
F3 PHCs (C16-C34)	283	8	ug/g	110	82.3	60-140			
F4 PHCs (C34-C50)	104	6	ug/g	ND	74.1	60-140			
Metals									
Antimony	210		ug/L	ND	84.1	70-130			
Arsenic	235		ug/L	24.5	84.1	70-130			
Barium	1200		ug/L	1020	74.5	70-130			
Beryllium	223		ug/L	2.82	87.9	70-130			
Boron	313		ug/L	111	80.5	70-130			
Cadmium	214		ug/L	ND	85.8	70-130			
Chromium	354		ug/L	164	76.1	70-130			
Cobalt	246		ug/L	56.6	75.9	70-130			
Copper	348		ug/L	132	86.3	70-130			
Lead	275		ug/L	74.9	80.1	70-130			
Molybdenum	197		ug/L	2.09	77.9	70-130			
Nickel	277		ug/L	89.2	75.2	70-130			
Selenium	203		ug/L	ND	81.2	70-130			
Silver	208		ug/L	ND	83.2	70-130			
Thallium	201		ug/L	ND	80.5	70-130			
Uranium	246		ug/L	ND	98.4	70-130			
Vanadium	514		ug/L	327	75.2	70-130			
Zinc	454		ug/L	275	71.5	70-130			
Volatiles									
Benzene	3.64	0.02	ug/g	ND	91.0	60-130			
Ethylbenzene	4.23	0.05	ug/g	ND	106	60-130			
Toluene	3.74	0.05	ug/g	ND	93.4	60-130			
m,p-Xylenes	8.02	0.05	ug/g	ND	100	60-130			
o-Xylene	3.85	0.05	ug/g	ND	96.2	60-130			
Surrogate: Toluene-d8	*7.95*		*ug/g*		*99.4*	*50-140*			

Certificate of Analysis

Report Date: 31-Oct-2013
Order Date:25-Oct-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Chain of Custody
(Lab Use Only)
№ 10001

Page 1 of 1

Client Name: Exp Services Inc.	Project Reference: OTT-00214936-A0	TAT: [X] Regular	[ ] 3 Day
Contact Name: MARK McCALLA / MARK DEVLIN	Quote #	[ ] 2 Day	[ ] 1 Day
Address: 2650 QUEENSVIEW DRIVE OTTAWA	PO #	Date Required:	
Telephone: 613 688 1899	Email Address: mark.mccalla@exp.com		

Criteria: [X] O. Reg. 153/04 (As Amended) Table 3 [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1343373

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analyses: BTEX/PHC	Required Analyses: metals
1	BH1 SS4	S		2	oct 23/13		X	X
2	BH2 SS5	S		2	oct 24		X	
3	BH3 SS3	S		2	oct 23		X	X
4	BH4 SS3	S		2	oct 24		X	X
5	BH4 SS3o	S		2	oct 24		X	X
6	BH9 SS5	S		2	oct 23		X	
7								
8								
9								
10								

Required Analyses: 350mL + 1Vial

Comments: * ICP metals per Mark McCalla. - MJC

Method of Delivery: Paracel Courier

Relinquished By (Sign): Mark McCalla	Received by Driver/Depot: T. LOUSE	Received at Lab: SUNEEP GILL	Verified By: MJC
Relinquished By (Print): MARK McCALLA	Date/Time: 25/10/13 9:34am	Date/Time: Oct 25 2013 10:33	Date/Time: Oct 25/13 12:24
Date/Time: Oct 25/13	Temperature: ____ °C	Temperature: 10.7 °C	pH Verified [ ] By: N/A

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Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Mark McCalla

Phone: (613) 688-1899
Fax: (613) 225-7337

Client PO:
Project: OTT00214936A0
Custody: 12925

Report Date: 18-Nov-2013
Order Date: 14-Nov-2013
Order #: 1346314

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1346314-01	MW13-1a
1346314-02	MW13-1b
1346314-03	MW13-2
1346314-04	MW13-3
1346314-05	MW13-4
1346314-06	MW13-6
1346314-07	MW13-9
1346314-08	MW13-60
1346314-09	Trip Blank
1346314-10	Trip Spike

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	15-Nov-13	16-Nov-13
PHC F1	CWS Tier 1 - P&T GC-FID	15-Nov-13	16-Nov-13
PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	15-Nov-13	16-Nov-13
VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	15-Nov-13	16-Nov-13

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	MW13-1a	MW13-1b	MW13-2	MW13-3
	Sample Date:	14-Nov-13	14-Nov-13	14-Nov-13	14-Nov-13
	Sample ID:	1346314-01	1346314-02	1346314-03	1346314-04
	MDL/Units	Water	Water	Water	Water
Volatiles					
Acetone	5.0 ug/L	<5.0	159	142	<5.0
Benzene	0.5 ug/L	<0.5	<0.5	0.7	<0.5
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Chloroform	0.5 ug/L	<0.5	3.7	3.1	<0.5
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5 ug/L	<0.5	7.5	3.0	<0.5
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	MW13-1a	MW13-1b	MW13-2	MW13-3
	Sample Date:	14-Nov-13	14-Nov-13	14-Nov-13	14-Nov-13
	Sample ID:	1346314-01	1346314-02	1346314-03	1346314-04
	MDL/Units	Water	Water	Water	Water
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	0.5 ug/L	<0.5	2.9	4.4	<0.5
1,2,4-Trichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	0.5 ug/L	<0.5	8.1	3.3	<0.5
o-Xylene	0.5 ug/L	<0.5	2.1	1.0	<0.5
Xylenes, total	0.5 ug/L	<0.5	10.2	4.3	<0.5
4-Bromofluorobenzene	Surrogate	113%	105%	106%	107%
Dibromofluoromethane	Surrogate	97.2%	100%	102%	98.9%
Toluene-d8	Surrogate	105%	106%	105%	105%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	102	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100
F1 + F2 PHCs	125 ug/L	<125	<125	<125	<125
F3 + F4 PHCs	200 ug/L	<200	<200	<200	<200

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	MW13-4	MW13-6	MW13-9	MW13-60
	Sample Date:	14-Nov-13	14-Nov-13	14-Nov-13	14-Nov-13
	Sample ID:	1346314-05	1346314-06	1346314-07	1346314-08
	MDL/Units	Water	Water	Water	Water
Volatiles					
Acetone	5.0 ug/L	179	<5.0	22.3	<5.0
Benzene	0.5 ug/L	1.0	<0.5	<0.5	<0.5
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5 ug/L	8.7	<0.5	0.6	<0.5
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	MW13-4	MW13-6	MW13-9	MW13-60
	Sample Date:	14-Nov-13	14-Nov-13	14-Nov-13	14-Nov-13
	Sample ID:	1346314-05	1346314-06	1346314-07	1346314-08
	MDL/Units	Water	Water	Water	Water
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	0.5 ug/L	8.2	<0.5	0.6	<0.5
1,2,4-Trichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	0.5 ug/L	9.7	<0.5	0.7	<0.5
o-Xylene	0.5 ug/L	3.5	<0.5	<0.5	<0.5
Xylenes, total	0.5 ug/L	13.2	<0.5	0.9	<0.5
4-Bromofluorobenzene	Surrogate	105%	106%	106%	107%
Dibromofluoromethane	Surrogate	100%	96.8%	98.8%	97.9%
Toluene-d8	Surrogate	106%	107%	106%	107%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	156	<25	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	100
F1 + F2 PHCs	125 ug/L	156	<125	<125	<125
F3 + F4 PHCs	200 ug/L	<200	<200	<200	<200

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	Trip Blank	Trip Spike	-	-
	Sample Date:	13-Nov-13	13-Nov-13	-	-
	Sample ID:	1346314-09	1346314-10	-	-
	MDL/Units	Water	Water	-	-
Volatiles					
Benzene	0.5 ug/L	<0.5	35.4 [1]	-	-
Ethylbenzene	0.5 ug/L	<0.5	37.0 [1]	-	-
Toluene	0.5 ug/L	<0.5	38.1 [1]	-	-
m,p-Xylenes	0.5 ug/L	<0.5	75.7 [1]	-	-
o-Xylene	0.5 ug/L	<0.5	43.4 [1]	-	-
Xylenes, total	0.5 ug/L	<0.5	119 [1]	-	-
Toluene-d8	Surrogate	107%	77.2% [1]	-	-

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Volatiles									
Acetone	ND	5.0	ug/L						
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.5	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.5	ug/L						
Carbon Tetrachloride	ND	0.2	ug/L						
Chlorobenzene	ND	0.5	ug/L						
Chloroethane	ND	1.0	ug/L						
Chloroform	ND	0.5	ug/L						
Chloromethane	ND	3.0	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
Dichlorodifluoromethane	ND	1.0	ug/L						
1,2-Dibromoethane	ND	0.2	ug/L						
1,2-Dichlorobenzene	ND	0.5	ug/L						
1,3-Dichlorobenzene	ND	0.5	ug/L						
1,4-Dichlorobenzene	ND	0.5	ug/L						
1,1-Dichloroethane	ND	0.5	ug/L						
1,2-Dichloroethane	ND	0.5	ug/L						
1,1-Dichloroethylene	ND	0.5	ug/L						
cis-1,2-Dichloroethylene	ND	0.5	ug/L						
trans-1,2-Dichloroethylene	ND	0.5	ug/L						
1,2-Dichloroethylene, total	ND	0.5	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.5	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Hexane	ND	1.0	ug/L						
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L						
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L						
Methyl Isobutyl Ketone	ND	5.0	ug/L						
Methyl tert-butyl ether	ND	2.0	ug/L						
Methylene Chloride	ND	5.0	ug/L						
Styrene	ND	0.5	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,2,4-Trichlorobenzene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.5	ug/L						
1,1,2-Trichloroethane	ND	0.5	ug/L						
Trichloroethylene	ND	0.5	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
1,3,5-Trimethylbenzene	ND	0.5	ug/L						
Vinyl chloride	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: 4-Bromofluorobenzene	*90.2*		*ug/L*		*113*	*50-140*			
Surrogate: Dibromofluoromethane	*73.1*		*ug/L*		*91.3*	*50-140*			
Surrogate: Toluene-d8	*91.6*		*ug/L*		*115*	*50-140*			

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzene	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: Toluene-d8	*91.6*		*ug/L*		*115*	*50-140*			

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND				30	
Volatiles									
Acetone	ND	5.0	ug/L	ND				30	
Benzene	0.70	0.5	ug/L	0.92			27.2	30	
Bromodichloromethane	ND	0.5	ug/L	ND				30	
Bromoform	ND	0.5	ug/L	ND				30	
Bromomethane	ND	0.5	ug/L	ND				30	
Carbon Tetrachloride	ND	0.2	ug/L	ND				30	
Chlorobenzene	ND	0.5	ug/L	ND				30	
Chloroethane	ND	1.0	ug/L	ND				30	
Chloroform	ND	0.5	ug/L	ND				30	
Chloromethane	ND	3.0	ug/L	ND				30	
Dibromochloromethane	ND	0.5	ug/L	ND				30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND				30	
1,2-Dibromoethane	ND	0.2	ug/L	ND				30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,1-Dichloroethane	ND	0.5	ug/L	ND				30	
1,2-Dichloroethane	ND	0.5	ug/L	ND				30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND				30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND				30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND				30	
1,2-Dichloropropane	ND	0.5	ug/L	ND				30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Hexane	ND	1.0	ug/L	ND				30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND				30	
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L	ND				30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND				30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND				30	
Methylene Chloride	ND	5.0	ug/L	ND				30	
Styrene	ND	0.5	ug/L	ND				30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
Tetrachloroethylene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND			0.0	30	
1,2,4-Trichlorobenzene	ND	0.5	ug/L	ND				30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND				30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND				30	
Trichloroethylene	ND	0.5	ug/L	ND				30	
Trichlorofluoromethane	ND	1.0	ug/L	ND				30	
1,3,5-Trimethylbenzene	ND	0.5	ug/L	ND				30	
Vinyl chloride	ND	0.5	ug/L	ND				30	
m,p-Xylenes	0.70	0.5	ug/L	0.76			8.2	30	
o-Xylene	ND	0.5	ug/L	ND				30	
Surrogate: 4-Bromofluorobenzene	*85.4*		*ug/L*	*ND*	*107*	*50-140*			
Surrogate: Dibromofluoromethane	*79.2*		*ug/L*	*ND*	*99.1*	*50-140*			
Surrogate: Toluene-d8	*86.5*		*ug/L*	*ND*	*108*	*50-140*			
Benzene	0.70	0.5	ug/L	0.92			27.2	30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND			0.0	30	
m,p-Xylenes	0.70	0.5	ug/L	0.76			8.2	30	
o-Xylene	ND	0.5	ug/L	ND				30	

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	*86.5*		*ug/L*	*ND*	*108*	*50-140*			

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1960	25	ug/L	ND	97.8	68-117			
F2 PHCs (C10-C16)	1770	100	ug/L	ND	98.2	60-140			
F3 PHCs (C16-C34)	3540	100	ug/L	ND	95.1	60-140			
F4 PHCs (C34-C50)	2280	100	ug/L	ND	92.0	60-140			
Volatiles									
Acetone	68.7	5.0	ug/L	ND	68.7	50-140			
Benzene	37.9	0.5	ug/L	ND	94.7	60-130			
Bromodichloromethane	35.2	0.5	ug/L	ND	88.1	60-130			
Bromoform	34.3	0.5	ug/L	ND	85.7	60-130			
Bromomethane	21.2	0.5	ug/L	ND	52.9	50-140			
Carbon Tetrachloride	35.0	0.2	ug/L	ND	87.5	60-130			
Chlorobenzene	32.7	0.5	ug/L	ND	81.8	60-130			
Chloroethane	36.2	1.0	ug/L	ND	90.6	50-140			
Chloroform	35.2	0.5	ug/L	ND	87.9	60-130			
Chloromethane	22.9	3.0	ug/L	ND	57.3	50-140			
Dibromochloromethane	32.4	0.5	ug/L	ND	81.0	60-130			
Dichlorodifluoromethane	23.4	1.0	ug/L	ND	58.4	50-140			
1,2-Dibromoethane	32.9	0.2	ug/L	ND	82.3	60-130			
1,2-Dichlorobenzene	34.4	0.5	ug/L	ND	85.9	60-130			
1,3-Dichlorobenzene	35.0	0.5	ug/L	ND	87.4	60-130			
1,4-Dichlorobenzene	36.6	0.5	ug/L	ND	91.4	60-130			
1,1-Dichloroethane	37.9	0.5	ug/L	ND	94.8	60-130			
1,2-Dichloroethane	34.4	0.5	ug/L	ND	86.0	60-130			
1,1-Dichloroethylene	33.9	0.5	ug/L	ND	84.7	60-130			
cis-1,2-Dichloroethylene	36.1	0.5	ug/L	ND	90.3	60-130			
trans-1,2-Dichloroethylene	33.7	0.5	ug/L	ND	84.4	60-130			
1,2-Dichloropropane	36.3	0.5	ug/L	ND	90.8	60-130			
cis-1,3-Dichloropropylene	35.5	0.5	ug/L	ND	88.8	60-130			
trans-1,3-Dichloropropylene	37.5	0.5	ug/L	ND	93.8	60-130			
Ethylbenzene	43.0	0.5	ug/L	ND	107	60-130			
Hexane	36.7	1.0	ug/L	ND	91.7	60-130			
Methyl Ethyl Ketone (2-Butanone)	98.4	5.0	ug/L	ND	98.4	50-140			
Methyl Butyl Ketone (2-Hexanone)	91.9	10.0	ug/L	ND	91.9	50-140			
Methyl Isobutyl Ketone	90.4	5.0	ug/L	ND	90.4	50-140			
Methyl tert-butyl ether	86.9	2.0	ug/L	ND	86.9	50-140			
Methylene Chloride	30.9	5.0	ug/L	ND	77.3	60-130			
Styrene	35.5	0.5	ug/L	ND	88.7	60-130			
1,1,1,2-Tetrachloroethane	33.2	0.5	ug/L	ND	82.9	60-130			
1,1,2,2-Tetrachloroethane	35.7	0.5	ug/L	ND	89.3	60-130			
Tetrachloroethylene	32.9	0.5	ug/L	ND	82.2	60-130			
Toluene	36.6	0.5	ug/L	ND	91.6	60-130			
1,2,4-Trichlorobenzene	35.4	0.5	ug/L	ND	88.6	60-130			
1,1,1-Trichloroethane	33.7	0.5	ug/L	ND	84.2	60-130			
1,1,2-Trichloroethane	35.3	0.5	ug/L	ND	88.2	60-130			
Trichloroethylene	33.1	0.5	ug/L	ND	82.8	60-130			
Trichlorofluoromethane	33.8	1.0	ug/L	ND	84.6	60-130			
1,3,5-Trimethylbenzene	30.8	0.5	ug/L	ND	77.1	60-130			
Vinyl chloride	29.9	0.5	ug/L	ND	74.8	50-140			
m,p-Xylenes	68.8	0.5	ug/L	ND	86.0	60-130			

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	36.1	0.5	ug/L	ND	90.3	60-130			
Surrogate: 4-Bromofluorobenzene	*75.0*		*ug/L*		*93.7*	*50-140*			
Benzene	37.9	0.5	ug/L	ND	94.7	60-130			
Ethylbenzene	43.0	0.5	ug/L	ND	107	60-130			
Toluene	36.6	0.5	ug/L	ND	91.6	60-130			
m,p-Xylenes	68.8	0.5	ug/L	ND	86.0	60-130			
o-Xylene	36.1	0.5	ug/L	ND	90.3	60-130			

Certificate of Analysis

Report Date: 18-Nov-2013
Order Date:14-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Qualifier Notes:

Sample Qualifiers :

1 : VOC Trip Spike prepared at 40 ug/L for all parameters, except for m/p-Xylene which is at 80 ug/L and ketones at 100 ug/L.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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www.paracellabs.com

Chain of Custody
(Lab Use Only)
№ 12925

Page 1 of 1

Client Name: EXP Services Inc.	Project Reference: OTT-00214936-A0.
Contact Name: Mark McCalla	Quote #
Address: 2650 Queensview Drive, Ottawa	PO #
Telephone: 613-688-1899	Email Address: mark.mccalla@exp.com.

TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Date Required: _____

Criteria: [X] O. Reg. 153/04 (As Amended) Table 3 [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1346314

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analyses: PHC (F1-F4)	VOC	BTEX
1	MW13-1a	GW		3	14 Nov 2013		X	X	
2	MW13-1b						X	X	
3	MW13-2						X	X	
4	MW13-3						X	X	
5	MW13-4						X	X	
6	MW13-6						X	X	
7	MW13-9						X	X	
8	MW13-60						X	X	
9	Trip blank	O		1					X
10	Trip Spike	O		1					X

Comments:

Method of Delivery: Walk in

Relinquished By (Sign):	Received by Driver/Depot:	Received at Lab: MC	Verified By: MC
Relinquished By (Print): DARRAGH KILROY	Date/Time:	Date/Time: Nov 14/13 5:00	Date/Time: Nov 14/13 5:36
Date/Time: 14 Nov 2013 17:00	Temperature: _____ °C	Temperature: 9.3 °C	pH Verified [ ] By: N/A

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Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Mark McCalla

Phone: (613) 688-1899
Fax: (613) 225-7337

Client PO:
Project: OTT00214936A0
Custody: 12815

Report Date: 25-Nov-2013
Order Date: 19-Nov-2013
Order #: 1347114

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1347114-01	BH18
1347114-02	BH23

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PHC F1	CWS Tier 1 - P&T GC-FID	20-Nov-13	22-Nov-13
PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	23-Nov-13	23-Nov-13
VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	20-Nov-13	22-Nov-13

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO:

Project Description: OTT00214936A0

	Client ID:	BH18	BH23	-	-
	Sample Date:	19-Nov-13	19-Nov-13	-	-
	Sample ID:	1347114-01	1347114-02	-	-
	MDL/Units	Water	Water	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	<5.0	-	-
Benzene	0.5 ug/L	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
Chloroethane	1.0 ug/L	<1.0	<1.0	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	-	-
Chloromethane	3.0 ug/L	<3.0	<3.0	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	-	-
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	-	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	-	-
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	-	-

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

	Client ID:	BH18	BH23	-	-
	Sample Date:	19-Nov-13	19-Nov-13	-	-
	Sample ID:	1347114-01	1347114-02	-	-
	MDL/Units	Water	Water	-	-
Styrene	0.5 ug/L	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	-	-
1,2,4-Trichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	-	-
4-Bromofluorobenzene	Surrogate	119%	118%	-	-
Dibromofluoromethane	Surrogate	99.5%	99.1%	-	-
Toluene-d8	Surrogate	120%	114%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	-	-
F1 + F2 PHCs	125 ug/L	<125	<125	-	-
F3 + F4 PHCs	200 ug/L	<200	<200	-	-

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Volatiles									
Acetone	ND	5.0	ug/L						
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.5	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.5	ug/L						
Carbon Tetrachloride	ND	0.2	ug/L						
Chlorobenzene	ND	0.5	ug/L						
Chloroethane	ND	1.0	ug/L						
Chloroform	ND	0.5	ug/L						
Chloromethane	ND	3.0	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
Dichlorodifluoromethane	ND	1.0	ug/L						
1,2-Dibromoethane	ND	0.2	ug/L						
1,2-Dichlorobenzene	ND	0.5	ug/L						
1,3-Dichlorobenzene	ND	0.5	ug/L						
1,4-Dichlorobenzene	ND	0.5	ug/L						
1,1-Dichloroethane	ND	0.5	ug/L						
1,2-Dichloroethane	ND	0.5	ug/L						
1,1-Dichloroethylene	ND	0.5	ug/L						
cis-1,2-Dichloroethylene	ND	0.5	ug/L						
trans-1,2-Dichloroethylene	ND	0.5	ug/L						
1,2-Dichloroethylene, total	ND	0.5	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.5	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Hexane	ND	1.0	ug/L						
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L						
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L						
Methyl Isobutyl Ketone	ND	5.0	ug/L						
Methyl tert-butyl ether	ND	2.0	ug/L						
Methylene Chloride	ND	5.0	ug/L						
Styrene	ND	0.5	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,2,4-Trichlorobenzene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.5	ug/L						
1,1,2-Trichloroethane	ND	0.5	ug/L						
Trichloroethylene	ND	0.5	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
1,3,5-Trimethylbenzene	ND	0.5	ug/L						
Vinyl chloride	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: 4-Bromofluorobenzene	*92.8*		*ug/L*		*116*	*50-140*			
Surrogate: Dibromofluoromethane	*78.6*		*ug/L*		*98.2*	*50-140*			
Surrogate: Toluene-d8	*92.4*		*ug/L*		*115*	*50-140*			

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND				30	
Volatiles									
Acetone	ND	5.0	ug/L	ND				30	
Benzene	ND	0.5	ug/L	ND				30	
Bromodichloromethane	ND	0.5	ug/L	ND				30	
Bromoform	ND	0.5	ug/L	ND				30	
Bromomethane	ND	0.5	ug/L	ND				30	
Carbon Tetrachloride	ND	0.2	ug/L	ND				30	
Chlorobenzene	ND	0.5	ug/L	ND				30	
Chloroethane	ND	1.0	ug/L	ND				30	
Chloroform	ND	0.5	ug/L	ND				30	
Chloromethane	ND	3.0	ug/L	ND				30	
Dibromochloromethane	ND	0.5	ug/L	ND				30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND				30	
1,2-Dibromoethane	ND	0.2	ug/L	ND				30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,1-Dichloroethane	44.1	0.5	ug/L	50.0			12.7	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND				30	
1,1-Dichloroethylene	46.0	0.5	ug/L	52.1			12.4	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			0.0	30	
trans-1,2-Dichloroethylene	0.56	0.5	ug/L	0.63			11.8	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND				30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Hexane	ND	1.0	ug/L	ND				30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND				30	
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L	ND				30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND				30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND				30	
Methylene Chloride	ND	5.0	ug/L	ND				30	
Styrene	ND	0.5	ug/L	ND				30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
Tetrachloroethylene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND				30	
1,2,4-Trichlorobenzene	ND	0.5	ug/L	ND				30	
1,1,1-Trichloroethane	59.8	0.5	ug/L	67.8			12.7	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND				30	
Trichloroethylene	1.58	0.5	ug/L	1.80			13.0	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND				30	
1,3,5-Trimethylbenzene	ND	0.5	ug/L	ND				30	
Vinyl chloride	ND	0.5	ug/L	ND				30	
m,p-Xylenes	ND	0.5	ug/L	ND				30	
o-Xylene	ND	0.5	ug/L	ND				30	
Surrogate: 4-Bromofluorobenzene	*92.0*		*ug/L*	*ND*	*115*	*50-140*			
Surrogate: Dibromofluoromethane	*81.1*		*ug/L*	*ND*	*101*	*50-140*			
Surrogate: Toluene-d8	*92.2*		*ug/L*	*ND*	*115*	*50-140*			

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	2100	25	ug/L	ND	105	68-117			
F2 PHCs (C10-C16)	1240	100	ug/L	ND	68.8	60-140			
F3 PHCs (C16-C34)	2510	100	ug/L	ND	67.5	60-140			
F4 PHCs (C34-C50)	1520	100	ug/L	ND	61.3	60-140			
Volatiles									
Acetone	68.8	5.0	ug/L	ND	68.8	50-140			
Benzene	50.4	0.5	ug/L	ND	126	60-130			
Bromodichloromethane	41.9	0.5	ug/L	ND	105	60-130			
Bromoform	37.8	0.5	ug/L	ND	94.4	60-130			
Bromomethane	34.6	0.5	ug/L	ND	86.4	50-140			
Carbon Tetrachloride	38.0	0.2	ug/L	ND	95.0	60-130			
Chlorobenzene	40.0	0.5	ug/L	ND	99.9	60-130			
Chloroethane	26.5	1.0	ug/L	ND	66.3	50-140			
Chloroform	46.8	0.5	ug/L	ND	117	60-130			
Chloromethane	30.8	3.0	ug/L	ND	77.0	50-140			
Dibromochloromethane	36.7	0.5	ug/L	ND	91.8	60-130			
Dichlorodifluoromethane	27.4	1.0	ug/L	ND	68.4	50-140			
1,2-Dibromoethane	41.0	0.2	ug/L	ND	102	60-130			
1,2-Dichlorobenzene	47.8	0.5	ug/L	ND	119	60-130			
1,3-Dichlorobenzene	44.2	0.5	ug/L	ND	110	60-130			
1,4-Dichlorobenzene	45.2	0.5	ug/L	ND	113	60-130			
1,1-Dichloroethane	49.5	0.5	ug/L	ND	124	60-130			
1,2-Dichloroethane	41.0	0.5	ug/L	ND	102	60-130			
1,1-Dichloroethylene	29.1	0.5	ug/L	ND	72.7	60-130			
cis-1,2-Dichloroethylene	50.3	0.5	ug/L	ND	126	60-130			
trans-1,2-Dichloroethylene	30.0	0.5	ug/L	ND	75.0	60-130			
1,2-Dichloropropane	51.0	0.5	ug/L	ND	127	60-130			
cis-1,3-Dichloropropylene	42.6	0.5	ug/L	ND	106	60-130			
trans-1,3-Dichloropropylene	38.6	0.5	ug/L	ND	96.6	60-130			
Ethylbenzene	40.5	0.5	ug/L	ND	101	60-130			
Hexane	36.1	1.0	ug/L	ND	90.3	60-130			
Methyl Ethyl Ketone (2-Butanone)	127	5.0	ug/L	ND	127	50-140			
Methyl Butyl Ketone (2-Hexanone)	112	10.0	ug/L	ND	112	50-140			
Methyl Isobutyl Ketone	114	5.0	ug/L	ND	114	50-140			
Methyl tert-butyl ether	91.3	2.0	ug/L	ND	91.3	50-140			
Methylene Chloride	34.6	5.0	ug/L	ND	86.6	60-130			
Styrene	43.5	0.5	ug/L	ND	109	60-130			
1,1,1,2-Tetrachloroethane	35.5	0.5	ug/L	ND	88.8	60-130			
1,1,2,2-Tetrachloroethane	41.0	0.5	ug/L	ND	102	60-130			
Tetrachloroethylene	38.9	0.5	ug/L	ND	97.2	60-130			
Toluene	43.6	0.5	ug/L	ND	109	60-130			
1,2,4-Trichlorobenzene	42.1	0.5	ug/L	ND	105	60-130			
1,1,1-Trichloroethane	38.7	0.5	ug/L	ND	96.7	60-130			
1,1,2-Trichloroethane	49.8	0.5	ug/L	ND	125	60-130			
Trichloroethylene	43.3	0.5	ug/L	ND	108	60-130			
Trichlorofluoromethane	28.6	1.0	ug/L	ND	71.4	60-130			
1,3,5-Trimethylbenzene	41.5	0.5	ug/L	ND	104	60-130			
Vinyl chloride	30.4	0.5	ug/L	ND	76.1	50-140			
m,p-Xylenes	81.2	0.5	ug/L	ND	101	60-130			

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	42.1	0.5	ug/L	ND	105	60-130			
Surrogate: 4-Bromofluorobenzene	*85.3*		*ug/L*		*107*	*50-140*			

Certificate of Analysis

Report Date: 25-Nov-2013
Order Date:19-Nov-2013

Client: **exp Services Inc. (Ottawa)**
Client PO: Project Description: OTT00214936A0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Chain of Custody
(Lab Use Only)
№ 12815

Page 1 of 1

Client Name: EXP	Project Reference: OTT-00214936-A0	TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Contact Name: Mark McCalla	Quote #	
Address: 2650 Queensview Drive	PO #	Date Required:
Telephone: 613-688-1899	Email Address: mark.mccalla@exp.com	

Criteria: [X] O. Reg. 153/04 (As Amended) Table 3 [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1347114

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analyses: PHC (F1-F4)	VOC
1	BH 18	GW		3	19 Nov 2013		X	X
2	BH 23	↓		↓	↓		X	X
3								
4								
5								
6								
7								
8								
9								
10								

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received by Driver/Depot: SUNDEPORN	Received at Lab:	Verified By:
Relinquished By (Print): DARRAGH KILROY	Date/Time: NOV 19, 2013 09:30	Date/Time: NOV 19/13	Date/Time: Nov 19/13 4:30
Date/Time: 19 Nov 2013 12:35 pm	Temperature: 9.1 °C	Temperature: 8.3 °C 12:39p	pH Verified [ ] By: N/A

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G105048 **REPORT No. B22-28067**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
% Moisture	30	Richmond Hill	FAL	02-Sep-22	A-% moisture RH	
Cyanide	30	Kingston	kwe	08-Sep-22	A-CN s K	in house
Conductivity	30	Holly Lane	LMG	07-Sep-22	A-COND-01 (o)	SM 2510B
pH	30	Holly Lane	LMG	07-Sep-22	A-PH-01 (o)	SM 4500H
PHC(F2-F4)	7	Kingston	aso	07-Sep-22	C-PHC-S-001 (k)	CWS Tier 1
PHC(F2-F4)	30	Kingston	KPR	02-Sep-22	C-PHC-S-001 (k)	CWS Tier 1
VOC's	30	Richmond Hill	FAL	02-Sep-22	C-VOC-02 (rh)	EPA 8260
PHC(F1)	30	Richmond Hill	FAL	02-Sep-22	C-VPHS-01 (rh)	CWS Tier 1
Chromium (VI)	30	Holly Lane	LMG	08-Sep-22	D-CRVI-02 (o)	EPA7196A
Mercury	30	Holly Lane	PBK	07-Sep-22	D-HG-01 (o)	EPA 7471A
Boron - HWS	30	Holly Lane	hmc	08-Sep-22	D-HWE s	MOE3470
Sodium Adsorption Ratio	30	Holly Lane	hmc	08-Sep-22	D-ICP-01 SAR (o)	SM 3120
Metals - ICP-OES	30	Holly Lane	hmc	08-Sep-22	D-ICP-02 (o)	EPA 6010
Metals - ICP-MS	30	Holly Lane	TPR	08-Sep-22	D-ICPMS-01 (o)	EPA 6020

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Final Report

C.O.C.: G105048 **REPORT No. B22-28067**

Report To:

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2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP1-1.0	TP1-2.5	TP1-4.5	TP2-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-1	B22-28067-2	B22-28067-3	B22-28067-4	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		1.50	1.64	1.69	0.217	2.4	
Antimony	µg/g	0.5	< 0.5	< 0.5	0.6	< 0.5	1.3	
Arsenic	µg/g	0.5	7.4	6.9	10.3	9.3	18	
Barium	µg/g	1	96	99	121	107	220	
Beryllium	µg/g	0.2	0.7	0.7	0.8	0.6	2.5	
Boron	µg/g	0.5	7.4	6.9	6.8	6.4	36	
Boron (HWS)	µg/g	0.02	0.07	0.07	0.08	0.10		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	21	21	21	20	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	9	9	14	10	21	
Copper	µg/g	1	34	36	46	38	92	
Lead	µg/g	5	25	16	32	29	120	
Mercury	µg/g	0.005	0.084	0.080	0.103	0.108	0.27	
Molybdenum	µg/g	1	2	2	**4**	2	2	
Nickel	µg/g	1	44	53	60	48	82	
Selenium	µg/g	0.5	1.1	1.0	1.3	1.3	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.4	0.5	0.6	0.5	1	
Uranium	µg/g	0.1	2.2	2.2	**2.7**	2.2	2.5	
Vanadium	µg/g	1	26	28	30	29	86	
Zinc	µg/g	3	108	84	92	85	290	
pH @25°C	pH Units		7.66	7.65	7.58	7.65		
Conductivity @25°C	µmho/cm	1	**302**	**612**	**479**	**247**	0.57	
% moisture	%		18.7	16.3	17.7	14.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Tel: 613-526-0123
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DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP1-1.0	TP1-2.5	TP1-4.5	TP2-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-1	B22-28067-2	B22-28067-3	B22-28067-4	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		83.2	80.5	80.3	79.6		
Toluene-d8 (SS)	% rec.		96.7	97.9	97.7	97.8		
Bromofluorobenzene,4(SS)	% rec.		94.1	99.2	97.6	98.9		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	< 5	< 5	< 5	< 5	10	
PHC F3 (>C16-C34)	µg/g	10	15	16	22	28	240	
PHC F4 (>C34-C50)	µg/g	10	13	< 10	< 10	12	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	**< 0.1**	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50					120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G105048 **REPORT No. B22-28067**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP2-2.0	TP2-3.0	TP2-3.7	TP3-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-5	B22-28067-6	B22-28067-7	B22-28067-8	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.435	0.517	1.05	0.116	2.4	
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.3	
Arsenic	µg/g	0.5	7.9	8.6	7.2	5.7	18	
Barium	µg/g	1	176	110	155	**254**	220	
Beryllium	µg/g	0.2	0.6	0.7	0.6	0.5	2.5	
Boron	µg/g	0.5	6.9	6.9	7.9	7.3	36	
Boron (HWS)	µg/g	0.02	0.04	0.06	0.05	0.06		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	18	23	18	16	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	13	12	11	10	21	
Copper	µg/g	1	39	41	35	31	92	
Lead	µg/g	5	26	35	25	26	120	
Mercury	µg/g	0.005	0.090	0.122	0.097	0.073	0.27	
Molybdenum	µg/g	1	**3**	**3**	**3**	2	2	
Nickel	µg/g	1	53	58	44	35	82	
Selenium	µg/g	0.5	1.2	1.1	0.9	1.0	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.6	0.8	0.5	0.4	1	
Uranium	µg/g	0.1	2.3	2.0	1.8	1.9	2.5	
Vanadium	µg/g	1	27	29	26	24	86	
Zinc	µg/g	3	87	100	83	70	290	
pH @25°C	pH Units		7.71	7.63	7.72	7.82		
Conductivity @25°C	µmho/cm	1	**389**	**395**	**387**	**319**	0.57	
% moisture	%		13.5	11.0	12.3	8.3		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP2-2.0	TP2-3.0	TP2-3.7	TP3-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-5	B22-28067-6	B22-28067-7	B22-28067-8	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		81.7	79.6	81.9	79.2		
Toluene-d8 (SS)	% rec.		96.5	98.2	97.3	98.0		
Bromofluorobenzene,4(SS)	% rec.		98.0	99.5	98.0	98.4		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	9	**12**	8	**15**	10	
PHC F3 (>C16-C34)	µg/g	10	32	34	36	42	240	
PHC F4 (>C34-C50)	µg/g	10	< 10	< 10	32 [2]	27	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	**< 0.5**	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50			< 50 [1]		120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP3-2.0	TP3-2.75	TP3-3.50	TP4-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-9	B22-28067-10	B22-28067-11	B22-28067-12	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.776	0.523	0.814	0.316	2.4	
Antimony	µg/g	0.5	< 0.5	**2.1**	< 0.5	< 0.5	1.3	
Arsenic	µg/g	0.5	3.7	5.7	4.9	5.7	18	
Barium	µg/g	1	70	127	115	151	220	
Beryllium	µg/g	0.2	0.4	0.6	0.5	0.6	2.5	
Boron	µg/g	0.5	5.8	8.6	7.3	7.5	36	
Boron (HWS)	µg/g	0.02	0.07	0.08	0.07	0.12		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	15	17	16	17	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	7	9	10	10	21	
Copper	µg/g	1	32	38	33	38	92	
Lead	µg/g	5	26	23	15	22	120	
Mercury	µg/g	0.005	0.115	0.064	0.051	0.085	0.27	
Molybdenum	µg/g	1	1	**3**	2	**3**	2	
Nickel	µg/g	1	22	33	37	37	82	
Selenium	µg/g	0.5	0.7	1.3	0.9	1.2	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.2	0.2	0.3	0.2	1	
Uranium	µg/g	0.1	1.0	1.8	1.4	1.9	2.5	
Vanadium	µg/g	1	22	24	24	26	86	
Zinc	µg/g	3	67	74	63	67	290	
pH @25°C	pH Units		7.89	7.86	5.97	7.92		
Conductivity @25°C	µmho/cm	1	**393**	**814**	**434**	**261**	0.57	
% moisture	%		11.8	12.5	8.9	16.1		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP3-2.0	TP3-2.75	TP3-3.50	TP4-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-9	B22-28067-10	B22-28067-11	B22-28067-12	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		82.3	81.3	82.8	80.9		
Toluene-d8 (SS)	% rec.		96.0	97.0	97.8	98.4		
Bromofluorobenzene,4(SS)	% rec.		95.8	98.2	97.2	99.9		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	< 5	< 5	**21**	**19**	10	
PHC F3 (>C16-C34)	µg/g	10	36	125	51	**1230**	240	
PHC F4 (>C34-C50)	µg/g	10	67 [2]	**299** [2]	< 10	15	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50	**390** [1]	**1440** [1]			120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP4-2.0	TP4-2.75	TP4-3.75	TP5-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-13	B22-28067-14	B22-28067-15	B22-28067-16	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.318	0.340	0.847	0.302	2.4	
Antimony	µg/g	0.5	< 0.5	< 0.5	0.6	< 0.5	1.3	
Arsenic	µg/g	0.5	4.6	5.6	7.5	5.8	18	
Barium	µg/g	1	93	124	90	100	220	
Beryllium	µg/g	0.2	0.4	0.5	0.5	0.5	2.5	
Boron	µg/g	0.5	7.5	8.2	6.4	6.8	36	
Boron (HWS)	µg/g	0.02	0.06	0.07	0.06	0.08		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	17	20	29	18	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	9	10	12	10	21	
Copper	µg/g	1	27	37	71	30	92	
Lead	µg/g	5	13	17	14	51	120	
Mercury	µg/g	0.005	0.036	0.060	0.054	0.109	0.27	
Molybdenum	µg/g	1	2	**3**	**5**	2	2	
Nickel	µg/g	1	26	34	50	33	82	
Selenium	µg/g	0.5	0.8	1.0	1.0	0.9	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.2	0.2	0.3	0.3	1	
Uranium	µg/g	0.1	1.4	1.8	1.6	1.4	2.5	
Vanadium	µg/g	1	21	23	26	26	86	
Zinc	µg/g	3	54	64	62	91	290	
pH @25°C	pH Units		7.89	8.04	8.02	7.96		
Conductivity @25°C	µmho/cm	1	**504**	**819**	**502**	**209**	0.57	
% moisture	%		12.3	11.6	12.7	14.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
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	Client I.D.		TP4-2.0	TP4-2.75	TP4-3.75	TP5-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-13	B22-28067-14	B22-28067-15	B22-28067-16	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		80.5	81.2	79.8	81.9		
Toluene-d8 (SS)	% rec.		97.4	97.4	97.9	98.5		
Bromofluorobenzene,4(SS)	% rec.		96.6	98.1	99.3	99.4		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	**35**	**29**	**59**	**15**	10	
PHC F3 (>C16-C34)	µg/g	10	77	65	112	72	240	
PHC F4 (>C34-C50)	µg/g	10	10	20	12	12	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50					120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
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	Client I.D.		TP5-2.0	TP5-2.75	TP5-3.25	TP6-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-17	B22-28067-18	B22-28067-19	B22-28067-20	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.306	0.514	0.278	0.444	2.4	
Antimony	µg/g	0.5	< 0.5	0.7	0.6	< 0.5	1.3	
Arsenic	µg/g	0.5	7.1	7.0	8.7	6.8	18	
Barium	µg/g	1	130	126	113	157	220	
Beryllium	µg/g	0.2	0.6	0.5	0.6	0.8	2.5	
Boron	µg/g	0.5	9.0	7.8	8.6	6.8	36	
Boron (HWS)	µg/g	0.02	0.08	0.08	0.07	0.07		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	19	17	18	21	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	12	11	12	9	21	
Copper	µg/g	1	31	42	34	46	92	
Lead	µg/g	5	30	62	43	22	120	
Mercury	µg/g	0.005	0.083	0.166	0.158	0.100	0.27	
Molybdenum	µg/g	1	2	2	**3**	2	2	
Nickel	µg/g	1	40	36	40	52	82	
Selenium	µg/g	0.5	1.0	1.0	1.0	1.1	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.3	0.3	0.4	0.3	1	
Uranium	µg/g	0.1	1.8	1.5	1.6	1.4	2.5	
Vanadium	µg/g	1	25	24	26	25	86	
Zinc	µg/g	3	87	121	90	85	290	
pH @25°C	pH Units		8.02	8.06	8.10	8.02		
Conductivity @25°C	µmho/cm	1	**283**	**703**	**1**	**176**	0.57	
% moisture	%		11.2	11.3	14.3	16.4		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G105048 **REPORT No. B22-28067**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Sep-22
DATE REPORTED: 09-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP5-2.0	TP5-2.75	TP5-3.25	TP6-1.0	O. Reg. 153	
	Sample I.D.		B22-28067-17	B22-28067-18	B22-28067-19	B22-28067-20	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		80.5	81.5	83.3	82.3		
Toluene-d8 (SS)	% rec.		98.9	97.8	97.8	98.1		
Bromofluorobenzene,4(SS)	% rec.		100	93.6	94.3	95.9		
PHC F1 (C6-C10)	µg/g	10	10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	**26**	**28**	**26**	8	10	
PHC F3 (>C16-C34)	µg/g	10	141	68	74	94	240	
PHC F4 (>C34-C50)	µg/g	10	**182** [2]	< 10	20	30	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50	**490** [1]				120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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DATE RECEIVED: 01-Sep-22
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP7-1.0	TP8-1.0	TP9-1.0	BH1	O. Reg. 153	
	Sample I.D.		B22-28067-21	B22-28067-22	B22-28067-23	B22-28067-24	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.140	0.376	0.546	0.523	2.4	
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5	0.5	1.3	
Arsenic	µg/g	0.5	7.0	5.9	6.3	9.2	18	
Barium	µg/g	1	112	92	86	131	220	
Beryllium	µg/g	0.2	0.6	0.5	0.5	0.8	2.5	
Boron	µg/g	0.5	7.5	7.2	6.6	9.0	36	
Boron (HWS)	µg/g	0.02	0.06	0.11	0.04	0.05		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	0.9	1.2	
Chromium	µg/g	1	18	17	14	24	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	10	8	10	11	21	
Copper	µg/g	1	35	34	30	73	92	
Lead	µg/g	5	26	36	18	89	120	
Mercury	µg/g	0.005	0.076	0.096	0.099	0.096	0.27	
Molybdenum	µg/g	1	**3**	**3**	**4**	**3**	2	
Nickel	µg/g	1	47	43	39	55	82	
Selenium	µg/g	0.5	1.2	0.9	**1.7**	1.2	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	0.2	0.5	
Thallium	µg/g	0.1	0.4	0.5	0.4	0.4	1	
Uranium	µg/g	0.1	2.1	1.8	2.1	1.8	2.5	
Vanadium	µg/g	1	24	24	24	35	86	
Zinc	µg/g	3	96	85	57	261	290	
pH @25°C	pH Units		8.94	8.04	7.89	8.00		
Conductivity @25°C	µmho/cm	1	**361**	**220**	**264**	**172**	0.57	
% moisture	%		12.4	9.8	10.0	11.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		TP7-1.0	TP8-1.0	TP9-1.0	BH1	O. Reg. 153	
	Sample I.D.		B22-28067-21	B22-28067-22	B22-28067-23	B22-28067-24	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		84.6	83.4	81.9	83.4		
Toluene-d8 (SS)	% rec.		97.0	97.0	97.8	97.0		
Bromofluorobenzene,4(SS)	% rec.		97.3	97.4	97.3	97.2		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	**37**	**16**	**30**	**109**	10	
PHC F3 (>C16-C34)	µg/g	10	**312**	78	60	**2620**	240	
PHC F4 (>C34-C50)	µg/g	10	63	29	18	**352**	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50					120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

	Client I.D.		BH2	BH5	BH6	Dup1	O. Reg. 153	
	Sample I.D.		B22-28067-25	B22-28067-26	B22-28067-27	B22-28067-28	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.440	0.517	0.132	0.446	2.4	
Antimony	µg/g	0.5	< 0.5	0.7	< 0.5	0.6	1.3	
Arsenic	µg/g	0.5	6.4	8.4	3.5	6.1	18	
Barium	µg/g	1	90	97	47	155	220	
Beryllium	µg/g	0.2	0.3	0.6	0.2	0.5	2.5	
Boron	µg/g	0.5	6.1	6.5	4.6	7.0	36	
Boron (HWS)	µg/g	0.02	0.05	0.10	0.02	0.07		
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1	13	17	9	17	70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.66	
Cobalt	µg/g	1	8	11	7	8	21	
Copper	µg/g	1	18	30	16	28	92	
Lead	µg/g	5	54	33	6	57	120	
Mercury	µg/g	0.005	0.058	0.096	0.022	0.102	0.27	
Molybdenum	µg/g	1	**3**	**4**	2	2	2	
Nickel	µg/g	1	20	48	19	32	82	
Selenium	µg/g	0.5	0.6	0.9	0.6	1.0	1.5	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Thallium	µg/g	0.1	0.3	0.5	0.2	0.4	1	
Uranium	µg/g	0.1	0.9	2.2	1.8	1.2	2.5	
Vanadium	µg/g	1	18	26	16	24	86	
Zinc	µg/g	3	91	59	22	93	290	
pH @25°C	pH Units		8.04	8.19	8.11	8.03		
Conductivity @25°C	µmho/cm	1	**259**	**363**	**1**	**398**	0.57	
% moisture	%		9.3	13.8	9.9	10.6		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
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WATERWORKS NO.

	Client I.D.		BH2	BH5	BH6	Dup1	O. Reg. 153	
	Sample I.D.		B22-28067-25	B22-28067-26	B22-28067-27	B22-28067-28	Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22		
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	
Dibromofluoromethane (SS)	% rec.		81.6	81.2	80.0	81.5		
Toluene-d8 (SS)	% rec.		96.5	97.3	96.9	97.7		
Bromofluorobenzene,4(SS)	% rec.		99.3	99.7	100	97.8		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	25	
PHC F2 (>C10-C16)	µg/g	5	< 5	5	**15**	5	10	
PHC F3 (>C16-C34)	µg/g	10	50	94	29	152	240	
PHC F4 (>C34-C50)	µg/g	10	**133** 2	94 2	< 10	**431** 2	120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	
PHC F4 (Gravimetric)	µg/g	50	**470** 1	**400** 1		**2150** 1	120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
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	Client I.D.		Dup2	Dup3			O. Reg. 153 Tbl. 1 - All	
	Sample I.D.		B22-28067-29	B22-28067-30				
	Date Collected		31-Aug-22	31-Aug-22				
Parameter	**Units**	**R.L.**						
Sodium Adsorption Ratio	units		0.538	0.127			2.4	
Antimony	µg/g	0.5	< 0.5	< 0.5			1.3	
Arsenic	µg/g	0.5	5.9	7.6			18	
Barium	µg/g	1	84	104			220	
Beryllium	µg/g	0.2	0.4	0.6			2.5	
Boron	µg/g	0.5	5.6	7.3			36	
Boron (HWS)	µg/g	0.02	0.04	0.05				
Cadmium	µg/g	0.5	< 0.5	< 0.5			1.2	
Chromium	µg/g	1	13	18			70	
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2			0.66	
Cobalt	µg/g	1	10	10			21	
Copper	µg/g	1	29	47			92	
Lead	µg/g	5	15	23			120	
Mercury	µg/g	0.005	0.071	0.075			0.27	
Molybdenum	µg/g	1	**4**	**3**			2	
Nickel	µg/g	1	35	45			82	
Selenium	µg/g	0.5	**1.7**	1.3			1.5	
Silver	µg/g	0.2	< 0.2	< 0.2			0.5	
Thallium	µg/g	0.1	0.3	0.4			1	
Uranium	µg/g	0.1	2.1	2.2			2.5	
Vanadium	µg/g	1	22	24			86	
Zinc	µg/g	3	37	86			290	
pH @25°C	pH Units		8.05	8.12				
Conductivity @25°C	µmho/cm	1	**301**	**380**			0.57	
% moisture	%		10.5	13.2				
Benzene	µg/g	0.02	< 0.02	< 0.02			0.02	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05			0.05	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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DATE RECEIVED: 01-Sep-22
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
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	Client I.D.		Dup2	Dup3			O. Reg. 153	
	Sample I.D.		B22-28067-29	B22-28067-30			Tbl. 1 - All	
	Date Collected		31-Aug-22	31-Aug-22				
Parameter	**Units**	**R.L.**						
Toluene	µg/g	0.2	< 0.2	< 0.2			0.2	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03				
Xylene, o-	µg/g	0.03	< 0.03	< 0.03				
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03			0.05	
Dibromofluoromethane (SS)	% rec.		81.8	82.6				
Toluene-d8 (SS)	% rec.		97.7	97.0				
Bromofluorobenzene,4(SS)	% rec.		99.8	96.1				
PHC F1 (C6-C10)	µg/g	10	< 10	< 10			25	
PHC F2 (>C10-C16)	µg/g	5	**26**	**49**			10	
PHC F3 (>C16-C34)	µg/g	10	71	**522**			240	
PHC F4 (>C34-C50)	µg/g	10	46	**141**			120	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05			0.051	
PHC F4 (Gravimetric)	µg/g	50					120	

1. Note : Sample Silica Cleaned
2. Note: Chromat did not return to baseline F4G requ

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Summary of Exceedances

Table 1 - Res/Park/Institutional/Indus/Com/Commun

TP1-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	302	0.57
TP1-2.5	Found Value	Limit
Conductivity @25°C (µmho/cm)	612	0.57
TP1-4.5	Found Value	Limit
Cyanide (Free) (µg/g)	< 0.1	0.051
Molybdenum (µg/g)	4	2
Conductivity @25°C (µmho/cm)	479	0.57
Uranium (µg/g)	2.7	2.5
TP2-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	247	0.57
TP2-2.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	389	0.57
Molybdenum (µg/g)	3	2
TP2-3.0	Found Value	Limit
Molybdenum (µg/g)	3	2
Conductivity @25°C (µmho/cm)	395	0.57
PHC F2 (>C10-C16) (µg/g)	12	10
TP2-3.7	Found Value	Limit
Conductivity @25°C (µmho/cm)	387	0.57

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: OTT-00214936-CO
P.O. NUMBER:
WATERWORKS NO.

Table 1 - Res/Park/Institutional/Indus/Com/Commun

TP2-3.7	Found Value	Limit
Molybdenum (µg/g)	3	2
Cyanide (Free) (µg/g)	< 0.5	0.051
TP3-1.0	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	15	10
Barium (µg/g)	254	220
Conductivity @25°C (µmho/cm)	319	0.57
TP3-2.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	393	0.57
PHC F4 (Gravimetric) (µg/g)	390	120
TP3-2.75	Found Value	Limit
Molybdenum (µg/g)	3	2
Conductivity @25°C (µmho/cm)	814	0.57
PHC F4 (>C34-C50) (µg/g)	299	120
PHC F4 (Gravimetric) (µg/g)	1440	120
Antimony (µg/g)	2.1	1.3
TP3-3.50	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	21	10
Conductivity @25°C (µmho/cm)	434	0.57
TP4-1.0	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	19	10
Molybdenum (µg/g)	3	2

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

C.O.C.: G105048 **REPORT No. B22-28067**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

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Table 1 - Res/Park/Institutional/Indus/Com/Commun

TP4-1.0	Found Value	Limit
PHC F3 (>C16-C34) (µg/g)	1230	240
Conductivity @25°C (µmho/cm)	261	0.57
TP4-2.0	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	35	10
Conductivity @25°C (µmho/cm)	504	0.57
TP4-2.75	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	29	10
Conductivity @25°C (µmho/cm)	819	0.57
Molybdenum (µg/g)	3	2
TP4-3.75	Found Value	Limit
Molybdenum (µg/g)	5	2
PHC F2 (>C10-C16) (µg/g)	59	10
Conductivity @25°C (µmho/cm)	502	0.57
TP5-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	209	0.57
PHC F2 (>C10-C16) (µg/g)	15	10
TP5-2.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	283	0.57
PHC F4 (>C34-C50) (µg/g)	182	120
PHC F4 (Gravimetric) (µg/g)	490	120
PHC F2 (>C10-C16) (µg/g)	26	10

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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TP5-2.75	Found Value	Limit
Conductivity @25°C (µmho/cm)	703	0.57
PHC F2 (>C10-C16) (µg/g)	28	10
TP5-3.25	Found Value	Limit
Molybdenum (µg/g)	3	2
Conductivity @25°C (µmho/cm)	1	0.57
PHC F2 (>C10-C16) (µg/g)	26	10
TP6-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	176	0.57
TP7-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	361	0.57
Molybdenum (µg/g)	3	2
PHC F2 (>C10-C16) (µg/g)	37	10
PHC F3 (>C16-C34) (µg/g)	312	240
TP8-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	220	0.57
PHC F2 (>C10-C16) (µg/g)	16	10
Molybdenum (µg/g)	3	2
TP9-1.0	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	30	10
Selenium (µg/g)	1.7	1.5
Molybdenum (µg/g)	4	2

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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TP9-1.0	Found Value	Limit
Conductivity @25°C (µmho/cm)	264	0.57
BH1	Found Value	Limit
PHC F4 (>C34-C50) (µg/g)	352	120
PHC F3 (>C16-C34) (µg/g)	2620	240
PHC F2 (>C10-C16) (µg/g)	109	10
Molybdenum (µg/g)	3	2
Conductivity @25°C (µmho/cm)	172	0.57
BH2	Found Value	Limit
PHC F4 (>C34-C50) (µg/g)	133	120
PHC F4 (Gravimetric) (µg/g)	470	120
Conductivity @25°C (µmho/cm)	259	0.57
Molybdenum (µg/g)	3	2
BH5	Found Value	Limit
Conductivity @25°C (µmho/cm)	363	0.57
Molybdenum (µg/g)	4	2
PHC F4 (Gravimetric) (µg/g)	400	120
BH6	Found Value	Limit
PHC F2 (>C10-C16) (µg/g)	15	10
Conductivity @25°C (µmho/cm)	1	0.57
Dup1	Found Value	Limit
Conductivity @25°C (µmho/cm)	398	0.57

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 1 - All - Table 1 - Res/Park/Institutional/Indus/Com/Commun

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Table 1 - Res/Park/Institutional/Indus/Com/Commun

Dup1	Found Value	Limit
PHC F4 (Gravimetric) (µg/g)	2150	120
PHC F4 (>C34-C50) (µg/g)	431	120
Dup2	Found Value	Limit
Conductivity @25°C (µmho/cm)	301	0.57
Selenium (µg/g)	1.7	1.5
Molybdenum (µg/g)	4	2
PHC F2 (>C10-C16) (µg/g)	26	10
Dup3	Found Value	Limit
PHC F4 (>C34-C50) (µg/g)	141	120
PHC F2 (>C10-C16) (µg/g)	49	10
Conductivity @25°C (µmho/cm)	380	0.57
Molybdenum (µg/g)	3	2
PHC F3 (>C16-C34) (µg/g)	522	240

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Final Report

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Report To:

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Attention: Chris Kimmerly

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DATE RECEIVED: 16-Sep-22
DATE REPORTED: 27-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
% Moisture	24	Richmond Hill	FAL	20-Sep-22	A-% moisture RH	
Conductivity	24	Holly Lane	ST	23-Sep-22	A-COND-01 (o)	SM 2510B
PHC(F2-F4)	24	Kingston	KPR	22-Sep-22	C-PHC-S-001 (k)	CWS Tier 1
PHC(F2-F4)	5	Kingston	SmT	26-Sep-22	C-PHC-S-001 (k)	CWS Tier 1
VOC's	24	Richmond Hill	FAL	20-Sep-22	C-VOC-02 (rh)	EPA 8260
PHC(F1)	24	Richmond Hill	FAL	20-Sep-22	C-VPHS-01 (rh)	CWS Tier 1
Chromium (VI)	24	Holly Lane	ST	22-Sep-22	D-CRVI-02 (o)	EPA7196A
Mercury	24	Holly Lane	PBK	23-Sep-22	D-HG-01 (o)	EPA 7471A
Boron - HWS	24	Holly Lane	NHG	23-Sep-22	D-HWE s	MOE3470
Sodium Adsorption Ratio	24	Holly Lane	NHG	23-Sep-22	D-ICP-01 SAR (o)	SM 3120
Metals - ICP-OES	24	Holly Lane	NHG	23-Sep-22	D-ICP-02 (o)	EPA 6010
Metals - ICP-MS	24	Holly Lane	TPR	23-Sep-22	D-ICPMS-01 (o)	EPA 6020

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
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WATERWORKS NO.

	Client I.D.		AH7-SS3	AH7-SS4	AH8-SS3	AH8-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-1	B22-29759-2	B22-29759-3	B22-29759-4	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**211**	**195**	**280**	**278**	1.4	1.4
Sodium Adsorption Ratio	units		1.28	1.11	2.69	2.67	12	12
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	50	40
Arsenic	µg/g	0.5	4.7	3.6	4.0	3.5	18	18
Barium	µg/g	1	151	70	48	67	670	670
Beryllium	µg/g	0.2	0.4	0.3	0.3	0.3	10	8
Boron	µg/g	0.5	6.5	7.1	6.1	6.9	120	120
Boron (HWS)	µg/g	0.02	0.02	0.02	< 0.02	< 0.02	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.9	1.9
Chromium	µg/g	1	13	13	13	14	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	12	8	9	9	100	80
Copper	µg/g	1	26	17	20	20	300	230
Lead	µg/g	5	10	7	8	8	120	120
Mercury	µg/g	0.005	0.025	0.017	0.019	0.019	20	3.9
Molybdenum	µg/g	1	4	2	3	3	40	40
Nickel	µg/g	1	32	20	25	23	340	270
Selenium	µg/g	0.5	0.9	0.6	0.7	0.6	5.5	5.5
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	50	40
Thallium	µg/g	0.1	0.2	0.2	< 0.1	0.2	3.3	3.3
Uranium	µg/g	0.1	1.5	1.3	1.5	1.3	33	33
Vanadium	µg/g	1	21	20	21	22	86	86
Zinc	µg/g	3	48	27	30	31	340	340
% moisture	%		7.5	7.9	7.7	7.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

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P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH7-SS3	AH7-SS4	AH8-SS3	AH8-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-1	B22-29759-2	B22-29759-3	B22-29759-4	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	30	26
Toluene-d8 (SS)	% rec.		98.1	96.2	96.7	97.7		
PHC F1 (C6-C10)	µg/g	10	13	< 10	< 10	< 10	65	55
PHC F2 (>C10-C16)	µg/g	5	20	41	28	33	250	230
PHC F3 (>C16-C34)	µg/g	10	47	66	53	139	2500	1700
PHC F4 (>C34-C50)	µg/g	10	< 10	11	18	198 [1]	6600	3300
PHC F4 (Gravimetric)	µg/g	50				680 [2]	6600	3300

1. Note: Chromat did not return to baseline F4G requ

2. Note: Sample silica cleaned

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
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	Client I.D.		AH9-SS3	AH9-SS1	DUP2	DUP1	O. Reg. 153	
	Sample I.D.		B22-29759-5	B22-29759-6	B22-29759-7	B22-29759-8	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**892**	**553**	**1230**	**511**	1.4	1.4
Sodium Adsorption Ratio	units		1.53	1.87	1.46	2.67	12	12
Antimony	µg/g	0.5	< 0.5	< 0.5	0.7	< 0.5	50	40
Arsenic	µg/g	0.5	6.2	6.7	6.3	3.5	18	18
Barium	µg/g	1	131	133	136	96	670	670
Beryllium	µg/g	0.2	0.5	0.6	0.5	0.4	10	8
Boron	µg/g	0.5	9.7	8.9	10.0	6.6	120	120
Boron (HWS)	µg/g	0.02	0.07	0.06	0.09	0.02	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.9	1.9
Chromium	µg/g	1	29	19	26	19	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	10	10	9	11	100	80
Copper	µg/g	1	31	33	48	21	300	230
Lead	µg/g	5	42	22	52	9	120	120
Mercury	µg/g	0.005	0.070	0.065	0.081	0.017	20	3.9
Molybdenum	µg/g	1	2	2	2	2	40	40
Nickel	µg/g	1	28	40	29	26	340	270
Selenium	µg/g	0.5	0.8	1.0	0.8	1.0	5.5	5.5
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	50	40
Thallium	µg/g	0.1	0.2	0.3	0.2	0.2	3.3	3.3
Uranium	µg/g	0.1	1.4	1.8	2.0	1.0	33	33
Vanadium	µg/g	1	29	25	30	30	86	86
Zinc	µg/g	3	72	77	91	41	340	340
% moisture	%		8.1	6.3	9.4	9.0		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH9-SS3	AH9-SS1	DUP2	DUP1	O. Reg. 153	
	Sample I.D.		B22-29759-5	B22-29759-6	B22-29759-7	B22-29759-8	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	30	26
Toluene-d8 (SS)	% rec.		97.7	97.8	97.6	96.3		
PHC F1 (C6-C10)	µg/g	10	17	< 10	14	< 10	65	55
PHC F2 (>C10-C16)	µg/g	5	32	33	30	< 5	250	230
PHC F3 (>C16-C34)	µg/g	10	139	141	114	11	2500	1700
PHC F4 (>C34-C50)	µg/g	10	153 [1]	270 [1]	132 [1]	< 10	6600	3300
PHC F4 (Gravimetric)	µg/g	50	680 [2]	1240 [2]	650 [2]		6600	3300

1. Note: Chromat did not return to baseline F4G requ

2. Note: Sample silica cleaned

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

R.L. = Reporting Limit
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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

Tahir Yapici Ph.D
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G110500 **REPORT No. B22-29759**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Chris Kimmerly

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 16-Sep-22
DATE REPORTED: 27-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH10-SS4	AH10-SS3	BH4-SS4	BH3-SS2	O. Reg. 153	
	Sample I.D.		B22-29759-9	B22-29759-10	B22-29759-11	B22-29759-12	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	15-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**497**	**569**	**239**	**519**	1.4	1.4
Sodium Adsorption Ratio	units		2.87	2.92	1.22	0.885	12	12
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	50	40
Arsenic	µg/g	0.5	2.8	4.1	3.1	7.0	18	18
Barium	µg/g	1	88	114	181	118	670	670
Beryllium	µg/g	0.2	0.4	0.4	0.6	0.6	10	8
Boron	µg/g	0.5	6.1	6.7	13.8	7.0	120	120
Boron (HWS)	µg/g	0.02	< 0.02	0.05	0.06	0.04	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.9	1.9
Chromium	µg/g	1	19	21	15	21	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	8	10	8	9	100	80
Copper	µg/g	1	19	22	13	38	300	230
Lead	µg/g	5	7	27	< 5	26	120	120
Mercury	µg/g	0.005	0.014	0.038	0.017	0.100	20	3.9
Molybdenum	µg/g	1	< 1	3	1	2	40	40
Nickel	µg/g	1	20	34	20	46	340	270
Selenium	µg/g	0.5	0.6	0.5	0.6	1.0	5.5	5.5
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	50	40
Thallium	µg/g	0.1	0.2	0.3	< 0.1	0.3	3.3	3.3
Uranium	µg/g	0.1	1.0	1.0	1.7	2.2	33	33
Vanadium	µg/g	1	31	30	19	26	86	86
Zinc	µg/g	3	36	49	65	96	340	340
% moisture	%		9.1	9.7	7.1	14.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH10-SS4	AH10-SS3	BH4-SS4	BH3-SS2	O. Reg. 153	
	Sample I.D.		B22-29759-9	B22-29759-10	B22-29759-11	B22-29759-12	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		14-Sep-22	14-Sep-22	14-Sep-22	15-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	30	26
Toluene-d8 (SS)	% rec.		96.9	97.4	97.7	96.8		
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	38	< 10	65	55
PHC F2 (>C10-C16)	µg/g	5	34	< 5	67	22	250	230
PHC F3 (>C16-C34)	µg/g	10	63	< 10	77	65	2500	1700
PHC F4 (>C34-C50)	µg/g	10	15	< 10	< 10	34	6600	3300
PHC F4 (Gravimetric)	µg/g	50					6600	3300

1. Note: Chromat did not return to baseline F4G requ
2. Note: Sample silica cleaned

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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SAMPLE MATRIX: Soil

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WATERWORKS NO.

	Client I.D.		AH1-SS1	AH1-SS2	AH2-SS1	AH2-SS2	O. Reg. 153	
	Sample I.D.		B22-29759-13	B22-29759-14	B22-29759-15	B22-29759-16	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**290**	**299**	**201**	**185**	1.4	1.4
Sodium Adsorption Ratio	units		1.14	0.938	0.255	1.48	12	12
Antimony	µg/g	0.5	< 0.5	2.0	3.4	< 0.5	50	40
Arsenic	µg/g	0.5	3.8	6.1	8.3	6.3	18	18
Barium	µg/g	1	66	170	232	69	670	670
Beryllium	µg/g	0.2	0.3	0.5	0.6	0.6	10	8
Boron	µg/g	0.5	5.5	7.5	9.6	8.3	120	120
Boron (HWS)	µg/g	0.02	0.07	0.12	0.13	0.04	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	0.6	< 0.5	1.9	1.9
Chromium	µg/g	1	11	19	24	18	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	6	9	12	13	100	80
Copper	µg/g	1	21	102	147	47	300	230
Lead	µg/g	5	34	**210**	**396**	14	120	120
Mercury	µg/g	0.005	0.061	0.233	0.315	0.049	20	3.9
Molybdenum	µg/g	1	1	3	3	3	40	40
Nickel	µg/g	1	20	35	38	48	340	270
Selenium	µg/g	0.5	0.7	0.9	1.1	1.5	5.5	5.5
Silver	µg/g	0.2	< 0.2	0.3	0.3	< 0.2	50	40
Thallium	µg/g	0.1	0.2	0.3	0.4	0.3	3.3	3.3
Uranium	µg/g	0.1	1.1	1.5	1.6	1.7	33	33
Vanadium	µg/g	1	17	28	30	25	86	86
Zinc	µg/g	3	78	167	259	81	340	340
% moisture	%		10.9	9.8	9.7	7.2		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
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DATE RECEIVED: 16-Sep-22
DATE REPORTED: 27-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH1-SS1	AH1-SS2	AH2-SS1	AH2-SS2	O. Reg. 153	
	Sample I.D.		B22-29759-13	B22-29759-14	B22-29759-15	B22-29759-16	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	30	26
Toluene-d8 (SS)	% rec.		96.8	98.1	96.9	97.8		
PHC F1 (C6-C10)	µg/g	10	< 10	19	< 10	13	65	55
PHC F2 (>C10-C16)	µg/g	5	10	57	19	78	250	230
PHC F3 (>C16-C34)	µg/g	10	45	109	193	126	2500	1700
PHC F4 (>C34-C50)	µg/g	10	16	17	154 [1]	< 10	6600	3300
PHC F4 (Gravimetric)	µg/g	50			700 [2]		6600	3300

1. Note: Chromat did not return to baseline F4G requ

2. Note: Sample silica cleaned

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
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WATERWORKS NO.

	Client I.D.		AH3-SS2	AH3-SS3	AH4-SS3	AH4-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-17	B22-29759-18	B22-29759-19	B22-29759-20	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**525**	**494**	**341**	**166**	1.4	1.4
Sodium Adsorption Ratio	units		2.21	1.12	0.631	0.630	12	12
Antimony	µg/g	0.5	0.6	< 0.5	< 0.5	< 0.5	50	40
Arsenic	µg/g	0.5	10.8	7.0	2.3	2.9	18	18
Barium	µg/g	1	94	208	107	298	670	670
Beryllium	µg/g	0.2	0.9	0.6	0.4	0.5	10	8
Boron	µg/g	0.5	7.0	10.2	11.2	13.9	120	120
Boron (HWS)	µg/g	0.02	0.02	< 0.02	0.06	0.04	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.9	1.9
Chromium	µg/g	1	22	21	17	17	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	15	12	6	9	100	80
Copper	µg/g	1	59	37	9	17	300	230
Lead	µg/g	5	18	12	< 5	< 5	120	120
Mercury	µg/g	0.005	0.098	0.038	0.017	0.021	20	3.9
Molybdenum	µg/g	1	4	4	1	2	40	40
Nickel	µg/g	1	71	42	14	25	340	270
Selenium	µg/g	0.5	1.4	1.6	0.6	0.7	5.5	5.5
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	50	40
Thallium	µg/g	0.1	0.4	< 0.1	< 0.1	< 0.1	3.3	3.3
Uranium	µg/g	0.1	2.4	2.1	1.5	2.0	33	33
Vanadium	µg/g	1	33	26	16	21	86	86
Zinc	µg/g	3	89	84	49	82	340	340
% moisture	%		10.1	5.4	3.3	5.0		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH3-SS2	AH3-SS3	AH4-SS3	AH4-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-17	B22-29759-18	B22-29759-19	B22-29759-20	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	16-Sep-22	16-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	0.30	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	0.07	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	0.37	< 0.03	30	26
Toluene-d8 (SS)	% rec.		97.6	97.4	98.9	97.3		
PHC F1 (C6-C10)	µg/g	10	< 10	15	50	36	65	55
PHC F2 (>C10-C16)	µg/g	5	24	111	45	111	250	230
PHC F3 (>C16-C34)	µg/g	10	75	152	58	104	2500	1700
PHC F4 (>C34-C50)	µg/g	10	< 10	18	20	10	6600	3300
PHC F4 (Gravimetric)	µg/g	50					6600	3300

1. Note: Chromat did not return to baseline F4G requ
2. Note: Sample silica cleaned

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SAMPLE MATRIX: Soil

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WATERWORKS NO.

	Client I.D.		AH5-SS2	AH5-SS3	AH6-SS3	AH6-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-21	B22-29759-22	B22-29759-23	B22-29759-24	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Conductivity @25°C	µmho/cm	1	**308**	**341**	**300**	**250**	1.4	1.4
Sodium Adsorption Ratio	units		2.81	2.28	2.24	0.787	12	12
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	50	40
Arsenic	µg/g	0.5	7.4	8.0	4.1	3.5	18	18
Barium	µg/g	1	96	184	71	84	670	670
Beryllium	µg/g	0.2	0.8	0.7	0.4	0.3	10	8
Boron	µg/g	0.5	7.2	10.3	5.9	6.8	120	120
Boron (HWS)	µg/g	0.02	0.04	< 0.02	< 0.02	< 0.02	2	2
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.9	1.9
Chromium	µg/g	1	22	21	13	12	160	160
Chromium (VI)	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	10	8
Cobalt	µg/g	1	13	12	10	9	100	80
Copper	µg/g	1	59	44	21	17	300	230
Lead	µg/g	5	23	13	9	8	120	120
Mercury	µg/g	0.005	0.094	0.051	0.027	0.023	20	3.9
Molybdenum	µg/g	1	3	4	3	2	40	40
Nickel	µg/g	1	58	47	27	21	340	270
Selenium	µg/g	0.5	1.3	1.2	0.8	0.6	5.5	5.5
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	50	40
Thallium	µg/g	0.1	< 0.1	< 0.1	0.2	0.2	3.3	3.3
Uranium	µg/g	0.1	1.9	2.7	1.1	1.3	33	33
Vanadium	µg/g	1	32	25	21	20	86	86
Zinc	µg/g	3	89	77	40	23	340	340
% moisture	%		14.9	5.6	7.5	5.8		
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.32
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	78	68
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	19	9.5

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

Tahir Yapici Ph.D
Lab Manager - Ottawa District

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G110500 **REPORT No. B22-29759**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Chris Kimmerly

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 16-Sep-22
DATE REPORTED: 27-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

	Client I.D.		AH5-SS2	AH5-SS3	AH6-SS3	AH6-SS4	O. Reg. 153	
	Sample I.D.		B22-29759-21	B22-29759-22	B22-29759-23	B22-29759-24	Tbl. 3 - ICC (f/m)	Tbl. 3 - ICC Soil
	Date Collected		16-Sep-22	16-Sep-22	14-Sep-22	14-Sep-22		
Parameter	**Units**	**R.L.**						
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	30	26
Toluene-d8 (SS)	% rec.		96.8	98.1	96.7	97.4		
PHC F1 (C6-C10)	µg/g	10	< 10	11	< 10	< 10	65	55
PHC F2 (>C10-C16)	µg/g	5	31	81	28	28	250	230
PHC F3 (>C16-C34)	µg/g	10	93	131	56	71	2500	1700
PHC F4 (>C34-C50)	µg/g	10	14	17	< 10	15	6600	3300
PHC F4 (Gravimetric)	µg/g	50					6600	3300

1. Note: Chromat did not return to baseline F4G requ

2. Note: Sample silica cleaned

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
Tbl. 3 - ICC Soil - Table 3 - Ind./Commercial/Community Soil Std

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

Summary of Exceedances

Table 3 - Ind./Commer/Commun Soil (fine/med)		
AH7-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	211	1.4
AH7-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	195	1.4
AH8-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	280	1.4
AH8-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	278	1.4
AH9-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	892	1.4
AH9-SS1	Found Value	Limit
Conductivity @25°C (µmho/cm)	553	1.4
DUP2	Found Value	Limit
Conductivity @25°C (µmho/cm)	1230	1.4
DUP1	Found Value	Limit
Conductivity @25°C (µmho/cm)	511	1.4
AH10-SS4	Found Value	Limit

Table 3 - Ind./Commercial/Community Soil Std		
AH7-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	211	1.4
AH7-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	195	1.4
AH8-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	280	1.4
AH8-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	278	1.4
AH9-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	892	1.4
AH9-SS1	Found Value	Limit
Conductivity @25°C (µmho/cm)	553	1.4
DUP2	Found Value	Limit
Conductivity @25°C (µmho/cm)	1230	1.4
DUP1	Found Value	Limit
Conductivity @25°C (µmho/cm)	511	1.4
AH10-SS4	Found Value	Limit

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 3 - ICC (f/m) - Table 3 - Ind./Commer/Commun Soil (fine/med)
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

Table 3 - Ind./Commer/Commun Soil (fine/med)		
AH10-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	497	1.4
AH10-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	569	1.4
BH4-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	239	1.4
BH3-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	519	1.4
AH1-SS1	Found Value	Limit
Conductivity @25°C (µmho/cm)	290	1.4
AH1-SS2	Found Value	Limit
Lead (µg/g)	210	120
Conductivity @25°C (µmho/cm)	299	1.4
AH2-SS1	Found Value	Limit
Lead (µg/g)	396	120
Conductivity @25°C (µmho/cm)	201	1.4
AH2-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	185	1.4
AH3-SS2	Found Value	Limit

Table 3 - Ind./Commercial/Community Soil Std		
AH10-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	497	1.4
AH10-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	569	1.4
BH4-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	239	1.4
BH3-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	519	1.4
AH1-SS1	Found Value	Limit
Conductivity @25°C (µmho/cm)	290	1.4
AH1-SS2	Found Value	Limit
Lead (µg/g)	210	120
Conductivity @25°C (µmho/cm)	299	1.4
AH2-SS1	Found Value	Limit
Lead (µg/g)	396	120
Conductivity @25°C (µmho/cm)	201	1.4
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AH3-SS2	Found Value	Limit

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Tahir Yapici Ph.D
Lab Manager - Ottawa District

C.O.C.: G110500 **REPORT No. B22-29759**

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DATE REPORTED: 27-Sep-22
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: OTT-21016315-AO
WATERWORKS NO.

Table 3 - Ind./Commer/Commun Soil (fine/med)		
AH3-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	525	1.4
AH3-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	494	1.4
AH4-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	341	1.4
AH4-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	166	1.4
AH5-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	308	1.4
AH5-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	341	1.4
AH6-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	300	1.4
AH6-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	250	1.4

Table 3 - Ind./Commercial/Community Soil Std		
AH3-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	525	1.4
AH3-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	494	1.4
AH4-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	341	1.4
AH4-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	166	1.4
AH5-SS2	Found Value	Limit
Conductivity @25°C (µmho/cm)	308	1.4
AH5-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	341	1.4
AH6-SS3	Found Value	Limit
Conductivity @25°C (µmho/cm)	300	1.4
AH6-SS4	Found Value	Limit
Conductivity @25°C (µmho/cm)	250	1.4

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Lab Manager - Ottawa District

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CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-1	MW13-2	BH-4	Dup1
			Sample I.D.		B23-02200-1	B23-02200-2	B23-02200-3	B23-02200-4
			Date Collected		27-Feb-23	27-Feb-23	27-Feb-23	27-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Sodium	µg/L	200	SM 3120	02-Mar-23/O	136000	346000	104000	135000
Barium	µg/L	1	SM 3120	02-Mar-23/O	38	63	52	44
Boron	µg/L	5	SM 3120	02-Mar-23/O	110	385	115	108
Chromium	µg/L	2	SM 3120	02-Mar-23/O	< 2	< 2	< 2	< 2
Copper	µg/L	2	SM 3120	02-Mar-23/O	< 2	< 2	< 2	< 2
Zinc	µg/L	5	SM 3120	02-Mar-23/O	< 5	< 5	7	< 5
Antimony	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.2	< 0.1	< 0.1
Arsenic	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.2	0.7	0.8	0.2
Beryllium	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.2	< 0.1	< 0.1
Cadmium	µg/L	0.015	EPA 200.8	03-Mar-23/O	< 0.015	< 0.028	0.091	0.017
Cobalt	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.1	< 0.2	< 0.1	0.1
Lead	µg/L	0.02	EPA 200.8	03-Mar-23/O	< 0.02	0.04	0.07	0.03
Molybdenum	µg/L	0.1	EPA 200.8	03-Mar-23/O	6.1	7.1	3.7	6.4
Nickel	µg/L	0.2	EPA 200.8	03-Mar-23/O	1.9	4.3	1.2	1.9
Selenium	µg/L	1	EPA 200.8	03-Mar-23/O	1	< 2	< 1	1
Silver	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.1	< 0.1	< 0.1
Thallium	µg/L	0.05	EPA 200.8	03-Mar-23/O	< 0.05	< 0.1	< 0.05	< 0.05
Uranium	µg/L	0.05	EPA 200.8	03-Mar-23/O	2.60	3.05	0.16	2.72
Vanadium	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.2	0.2	< 0.1
Mercury	µg/L	0.02	SM 3112 B	06-Mar-23/O	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (VI)	µg/L	10	MOE E3056	02-Mar-23/O	< 10 [1]	< 10 [1]	< 10 [1]	< 10 [1]
Acetone	µg/L	30	EPA 8260	02-Mar-23/R	< 30	< 30	< 30	< 30
Benzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	3	< 2
Bromoform	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Bromomethane	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-1	MW13-2	BH-4	Dup1
			Sample I.D.		B23-02200-1	B23-02200-2	B23-02200-3	B23-02200-4
			Date Collected		27-Feb-23	27-Feb-23	27-Feb-23	27-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	1	EPA 8260	02-Mar-23/R	< 1	< 1	21	< 1
Dibromochloromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichlorobenzene,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene,1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene,1,4-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichloroethane,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethylene,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethene, cis-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethene, trans-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene, cis-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene, trans-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene 1,3- cis+trans	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dibromoethane,1,2- (Ethylene Dibromide)	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2
Hexane	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Methyl Ethyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20	< 20	< 20	< 20
Methyl-t-butyl Ether	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichloromethane (Methylene Chloride)	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Styrene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-1	MW13-2	BH-4	Dup1
			Sample I.D.		B23-02200-1	B23-02200-2	B23-02200-3	B23-02200-4
			Date Collected		27-Feb-23	27-Feb-23	27-Feb-23	27-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethane,1,1,2,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	1.7	< 0.5
Trichloroethane,1,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Vinyl Chloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2
Xylene, m,p-	µg/L	1.0	EPA 8260	02-Mar-23/R	< 1.0	< 1.0	< 1.0	< 1.0
Xylene, o-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Xylene, m,p,o-	µg/L	1.1	EPA 8260	02-Mar-23/R	< 1.1	< 1.1	< 1.1	< 1.1
PHC F1 (C6-C10)	µg/L	25	MOE E3421	02-Mar-23/R	< 25	< 25	< 25	< 25
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	02-Mar-23/K	< 50	< 50	< 50	< 50
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	02-Mar-23/K	< 400	< 400	< 400	< 400
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	02-Mar-23/K	< 400	< 400	< 400	< 400
Acenaphthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	µg/L	0.01	EPA 8270	03-Mar-23/K	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	03-Mar-23/K	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05

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Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-1	MW13-2	BH-4	Dup1
			Sample I.D.		B23-02200-1	B23-02200-2	B23-02200-3	B23-02200-4
			Date Collected		27-Feb-23	27-Feb-23	27-Feb-23	27-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene 2-(1-)	µg/L	1	EPA 8270	03-Mar-23/K	< 1	< 1	< 1	< 1
Naphthalene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05

1. Chromium (VI) result is based on total Chromium

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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			Client I.D.		MW23-5	MW23-4	BH-1	MW23-2
			Sample I.D.		B23-02200-5	B23-02200-6	B23-02200-7	B23-02200-8
			Date Collected		28-Feb-23	28-Feb-23	28-Feb-23	28-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Sodium	µg/L	200	SM 3120	02-Mar-23/O	94600	86200	63800	442000
Barium	µg/L	1	SM 3120	02-Mar-23/O	102	122	66	152
Boron	µg/L	5	SM 3120	02-Mar-23/O	84	88	55	270
Chromium	µg/L	2	SM 3120	02-Mar-23/O	< 2	< 2	< 2	< 2
Copper	µg/L	2	SM 3120	02-Mar-23/O	2	4	3	4
Zinc	µg/L	5	SM 3120	02-Mar-23/O	5	< 5	7	7
Antimony	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.3	0.4	0.1	0.9
Arsenic	µg/L	0.1	EPA 200.8	03-Mar-23/O	1.4	0.5	1.9	1.4
Beryllium	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.1	< 0.1	< 0.2
Cadmium	µg/L	0.015	EPA 200.8	03-Mar-23/O	0.049	0.029	0.019	0.048
Cobalt	µg/L	0.1	EPA 200.8	03-Mar-23/O	1.8	1.6	0.2	1.3
Lead	µg/L	0.02	EPA 200.8	03-Mar-23/O	0.08	0.08	0.06	0.09
Molybdenum	µg/L	0.1	EPA 200.8	03-Mar-23/O	6.4	2.8	2.4	8.4
Nickel	µg/L	0.2	EPA 200.8	03-Mar-23/O	6.2	14.4	2.5	6.8
Selenium	µg/L	1	EPA 200.8	03-Mar-23/O	< 1	2	< 1	2
Silver	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1	< 0.1	< 0.1	< 0.1
Thallium	µg/L	0.05	EPA 200.8	03-Mar-23/O	< 0.05	< 0.05	< 0.05	< 0.1
Uranium	µg/L	0.05	EPA 200.8	03-Mar-23/O	5.69	6.90	0.98	7.76
Vanadium	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.3	0.2	0.1	0.4
Mercury	µg/L	0.02	SM 3112 B	06-Mar-23/O	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (VI)	µg/L	10	MOE E3056	02-Mar-23/O	< 10 [1]	< 10 [1]	< 10 [1]	< 10 [1]
Acetone	µg/L	30	EPA 8260	02-Mar-23/R	< 30	< 30	60	< 30
Benzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	0.9	< 0.5
Bromodichloromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Bromoform	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Bromomethane	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2

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Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

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Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-5	MW23-4	BH-1	MW23-2
			Sample I.D.		B23-02200-5	B23-02200-6	B23-02200-7	B23-02200-8
			Date Collected		28-Feb-23	28-Feb-23	28-Feb-23	28-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	1	EPA 8260	02-Mar-23/R	< 1	< 1	20	< 1
Dibromochloromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichlorobenzene,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene,1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene,1,4-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichloroethane,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethylene,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethene, cis-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethene, trans-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene, cis-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene, trans-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene 1,3- cis+trans	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Dibromoethane,1,2- (Ethylene Dibromide)	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2
Hexane	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	10	< 5
Methyl Ethyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20	< 20	< 20	< 20
Methyl-t-butyl Ether	µg/L	2	EPA 8260	02-Mar-23/R	< 2	< 2	< 2	< 2
Dichloromethane (Methylene Chloride)	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Styrene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		MW23-5	MW23-4	BH-1	MW23-2
			Sample I.D.		B23-02200-5	B23-02200-6	B23-02200-7	B23-02200-8
			Date Collected		28-Feb-23	28-Feb-23	28-Feb-23	28-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethane,1,1,2,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	0.9	< 0.5
Trichloroethane,1,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	5	EPA 8260	02-Mar-23/R	< 5	< 5	< 5	< 5
Vinyl Chloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2	< 0.2	< 0.2	< 0.2
Xylene, m,p-	µg/L	1.0	EPA 8260	02-Mar-23/R	< 1.0	1.1	< 1.0	< 1.0
Xylene, o-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5	< 0.5	< 0.5	< 0.5
Xylene, m,p,o-	µg/L	1.1	EPA 8260	02-Mar-23/R	< 1.1	1.1	< 1.1	< 1.1
PHC F1 (C6-C10)	µg/L	25	MOE E3421	02-Mar-23/R	< 25	< 25	98	< 25
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	02-Mar-23/K	< 50	< 50	< 50	< 50
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	02-Mar-23/K	< 400	< 400	< 400	< 400
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	02-Mar-23/K	< 400	< 400	< 400	< 400
Acenaphthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	µg/L	0.01	EPA 8270	03-Mar-23/K	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	03-Mar-23/K	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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			Client I.D.		MW23-5	MW23-4	BH-1	MW23-2
			Sample I.D.		B23-02200-5	B23-02200-6	B23-02200-7	B23-02200-8
			Date Collected		28-Feb-23	28-Feb-23	28-Feb-23	28-Feb-23
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene 2-(1-)	µg/L	1	EPA 8270	03-Mar-23/K	< 1	< 1	< 1	< 1
Naphthalene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05	< 0.05	< 0.05	< 0.05

1. Chromium (VI) result is based on total Chromium

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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WATERWORKS NO.

			Client I.D.		BH-2			
			Sample I.D.		B23-02200-9			
			Date Collected		28-Feb-23			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Sodium	µg/L	200	SM 3120	02-Mar-23/O	43000			
Barium	µg/L	1	SM 3120	02-Mar-23/O	36			
Boron	µg/L	5	SM 3120	02-Mar-23/O	35			
Chromium	µg/L	2	SM 3120	02-Mar-23/O	< 2			
Copper	µg/L	2	SM 3120	02-Mar-23/O	5			
Zinc	µg/L	5	SM 3120	02-Mar-23/O	13			
Antimony	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.3			
Arsenic	µg/L	0.1	EPA 200.8	03-Mar-23/O	2.2			
Beryllium	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1			
Cadmium	µg/L	0.015	EPA 200.8	03-Mar-23/O	0.153			
Cobalt	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1			
Lead	µg/L	0.02	EPA 200.8	03-Mar-23/O	0.08			
Molybdenum	µg/L	0.1	EPA 200.8	03-Mar-23/O	6.5			
Nickel	µg/L	0.2	EPA 200.8	03-Mar-23/O	1.0			
Selenium	µg/L	1	EPA 200.8	03-Mar-23/O	1			
Silver	µg/L	0.1	EPA 200.8	03-Mar-23/O	< 0.1			
Thallium	µg/L	0.05	EPA 200.8	03-Mar-23/O	< 0.05			
Uranium	µg/L	0.05	EPA 200.8	03-Mar-23/O	0.86			
Vanadium	µg/L	0.1	EPA 200.8	03-Mar-23/O	0.6			
Mercury	µg/L	0.02	SM 3112 B	06-Mar-23/O	< 0.02			
Chromium (VI)	µg/L	10	MOE E3056	02-Mar-23/O	< 10 [1]			
Acetone	µg/L	30	EPA 8260	02-Mar-23/R	< 30			
Benzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Bromodichloromethane	µg/L	2	EPA 8260	02-Mar-23/R	2			
Bromoform	µg/L	5	EPA 8260	02-Mar-23/R	< 5			
Bromomethane	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Carbon Tetrachloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2			

Tahir Yapici Ph.D
Lab Manager - Ottawa District

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		BH-2			
			Sample I.D.		B23-02200-9			
			Date Collected		28-Feb-23			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Chloroform	µg/L	1	EPA 8260	02-Mar-23/R	20			
Dibromochloromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2			
Dichlorobenzene,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichlorobenzene,1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichlorobenzene,1,4-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichlorodifluoromethane	µg/L	2	EPA 8260	02-Mar-23/R	< 2			
Dichloroethane,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloroethane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloroethylene,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloroethene, cis-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloroethene, trans-1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloropropane,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloropropene, cis-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloropropene, trans-1,3-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dichloropropene 1,3-cis+trans	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Ethylbenzene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Dibromoethane,1,2- (Ethylene Dibromide)	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2			
Hexane	µg/L	5	EPA 8260	02-Mar-23/R	< 5			
Methyl Ethyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20			
Methyl Isobutyl Ketone	µg/L	20	EPA 8260	02-Mar-23/R	< 20			
Methyl-t-butyl Ether	µg/L	2	EPA 8260	02-Mar-23/R	< 2			
Dichloromethane (Methylene Chloride)	µg/L	5	EPA 8260	02-Mar-23/R	< 5			
Styrene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		BH-2			
			Sample I.D.		B23-02200-9			
			Date Collected		28-Feb-23			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Tetrachloroethane,1,1,2,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Tetrachloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Toluene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Trichloroethane,1,1,1-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Trichloroethane,1,1,2-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Trichloroethylene	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Trichlorofluoromethane	µg/L	5	EPA 8260	02-Mar-23/R	< 5			
Vinyl Chloride	µg/L	0.2	EPA 8260	02-Mar-23/R	< 0.2			
Xylene, m,p-	µg/L	1.0	EPA 8260	02-Mar-23/R	< 1.0			
Xylene, o-	µg/L	0.5	EPA 8260	02-Mar-23/R	< 0.5			
Xylene, m,p,o-	µg/L	1.1	EPA 8260	02-Mar-23/R	< 1.1			
PHC F1 (C6-C10)	µg/L	25	MOE E3421	02-Mar-23/R	< 25			
PHC F2 (>C10-C16)	µg/L	50	MOE E3421	02-Mar-23/K	< 50			
PHC F3 (>C16-C34)	µg/L	400	MOE E3421	02-Mar-23/K	< 400			
PHC F4 (>C34-C50)	µg/L	400	MOE E3421	02-Mar-23/K	< 400			
Acenaphthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Acenaphthylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Benzo(a)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Benzo(a)pyrene	µg/L	0.01	EPA 8270	03-Mar-23/K	< 0.01			
Benzo(b)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Benzo(b+k)fluoranthene	µg/L	0.1	EPA 8270	03-Mar-23/K	< 0.1			
Benzo(g,h,i)perylene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Benzo(k)fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Chrysene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Dibenzo(a,h)anthracene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G109932 **REPORT No. B23-02200**

Report To:

EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 01-Mar-23
DATE REPORTED: 07-Mar-23
SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.:
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		BH-2			
			Sample I.D.		B23-02200-9			
			Date Collected		28-Feb-23			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Fluoranthene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Fluorene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Indeno(1,2,3,-cd)pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Methylnaphthalene,1-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Methylnaphthalene,2-	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Methylnaphthalene 2-(1-)	µg/L	1	EPA 8270	03-Mar-23/K	< 1			
Naphthalene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Phenanthrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			
Pyrene	µg/L	0.05	EPA 8270	03-Mar-23/K	< 0.05			

1. Chromium (VI) result is based on total Chromium

Tahir Yapici Ph.D
Lab Manager - Ottawa District

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Quality Assurance Report

REPORT No. B23-02200

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613-526 0123
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DATE SUBMITTED:	1-Mar-23	JOB/PROJECT NO.:	
DATE REPORTED:	7-Mar-23	P.O. NUMBER:	OTT-00214936-CO
SAMPLE MATRIX:	Groundwater	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
Mercury	9	Ottawa	PBK	6-Mar-23	6-Mar-23	6-Mar-23	D-HG-02 (o)	SM 3112 B
Metals - ICP-OES	9	Ottawa	NHG	2-Mar-23	2-Mar-23	2-Mar-23	D-ICP-01 (o)	SM 3120
Metals - ICP-MS	9	Ottawa	TPR	3-Mar-23	3-Mar-23	7-Mar-23	D-ICPMS-01 (o)	EPA 200.8

NA = Not Applicable

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Quality Assurance Report

REPORT No. B23-02200

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Antimony	0.1	99	80-120	0.1	0.1	NC	20	0.1	71	70-130
Arsenic	0.1	104	80-120	1.9	1.9	0	20	< R.L.	115	70-130
Barium	1	105	80-120	62.5	61.6	1.5	20	< R.L.	89	70-130
Beryllium	0.1	90	80-120	< R.L.	< R.L.	NC	20	< R.L.	125	70-130
Boron	5	105	80-120	9	8	NC	20	< R.L.	116	70-130
Cadmium	0.015	104	80-120	0.019	0.018	NC	20	< R.L.	106	70-130
Chromium	2	96	80-120	< R.L.	< R.L.	NC	20	< R.L.	113	70-130
Cobalt	0.1	96	80-120	0.2	0.3	NC	20	< R.L.	117	70-130
Copper	2	103	80-120	3.9	3.8	NC	20	< R.L.	109	70-130
Lead	0.02	104	80-120	0.06	0.06	NC	20	< R.L.	100	70-130
Mercury	0.02	97	80-120	< R.L.	< R.L.	NC	20	< R.L.	88	70-130
Molybdenum	0.1	97	80-120	2.4	2.4	0	20	< R.L.	109	70-130
Nickel	0.2	94	80-120	2.5	2.3	8.3	20	< R.L.	118	70-130
Selenium	1	99	80-120	< R.L.	< R.L.	NC	20	< R.L.	100	70-130
Silver	0.1	95	80-120	< R.L.	< R.L.	NC	20	< R.L.	107	70-130
Sodium	200	101	80-120	2500	2500	0	20	< R.L.	100	70-130
Thallium	0.05	97	80-120	< R.L.	< R.L.	NC	20	< R.L.	95	70-130
Uranium	0.05	94	80-120	0.98	0.92	6.3	20	< R.L.	84	70-130
Vanadium	0.1	117	80-120	0.1	0.1	NC	20	< R.L.	113	70-130
Zinc	5	99	80-120	< R.L.	< R.L.	NC	20	< R.L.	119	70-130

All values expressed as µg/L unless stated otherwise
LCS = Laboratory Control Standard
R.P.D. = Relative Percent Difference of Duplicate Pairs at > 10 x's M.D.L.
R.L. = Reporting Limit

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- = Not Requested/Analyzed
NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B23-02200

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE SUBMITTED:	1-Mar-23	JOB/PROJECT NO.:	
DATE REPORTED:	7-Mar-23	P.O. NUMBER:	OTT-00214936-CO
SAMPLE MATRIX:	Groundwater	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
PHC(F1)	9	RH	JE	2-Mar-23	2-Mar-23	7-Mar-23	C-VPHW-01(rh)	MOE E3421
PHC(F2-F4)	9	Kingston	KPR	2-Mar-23	2-Mar-23	3-Mar-23	C-PHC-W-001(k)	MOE E3421
VOC's	9	RH	JE	2-Mar-23	2-Mar-23	7-Mar-23	C-VOC-02(rh)	EPA 8260

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Quality Assurance Report

REPORT No. B23-02200

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Acetone	30	130	50-140	< R.L.	< R.L.	NC	50	< R.L.	120	50-140
Benzene	0.5	101	60-120	< R.L.	< R.L.	NC	50	< R.L.	101	50-140
Bromodichloromethane	2	106	60-140	3	3	NC	50	< R.L.	108	50-140
Bromoform	5	109	50-140	< R.L.	< R.L.	NC	50	< R.L.	110	50-140
Bromomethane	0.5	78	50-140	< R.L.	< R.L.	NC	50	< R.L.	73	50-140
Carbon Tetrachloride	0.2	110	60-130	< R.L.	< R.L.	NC	50	< R.L.	108	50-140
Monochlorobenzene	0.5	106	60-130	< R.L.	< R.L.	NC	50	< R.L.	107	50-140
Chloroform	1	112	60-130	21	22	4.7	50	< R.L.	114	50-140
Dibromochloromethane	2	105	60-130	< R.L.	< R.L.	NC	50	< R.L.	108	50-140
Dichlorobenzene,1,2-	0.5	113	60-130	< R.L.	< R.L.	NC	50	< R.L.	115	50-140
Dichlorobenzene,1,3-	0.5	98	60-130	< R.L.	< R.L.	NC	50	< R.L.	97	50-140
Dichlorobenzene,1,4-	0.5	119	60-130	< R.L.	< R.L.	NC	50	< R.L.	118	50-140
Dichloroethane,1,1-	0.5	120	60-130	< R.L.	< R.L.	NC	50	< R.L.	118	50-140
Dichloroethane,1,2-	0.5	114	60-130	< R.L.	< R.L.	NC	50	< R.L.	116	50-140
Dichloroethylene,1,1-	0.5	116	60-130	< R.L.	< R.L.	NC	50	< R.L.	112	50-140
Dichloroethene, cis-1,2-	0.5	109	60-130	< R.L.	< R.L.	NC	50	< R.L.	109	50-140
Dichloroethene, trans-1,2-	0.5	111	60-130	< R.L.	< R.L.	NC	50	< R.L.	109	50-140
Dichloropropane,1,2-	0.5	106	60-130	< R.L.	< R.L.	NC	50	< R.L.	107	50-140
Dichloropropene, cis-1,3-	0.5	107	60-130	< R.L.	< R.L.	NC	50	< R.L.	92	50-140

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Quality Assurance Report

REPORT No. B23-02200

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Dichloropropene, trans-1,3-	0.5	114	60-130	< R.L.	< R.L.	NC	50	< R.L.	97	50-140
Ethylbenzene	0.5	107	60-130	< R.L.	< R.L.	NC	50	< R.L.	107	50-140
Dibromoethane,1,2- (Ethylene Dibromide)	0.2	111	60-130	< R.L.	< R.L.	NC	50	< R.L.	113	50-140
Hexane	5	99	60-130	< R.L.	< R.L.	NC	50	< R.L.	90	50-140
Methyl Ethyl Ketone	20	153	50-140	< R.L.	< R.L.	NC	50	< R.L.	120	50-140
Methyl Isobutyl Ketone	20	118	50-140	< R.L.	< R.L.	NC	50	< R.L.	120	50-140
Methyl-t-butyl Ether	2	124	60-130	< R.L.	< R.L.	NC	50	< R.L.	124	50-140
Dichloromethane (Methylene Chloride)	5	112	60-130	< R.L.	< R.L.	NC	50	< R.L.	116	50-140
Styrene	0.5	101	60-130	< R.L.	< R.L.	NC	50	< R.L.	101	50-140
Tetrachloroethane,1,1,1,2-	0.5	108	60-130	< R.L.	< R.L.	NC	50	< R.L.	112	50-140
Tetrachloroethane,1,1,2,2-	0.5	104	60-130	< R.L.	< R.L.	NC	50	< R.L.	101	50-140
Tetrachloroethylene	0.5	99	60-130	< R.L.	< R.L.	NC	50	< R.L.	94	50-140
Toluene	0.5	99	60-130	1.7	1.8	NC	50	< R.L.	100	50-140
Trichloroethane,1,1,1-	0.5	117	60-130	< R.L.	< R.L.	NC	50	< R.L.	115	50-140
Trichloroethane,1,1,2-	0.5	114	60-130	< R.L.	< R.L.	NC	50	< R.L.	116	50-140
Trichloroethylene	0.5	99	60-130	< R.L.	< R.L.	NC	50	< R.L.	96	50-140
Trichlorofluoromethane	5	101	50-140	< R.L.	< R.L.	NC	50	< R.L.	94	50-140
Vinyl Chloride	0.2	62	50-140	< R.L.	< R.L.	NC	50	< R.L.	74	50-140
Xylene, m,p-	1	103	60-130	< R.L.	< R.L.	NC	50	< R.L.	104	50-140
Xylene, o-	0.5	104	60-130	< R.L.	< R.L.	NC	50	< R.L.	105	50-140

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Quality Assurance Report

REPORT No. B23-02200

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
PHC F1 (C6-C10)	50	95	60-140	<R.L.	<R.L.	NC	40	< R.L.	108	60-140
PHC F2 (>C10-C16)	50	69	60-140	1085	1027	6.0	40	< R.L.	70	60-140
PHC F3 (>C16-C34)	400	92	60-140	2853	2834	NC	40	< R.L.	95	60-140
PHC F4 (>C34-C50)	400	108	60-140	<R.L.	<R.L.	NC	40	< R.L.	71	60-140

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DATE SUBMITTED:	1-Mar-23	JOB/PROJECT NO.:	
DATE REPORTED:	7-Mar-23	P.O. NUMBER:	OTT-00214936-CO
SAMPLE MATRIX:	Groundwater	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
SVOC	9	Kingston	ESI	2-Mar-23	2-Mar-23	3-Mar-23	C-NAB-W-001 (K)	EPA 8270

NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B23-02200

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Acenaphthene	0.05	99	50-140	12.4	10.2	19.5	50	< R.L.	86	50-140
Acenaphthylene	0.05	98	50-140	12.3	10.1	19.6	50	< R.L.	82	50-140
Anthracene	0.05	104	50-140	12.6	10.6	17.2	50	< R.L.	90	50-140
Benzo(a)anthracene	0.05	108	50-140	13.5	11.2	18.6	50	< R.L.	88	50-140
Benzo(a)pyrene	0.01	111	50-140	14.8	12.3	18.5	50	< R.L.	90	50-140
Benzo(b)fluoranthene	0.05	108	50-140	13.9	11.3	20.6	50	< R.L.	84	50-140
Benzo(k)fluoranthene	0.05	106	50-140	13.2	11.1	17.3	50	< R.L.	88	50-140
Benzo(g,h,i)perylene	0.05	102	50-140	13.1	10.7	20.2	50	< R.L.	84	50-140
Chrysene	0.05	108	50-140	12.9	10.7	18.6	50	< R.L.	74	50-140
Dibenzo(a,h)anthracene	0.05	108	50-140	13.9	11.5	18.9	50	< R.L.	94	50-140
Fluoranthene	0.05	104	50-140	13.1	10.8	19.2	50	< R.L.	90	50-140
Fluorene	0.05	103	50-140	12.7	10.6	18.0	50	< R.L.	94	50-140
Indeno(1,2,3,-cd)pyrene	0.05	112	50-140	14.3	12	17.5	50	<R.L.	94	50-140
Methylnaphthalene,2-	0.08	105	50-140	13.5	11.1	19.5	50	< R.L.	78	50-140
Naphthalene	0.05	95	50-140	12.3	10.3	17.7	50	< R.L.	68	50-140
Phenanthrene	0.05	102	50-140	12.9	10.6	19.6	50	< R.L.	90	50-140
Pyrene	0.05	107	50-140	13.3	11	18.9	50	< R.L.	92	50-140

NC = Not Calculated
- = Not Requested/Analyzed
NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B22-29759

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa On K2B 8H6 Canada
Attention: **Chris kimmerly**

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE SUBMITTED:	16-Sep-22	JOB/PROJECT NO.:	
DATE REPORTED:	27-Sep-22	P.O. NUMBER:	OTT-21016315-AO
SAMPLE MATRIX:	Soil	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
Conductivity	24	Ottawa	MD	23-Dep-22	23-Sep-22	23-Sep-22	A-COND-001(O)	SM2510B
Chromium (VI)	24	Ottawa	LMG	22-Sep-22	22-Sep-22	22-Sep-22	D-CRVI-02 (o)	EPA7196A
Mercury	24	Ottawa	PBK	23-Sep-22	23-Sep-22	23-Sep-22	D-HG-01 (o)	EPA 7471A
Metals - ICP-OES	24	Ottawa	HMC	23-Sep-22	23-Sep-22	26-Sep-22	D-ICP-02(o)	EPA 6010
Metals - ICP-MS	24	Ottawa	TPR	23-Sep-22	23-Sep-22	23-Sep-22	D-ICPMS-01 (o)	EPA 6020
Metals - ICP-OES	24	Ottawa	NHG	23-Sep-22	23-Sep-22	23-Sep-22	D-ICP-01 (o)	SM 3120
Boron - HWS	24	Ottawa	NHG	23-Sep-22	23-Sep-22	23-Sep-22	D-HWE s	MOE3470

NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
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Quality Assurance Report

REPORT No. B22-29759

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Conductivity @25°C	0.001	111	90-110	308	319	3.5	10	<R.L.	NA	-
Antimony	0.5	100	80-120	< R.L.	< R.L.	0	30	< R.L.	100	70-130
Arsenic	0.5	108	80-120	7.4	7.1	4.1	30	< R.L.	108	70-130
Barium	1	99	80-120	181	200	10.0	30	< R.L.	105	70-130
Beryllium	0.2	91	80-120	0.8	0.8	NC	30	< R.L.	83	70-130
Boron	0.5	108	80-120	13.8	12.4	10.7	30	< R.L.	108	70-130
Boron (HWS)	0.02	NA	70-130	0.07	0.06	NC	40	< R.L.	NA	60-140
Cadmium	0.5	86	80-120	< R.L.	< R.L.	NC	30	< R.L.	106	70-130
Chromium	1	99	80-120	22	22	0	30	< R.L.	87	70-130
Chromium (VI)	0.2	NA	80-120	< R.L.	< R.L.	NC	35	< R.L.	N/A	25-124
Cobalt	1	86	80-120	13	14	7.4	30	< R.L.	109	70-130
Copper	1	102	80-120	59	57	3.4	30	< R.L.	105	70-130
Lead	5	105	80-120	23	23	NC	30	< R.L.	111	70-130
Mercury	0.005	108	80-120	0.025	0.031	NC	30	< R.L.	108	70-130
Molybdenum	1	109	80-120	4	4	NC	30	< R.L.	99	70-130
Nickel	1	102	80-120	58	57	1.7	30	< R.L.	113	70-130
Selenium	0.5	103	80-120	1.3	1.2	NC	30	< R.L.	100	70-130
Silver	0.2	99	80-120	1	0.3	NC	30	< R.L.	92	70-130
Thallium	0.1	99	80-120	0.2	0.2	NC	30	< R.L.	100	70-130
Uranium	0.1	97	80-120	1.9	1.8	5.4	30	< R.L.	96	70-130
Vanadium	1	100	80-120	32	32	0	30	< R.L.	96	70-130
Zinc	3	101	80-120	89	88	1.1	30	< R.L.	106	70-130

All values expressed as µg/g unless stated otherwise
LCS = Laboratory Control Standard
R.P.D. = Relative Percent Difference of Duplicate Pairs at > 10 x's M.D.L.
R.L. = Reporting Limit

NC = Not Calculated
- = Not Requested/Analyzed
NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B22-29759

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Chris Kimmerly

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613 526 0123
Fax: 613 526 1244

DATE SUBMITTED:	16-Sep-22	JOB/PROJECT NO.:	
DATE REPORTED:	27-Sep-22	P.O. NUMBER:	OTT-21016315-AO
SAMPLE MATRIX:	Soil	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
PHC(F1)	24	RH	FAL	20-Sep-22	20-Sep-22	23-Sep-22	C-VHPS-01(rh)	MOE E3421
PHC(F2-F4)	24	Kingston	KPR	22-Sep-22	22-Sep-22	23-Sep-22	C-PHC-S-001(k)	MOE E3421
VOC's	24	RH	FAL	20-Sep-22	20-Sep-22	23-Sep-22	C-VOC-02(rh)	EPA 8260

NA = Not Applicable

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Quality Assurance Report

REPORT No. B22-29759

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Benzene	0.02	89	60-130	< R.L.	< R.L.	NC	50	< R.L.	90	50-140
Ethylbenzene	0.05	99	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
Toluene	0.2	92	60-130	< R.L.	< R.L.	NC	50	< R.L.	95	50-140
Xylene, m,p-	0.03	98	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
Xylene, o-	0.03	96	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
PHC F1 (C6-C10)	10	101	80-120	36	36	NC	50	< R.L.	117	60-140
PHC F2 (>C10-C16)	5	107	80-120	45	42	NC	50	< R.L.	75	60-140
PHC F3 (>C16-C34)	10	102	80-120	58	48	NC	50	< R.L.	73	60-140
PHC F4 (>C34-C50)	10	92	80-120	20	17	NC	50	< R.L.	85	60-140

NC = Not Calculated
- = Not Requested/Analyzed
NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
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Quality Assurance Report

REPORT No. B22-28067

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: **Mark McCalla**

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613-526 0123
Fax: 613-526-1244

DATE SUBMITTED:	1-Sep-22	JOB/PROJECT NO.:	
DATE REPORTED:	9-Sep-22	P.O. NUMBER:	OTT-00214936-CO
SAMPLE MATRIX:	Soil	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
Conductivity	30	Ottawa	LMG	7-Sep-22	7-Sep-22	7-Sep-22	A-COND-001(O)	SM2510B
pH	30	Ottawa	LMG	7-Sep-22	7-Sep-22	7-Sep-22	A-PH-001 (O)	SM4500H+
Chromium (VI)	30	Ottawa	LMG	8-Sep-22	8-Sep-22	8-Sep-22	D-CRVI-02 (o)	EPA7196A
Mercury	30	Ottawa	PBK	7-Sep-22	7-Sep-22	7-Sep-22	D-HG-01 (o)	EPA 7471A
Metals - ICP-OES	30	Ottawa	NHG	8-Sep-22	8-Sep-22	9-Sep-22	D-ICP-02(o)	EPA 6010
Metals - ICP-MS	30	Ottawa	TPR	7-Sep-22	8-Sep-22	8-Sep-22	D-ICPMS-01 (o)	EPA 6020
Metals - ICP-OES	30	Ottawa	NHG	8-Sep-22	8-Sep-22	8-Sep-22	D-ICP-01 (o)	SM 3120
Boron - HWS	30	Ottawa	NHG	8-Sep-22	8-Sep-22	9-Sep-22	D-HWE s	MOE3470

NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
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Quality Assurance Report

REPORT No. B22-28067

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Conductivity @25°C	0.001	93	90-110	0.502	0.507	1.0	10	<R.L.	NA	-
pH	-	7.16	0.2 pHunits	7.92	7.93	0.01	0.3pHunits	NA	-	-
Antimony	0.5	96	80-120	< R.L.	< R.L.	NC	30	< R.L.	97	70-130
Arsenic	0.5	108	80-120	7.4	7.5	1.3	30	< R.L.	108	70-130
Barium	1	102	80-120	115	105	9.1	30	< R.L.	107	70-130
Beryllium	0.2	93	80-120	0.7	0.7	NC	30	< R.L.	83	70-130
Boron	0.5	110	80-120	7.5	7.6	1.3	30	< R.L.	110	70-130
Boron (HWS)	0.02	NA	70-130	0.07	0.08	NC	40	< R.L.	NA	60-140
Cadmium	0.5	85	80-120	< R.L.	< R.L.	NC	30	< R.L.	103	70-130
Chromium	1	101	80-120	21	21	0	30	< R.L.	88	70-130
Chromium (VI)	0.2	NA	80-120	< R.L.	< R.L.	NC	35	< R.L.	N/A	25-124
Cobalt	1	87	80-120	10	10	0	30	< R.L.	109	70-130
Copper	1	98	80-120	35	36	2.8	30	< R.L.	101	70-130
Lead	5	98	80-120	26	26	NC	30	< R.L.	104	70-130
Mercury	0.005	94	80-120	0.084	0.092	9.1	30	< R.L.	94	70-130
Molybdenum	1	109	80-120	3	3	NC	30	< R.L.	103	70-130
Nickel	1	100	80-120	47	47	0	30	< R.L.	110	70-130
Selenium	0.5	88	80-120	1.2	1.2	NC	30	< R.L.	115	70-130
Silver	0.2	105	80-120	< R.L.	< R.L.	NC	30	< R.L.	92	70-130
Thallium	0.1	113	80-120	0.4	0.4	NC	30	< R.L.	105	70-130
Uranium	0.1	103	80-120	2.2	2.3	4.4	30	< R.L.	103	70-130
Vanadium	1	101	80-120	26	26	0	30	< R.L.	96	70-130
Zinc	3	97	80-120	108	108	0	30	< R.L.	101	70-130

All values expressed as µg/g unless stated otherwise
LCS = Laboratory Control Standard
R.P.D. = Relative Percent Difference of Duplicate Pairs at > 10 x's M.D.L.
R.L. = Reporting Limit

NC = Not Calculated
- = Not Requested/Analyzed
NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B22-28067

Report To:
EXP Services Inc
2650 Queensview Drive, Suite 100
Ottawa ON K2B 8H6 Canada
Attention: Mark McCalla

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa ON K1V 7P1
Tel: 613 526 0123
Fax: 613 526 1244

DATE SUBMITTED:	1-Sep-22	JOB/PROJECT NO.:	
DATE REPORTED:	9-Sep-22	P.O. NUMBER:	OTT-00214936-CO
SAMPLE MATRIX:	Soil	WATERWORKS NO.:	

Analyses	Qty.	Site Analyzed	Analyst Initials	Date Extracted	Date Analyzed	Date Approved	Lab Method	Method Reference
PHC(F1)	30	RH	FAL	2-Sep-22	2-Sep-22	9-Sep-22	C-VHPS-01(rh)	MOE E3421
PHC(F2-F4)	30	Kingston	KPR	2-Sep-22	2-Sep-22	6-Sep-22	C-PHC-S-001(k)	MOE E3421
VOC's	30	RH	FAL	2-Sep-22	2-Sep-22	7-Sep-22	C-VOC-02(rh)	EPA 8260

NA = Not Applicable

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

Quality Assurance Report

REPORT No. B22-28067

PARAMETERS	R.L.	QC DATA								
		LCS Sample (% Rec.)		Duplicate				Lab	Matrix Spike (% Recovery)	
		Found	Limits	Result 1	Result 2	R.P.D.	Limits (%)	Blank	Found	Limits
Benzene	0.02	96	60-130	< R.L.	< R.L.	NC	50	< R.L.	90	50-140
Ethylbenzene	0.05	111	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
Toluene	0.2	105	60-130	< R.L.	< R.L.	NC	50	< R.L.	95	50-140
Xylene, m,p-	0.03	111	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
Xylene, o-	0.03	108	60-130	< R.L.	< R.L.	NC	50	< R.L.	99	50-140
PHC F1 (C6-C10)	10	95	80-120	< R.L.	< R.L.	NC	50	< R.L.	107	60-140
PHC F2 (>C10-C16)	5	99	80-120	8	10	NC	50	< R.L.	75	60-140
PHC F3 (>C16-C34)	10	97	80-120	94	105	NC	50	< R.L.	63	60-140
PHC F4 (>C34-C50)	10	82	80-120	30	24	NC	50	< R.L.	83	60-140

NC = Not Calculated
- = Not Requested/Analyzed
NA = Not Applicable

Appendix G: Hydraulic Conductivity Testing

Data Set: C:\Users\AhmedD\OneDrive - EXP\Desktop\122 Montreal Rd Ottawa\AQtestAnalysis.aqt
Date: 04/11/23
Time: 10:01:45

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Date: March 03, 2023
Test Well: MW23-2

AQUIFER DATA

Saturated Thickness: 2.26 m
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Test Well: MW23-2

X Location: 0. m
Y Location: 0. m

Initial Displacement: 2.11 m
Static Water Column Height: 2.26 m
Casing Radius: 0.05 m
Well Radius: 0.055 m
Well Skin Radius: 0.1 m
Screen Length: 3. m
Total Well Penetration Depth: 4.75 m

No. of Observations: 24

Observation Data

Time (min)	Displacement (m)	Time (min)	Displacement (m)
0.	2.11	4.75	1.83
0.25	2.06	5.75	1.79
0.5	2.04	6.75	1.74
0.75	2.02	8.75	1.65
1.	2.	10.75	1.58
1.25	1.99	12.75	1.51
1.5	1.98	17.75	1.34
1.75	1.96	22.75	1.2
2.25	1.94	27.75	1.06
2.75	1.92	37.75	0.83
3.25	1.9	47.75	0.65
3.75	1.88	57.75	0.49

SOLUTION

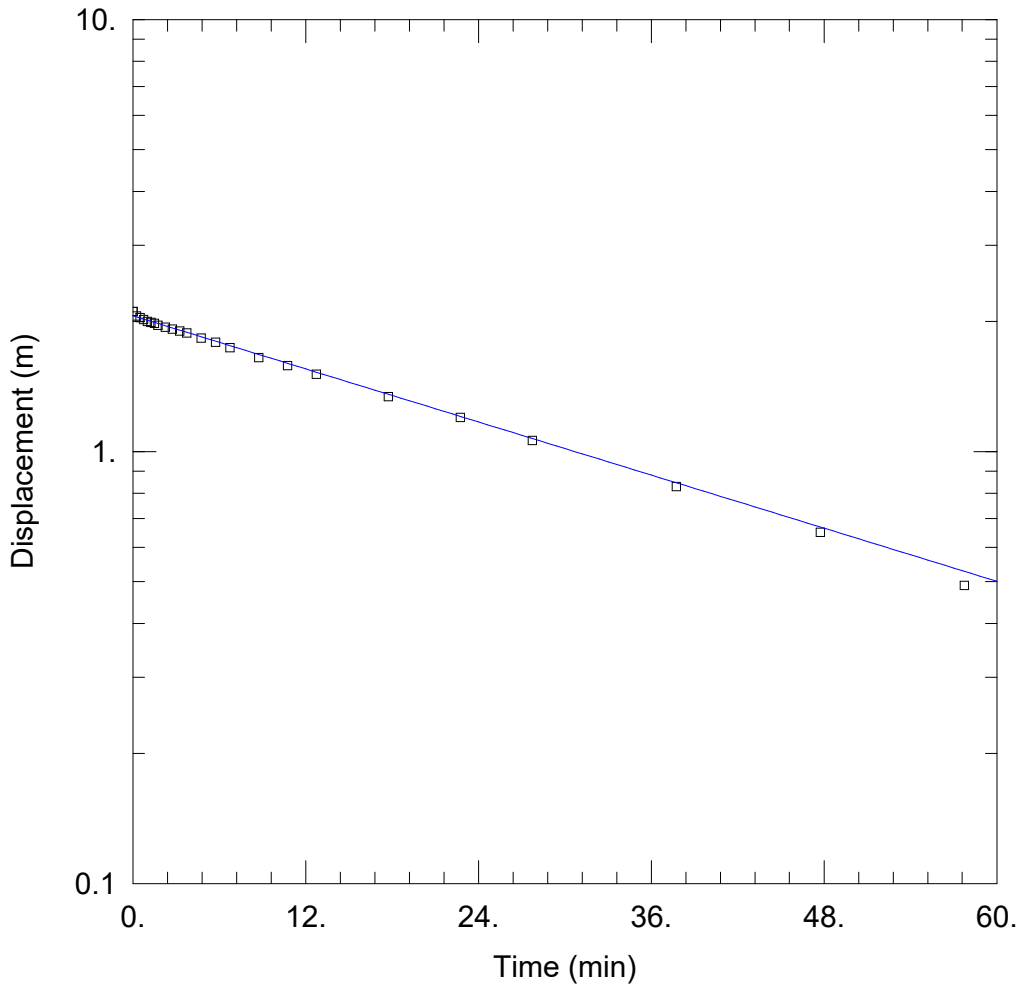
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.295

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	5.691E-7	m/sec
y0	2.062	m

K = 5.691E-5 cm/sec
T = K*b = 1.286E-6 m²/sec (0.01286 sq. cm/sec)



WELL TEST ANALYSIS

Data Set: C:\...\AQtestAnalysisMW23-2.aqt
Date: 04/11/23 Time: 10:36:11

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Well: MW23-2
Test Date: March 03, 2023

AQUIFER DATA

Saturated Thickness: 2.26 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW23-2)

Initial Displacement: 2.11 m
Total Well Penetration Depth: 4.75 m
Casing Radius: 0.05 m
Static Water Column Height: 2.26 m
Screen Length: 3. m
Well Radius: 0.055 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 7.164E-7 m/sec y0 = 2.062 m

Data Set: C:\Users\AhmedD\OneDrive - EXP\Desktop\122 Montreal Rd Ottawa\AQtestAnalysisMW23-4.aqt
Date: 04/11/23
Time: 10:11:31

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Date: March 03, 2023
Test Well: MW23-2

AQUIFER DATA

Saturated Thickness: 2.5 m
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Test Well: MW23-4

X Location: 0. m
Y Location: 0. m

Initial Displacement: 2.05 m
Static Water Column Height: 2.5 m
Casing Radius: 0.05 m
Well Radius: 0.055 m
Well Skin Radius: 0.1 m
Screen Length: 3. m
Total Well Penetration Depth: 4.5 m

No. of Observations: 15

Observation Data

Time (min)	Displacement (m)	Time (min)	Displacement (m)
0.	2.05	7.5	1.42
0.5	2.	9.5	1.26
1.	1.96	11.5	1.11
1.5	1.92	13.5	0.96
2.5	1.83	18.5	0.6
3.5	1.74	23.5	0.25
4.5	1.66	28.5	0.08
5.5	1.58		

SOLUTION

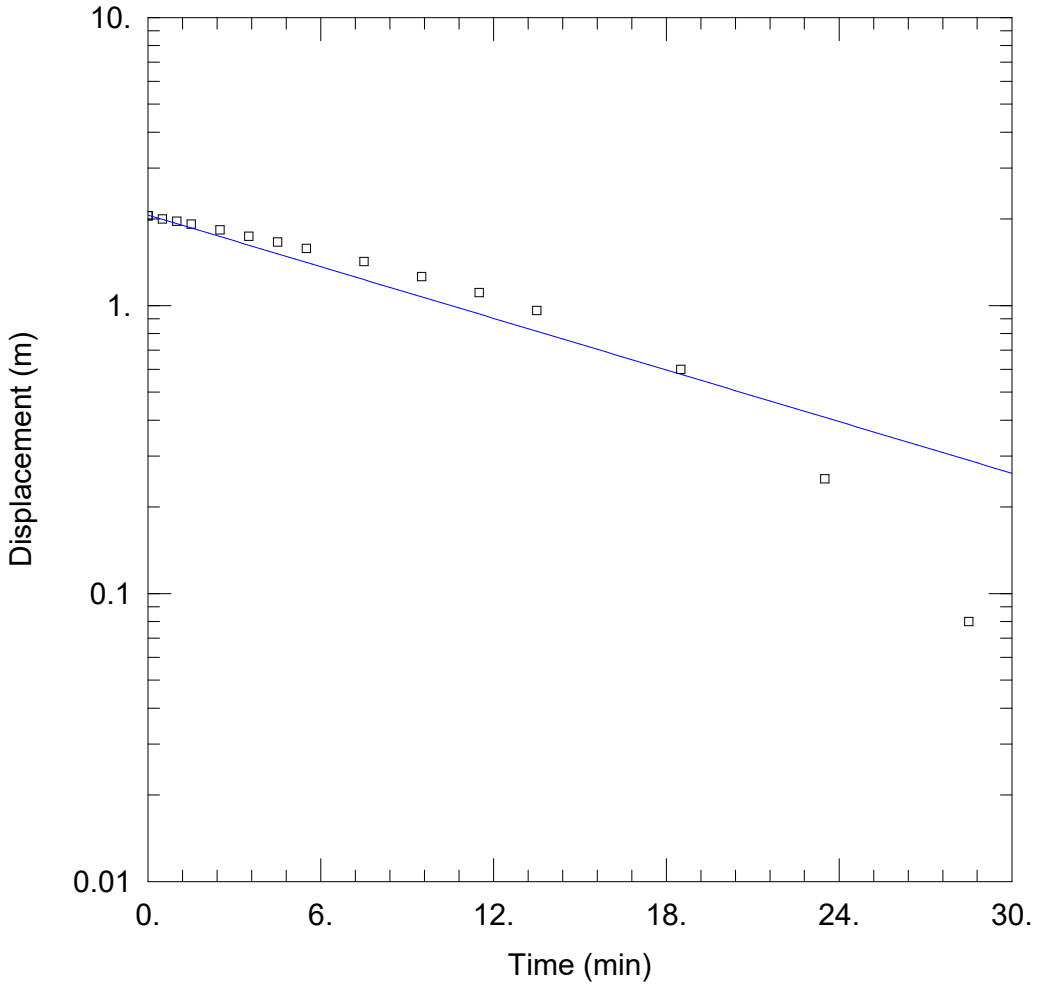
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.286

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	5.691E-7	m/sec
y0	2.062	m

K = 5.691E-5 cm/sec
T = K*b = 1.423E-6 m²/sec (0.01423 sq. cm/sec)



WELL TEST ANALYSIS

Data Set: C:\...\AQtestAnalysisMW23-4.aqt
Date: 04/11/23 Time: 10:37:21

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Well: MW23-2
Test Date: March 03, 2023

AQUIFER DATA

Saturated Thickness: 2.5 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW23-4)

Initial Displacement: 2.05 m
Total Well Penetration Depth: 4.5 m
Casing Radius: 0.05 m
Static Water Column Height: 2.5 m
Screen Length: 3. m
Well Radius: 0.055 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.884E-6 m/sec y0 = 2.062 m

Data Set: C:\Users\AhmedD\OneDrive - EXP\Desktop\122 Montreal Rd Ottawa\AQtestAnalysisMW23-5.aqt
Date: 04/11/23
Time: 10:29:36

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Date: March 03, 2023
Test Well: MW23-2

AQUIFER DATA

Saturated Thickness: 3.04 m
Anisotropy Ratio (Kz/Kr): 0.1

SLUG TEST WELL DATA

Test Well: MW23-5

X Location: 0. m
Y Location: 0. m

Initial Displacement: 3.03 m
Static Water Column Height: 3.04 m
Casing Radius: 0.05 m
Well Radius: 0.055 m
Well Skin Radius: 0.1 m
Screen Length: 3. m
Total Well Penetration Depth: 6.75 m

No. of Observations: 17

Observation Data

Time (min)	Displacement (m)	Time (min)	Displacement (m)
0.	3.03	6.5	2.39
0.5	2.84	8.5	2.33
1.	2.65	10.5	2.29
1.5	2.59	12.5	2.24
2.	2.55	14.5	2.19
2.5	2.52	19.5	2.09
3.5	2.48	24.5	1.99
4.5	2.44	68.5	1.26
5.5	2.41		

SOLUTION

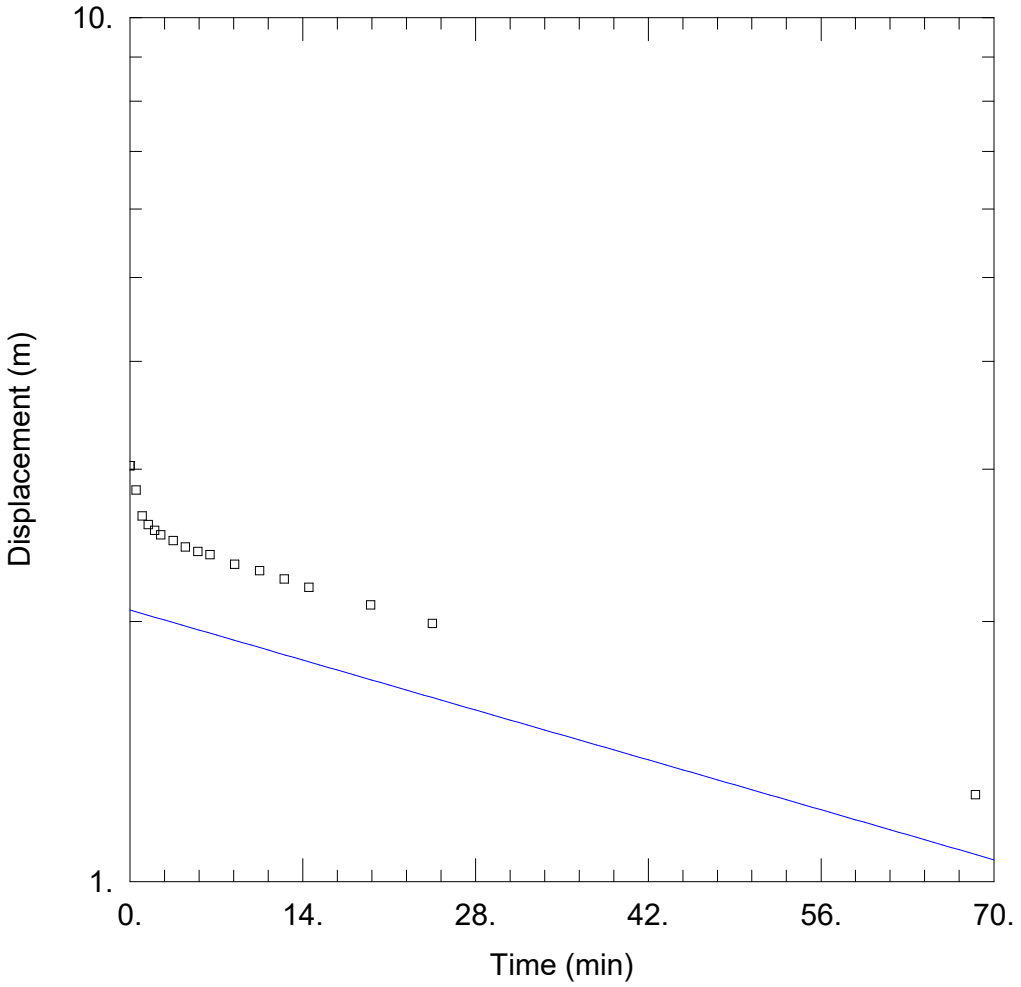
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 4.524

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	5.691E-7	m/sec
y0	2.062	m

K = 5.691E-5 cm/sec
T = K*b = 1.73E-6 m²/sec (0.0173 sq. cm/sec)



WELL TEST ANALYSIS

Data Set: C:\...\AQtestAnalysisMW23-5.aqt
Date: 04/11/23 Time: 10:40:05

PROJECT INFORMATION

Company: exp
Project: OTT-00214936
Location: 122 Montreal Road, Vanier, Ott
Test Well: MW23-2
Test Date: March 03, 2023

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW23-5)

Initial Displacement: 3.03 m
Total Well Penetration Depth: 6.75 m
Casing Radius: 0.05 m
Static Water Column Height: 3.04 m
Screen Length: 3. m
Well Radius: 0.055 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 2.987E-7 m/sec y0 = 2.062 m