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Phase Two Environmental Site Assessment (ESA)

725 Westney Road South, Ajax

Project #
1904320

Prepared For
Firearms Outlets Canada

June 17, 2024

871 Equestrian Court, Unit 1, Oakville ON L6L 6L7
Tel: 647-795-8153 | www.pecg.ca

June 17, 2024

Fred Pellegrino
Firearms Outlets Canada
c/o Shilpi Saraf-Uiterlinden
The Biglieri Group
2472 Kingston Road, Toronto, M1N 1V3

Dear Fred Pellegrino:

Re: Phase Two Environmental Site Assessment, 725 Westney Road South, Ajax, ON
Project #: 1904320

We are pleased to present our Phase Two Environmental Site Assessment (ESA) report for the above-noted property. The scope of this Phase Two ESA conforms to the requirements outlined in Ontario Regulation 153/04 and 407/19. The purpose of this Phase Two ESA was to support a Site Plan Approval and Zoning By-Law Amendment application with the Town of Ajax, and may be required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP).

The report provides information from Palmer's site reconnaissance, drilling activities, soil and ground water sampling, review of laboratory certificate of analysis, and our conclusions for your consideration.

We trust that this report will be satisfactory for your current needs. If you have any questions or require further information, please contact our office at your convenience.

Yours truly,

Sarah Vlantis, B.Sc., P.Geo (limited), QP$_{ESA}$.
Principal, Environment & Construction Team Lead

Executive Summary

Palmer is pleased to provide this Phase Two Environmental Site Assessment (ESA) report to Firearms Outlets Canada. The Phase Two ESA was prepared for the parcel of land located at 725 Westney Road South, Ajax (hereafter collectively referred to as the “Phase Two Property”).

It is Palmer’s understanding that the purpose of this Phase Two ESA is to support a Site Plan Approval and Zoning By-Law Amendment application with the Town of Ajax and may be required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). The Phase Two Property (also referred to as the "Subject Property" or "Site") is contemplated for commercial redevelopment with a two-storey addition after the demolition of the northern half of the current building. This Phase Two ESA Report has been prepared in accordance with Schedule E of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the Environmental Protection Act (EPA).

The Phase Two Property is a 0.66-hectare, square shaped, parcel of land located on the north side of Westney Road South, west of the intersection with Finley Avenue in Ajax, Ontario. Building structures on the Site include a 1,436 m^2, single storey commercial/light industrial building which comprises three units. Unit 1 is vacant and was most recently leased by a kitchen renovation company. Unit 2 is leased by Firearms Outlets Canada, a gun wholesaler. Unit 3 is leased by Wraptors Inc., a vehicle detailing company. The remaining parts of the Site comprise asphalt-paved, grass, and landscaped areas.

Based on the findings of our recently completed Phase One ESA, the Phase One Study Area (“surrounding area”) covers land uses within a 250 metre (m) radius of the Phase Two Property. The Phase One Study Area is developed with residential, industrial and commercial land uses including automotive repair by Sortech Automotive Corp & Seal Auto Glass & Trim since 2012, chemical manufacturing by Septo-Clean Ltd since 2012, metal fabrication by Ko-Tek Manufacturing & Bayview Metals since 2020, Craftsmen Printers in 1991, and plastics manufacturing by Roven Tool & Mould between 1997 and 2004 at 700 Finley Avenue, metal fabrication by Die-Max Tool & Die Ltd since at least 2007 at 729 Finley Avenue, vehicle maintenance and storage by Rock Brune Bros since at least 1981 at 725 Finley Avenue, automotive repair and metal fabrication since at least 1989 at 717 Finley Avenue, automotive repair since at least 2003 at 711 Finley Avenue, a metal and scrap collection facility Apick Scrap Metal Inc. since at least 2005 at 695 Finley Avenue, a machine shop (E.J. Industries Ltd) and fuel storage operations at 765 Westney Road South.

There are no water bodies or areas of natural significance on the Phase Two Property. Duffin’s Creek is located approximately 800 m northwest of the Phase Two Property. No Areas of Natural Significance are within the Phase One Study Area.

Historically, the Phase Two Property was utilized as a temporary construction office with a mobile trailer depicted at the northeast portion in the early 1980s. The Site was first developed in the early 1990s with the current building. Tenants of the building have included a home renovations business (2022-2023), All-Canadian Tax Service (2021), Bell Mobility (2000), Children’s Wish Foundation (2012-2017), Eastway Management Inc (2012-2021), Excell Communications (2000-2017), Gilson Construction Ltd. (1991), Heart and Stroke Foundation of Ontario (2000), Mak Boat Sales (2012-2017), National Bank of Canada Ajax (1991), Novanet Communications (1995-2021), Pickering Audio Visual (2000-2021), Positive Changes Hypnosis (2012), Stationers Marketing of Canada Inc. (1995), Road Lanes Publishing (2021), T L P General

Contractors Ltd (1991), Trenway Communications Services Ltd (1995), and UDI Office Centre Canada Ltd (2000).

Based on the findings of the historical records review, Site reconnaissance, and personal interviews, it was concluded that twenty-five (25) potentially contaminating activities (PCAs) were identified either on the Phase Two Property or within the Phase One Study Area. These PCAs were deemed to be contributing to eight (8) areas of potential environmental concern (APECs) on the Phase Two Property. The identified PCAs and APECs are as follows:

Table A. Summary of APECs and PCAs

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #1: Existing Waste Generator & Car Wash Chemicals Manufacturing	Western portion of Phase One Property	#33. Metal Treatment, Coating, Plating and Finishing #50. Soap and Detergent Manufacturing, Processing and Bulk Storage #40. Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage, and Large Scale Applications	Off-Site – *Besnovo Technologies* generating petroleum wastes and performing laser de-coating since at least 2018; Coopers Agropharm Inc. is registered as pesticides vendor and is a manufacturer of veterinary supplies and drugs between 1991 and 1995; Mondo Products Co Ltd operating as a car wash chemicals manufacturer and generating petroleum and hazardous wastes since at least 1999 to at least 2022 adjacent to the Phase One Property at 695 Westney Road South.	Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Petroleum Hydrocarbons (PHCs), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine (OC) Pesticides	Soil & Ground Water
APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations &	Northern portion of Phase One Property	#8. Chemical Manufacturing, Processing and Bulk Storage #10. Commercial Autobody shops #31. Ink Manufacturing, Processing and Bulk Storage	Off-Site – *Seal Auto Glass & Trim* and *Sortech Automotive Corp* operating as automotive repair and auto body shops since at least 2012, *Rapid Packaging Systems Ltd* operating as a plastics manufacturer since at least 2017, *Septo-Clean Ltd* operating as chemical products manufacturer since at	Metals, As, Sb, Se, PHCs, Benzene, Toluene, Ethylbenzene, Xylene (BTEX), VOCs	Soil & Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
Plastic Manufacturing, Former Storage Tank		#34. Metal Fabrication #43. Plastics (including Fiberglass) Manufacturing and Processing #52. Storage, Maintenance, Fueling, And Repair Of Equipment, Vehicles, And Material Used To Maintain Transportation Systems #28. Gasoline and Associated Products Storage in Fixed Tanks	least 2012, *Ko-Tek Manufacturing* operating as Metal fabrication since 2012, *Bayview Metals* operating as a machine shop in 2020, *Craftsmen Printers* operating in 1991, *Emifri Shield Plating* operating between 1986 and 1998, *Holscoe Precision Tooling* operating as a machine shop in 2004, *Roven Tool and Mould* operating as plastics manufacturer between 1997 and 2004 adjacent to the north property boundary of the Phase One Property at 700 Finley Avenue. In addition, one record for an expired 1,750-L storage tank with unknown content is listed for Wooden Paddle Candy Co in 1993.		
APEC #3: Existing Metal Coating and Treatment	Eastern portion of Phase One Property	#34: Metal Fabrication #33: Metal Treatment, Coating, Plating and Finishing	Off-Site – *Die-Max Tool & Die Ltd* operating since at least 2007 and *Progress Machine Co* operating as a woodworking machinery manufacturing facility between 1962 and 2000 at 729 Finley Avenue.	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #4: Existing Automotive Repair Operations	Northeastern portion of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-Site – *Rockbrune Bros* performing vehicle and equipment maintenance and repair since at least 1981 at 725 Finley Avenue	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations	Northeastern portion of Phase One Property	#10: Commercial Autobody Shops #33: Metal Treatment, Coating, Plating and Finishing #39. Paints Manufacturing, Processing and Bulk Storage	Off-Site – *Autobahn East* operating since at least 2013, *Ny-Mould Industries* operating as a machine shop in 1989, and *Red Tower* operating since at least 2017 at 717 Finley Avenue	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #6: Automotive Repair Operations	Northeastern portion of Phase One Property	#10: Commercial Autobody Shops #52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-Site – *Padhiana Auto Ltd.* operating as an autobody shop in 2002 and 2003, *Kelly & Sons Auto Repair* operating since at least 2015 and *Precision Motorsport* operating since at least 2021 at 711 Finley Avenue.	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop	Northern portion of Phase One Property	#2. Adhesives and Resins Manufacturing, Processing and Bulk Storage #39. Paints Manufacturing, Processing and Bulk Storage #52. Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems #58. Waste Disposal and Waste Management, including thermal treatment, landfilling and	Off-Site – *Apick Scrap Metal Inc* operating as a Metal and scrap collection facility since at least 2005, *Lifestyle Cabinets*, *Bantam Trades and Services* operating in 1984, and *D&K Forklift Services Ltd.* generating wastes from 1992 to 2001 at 695 Finley Avenue.	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
		transfer of waste, other than use of biosoils as soil conditioners			
APEC#8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing	Southeastern Portion of Phase One Property	#28. Gasoline and Associated Products Storage in Fixed Tanks #33. Metal Treatment, Coating, Plating and Finishing #34. Metal Fabrication	Off-Site – First Choice Petroleum and Olco Petroleum Group listed as having 13 records for gasoline/diesel storage tanks with unknown volume and installation date; Comtrade Petroleum Inc. listed as generator of waste oils and lubricants since at least 1990 to at least 1998; MP Gas Bar operating as a petroleum products supplier in 1991; Bel-Merit operating as a metal machinery fabrication facility in 1996. Pro-Bel operating as metal products manufacturer since at least 1991; E.J. Industries Ltd. Is listed as operating as a machine shop and fabricated metal products since at least 2012 at 765 Westney Road South.	Metals, As, Sb, Se, PHCs, BTEX, VOCs, PAHs	Ground Water

A Phase Two ESA was recommended to assess potential subsurface impacts as a result of the aforementioned PCAs and APECs.

The Phase Two ESA entailed the drilling of a total of seven (7) sampled boreholes (BH23-1 to BH23-7) to depths ranging between 8.40 to 9.90 metres below ground surface (mbgs) at strategically selected and accessible locations on the Phase Two Property. Ground water monitoring wells were also installed in all seven (7) boreholes.

The observed soil stratigraphy generally comprised surficial asphalt pavement or grass overlying sand and/or gravel, topsoil, clayey silt, silty clay or sandy silt fill, which was underlain by a stratum of sandy silt till. The soil across the property is considered to be medium-fine textured for the purpose of this assessment.

Fieldwork for this investigation began on November 28, 2023 by soil sampling from a total of five (5) exterior boreholes drilled to depths of 8.40 to 9.90 m below existing grade with the installation of seven (7) monitoring wells. The stabilized ground water levels were measured at depths of 5.94 to 8.62 m below existing grade. No free-product was measured in any of the monitoring wells.

Based on the site topography and ground water level measurements, the ground water flow is interpreted to flow across the Site in a southwesterly direction. The results of the ground water monitoring also indicate that the primary near surface water table resides within the native sandy silt (till) layer.

Seventeen (17) soil samples (representative of fill and native soils) and ten (10) ground water samples were collected and submitted for laboratory analyses.

In comparison with the new (2011) Ontario *Soil, Ground Water, and Sediment Standards for Use Under Part XV.1 of the* EPA criteria, the results of laboratory analyses did not reveal any soil or ground water exceedances in comparison to Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils.

As the soil and ground water analytical results do not exceed the Table 3 SCS, no remedial activities are required.

The statements made in this Executive Summary are subject to the same limitations as contained in the report and should be read in conjunction with the entire report.

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1. Introduction

Palmer was retained by Firearms Outlets Canada (the 'Client') to conduct a Phase Two Environmental Site Assessment (ESA) for the parcel of land located at 725 Westney Road South, Ajax (hereinafter referred to as the 'Phase Two Property'), as shown in **Drawing 1**.

It is Palmer's understanding that the purpose of this Phase Two ESA is to support a Site Plan Approval and Zoning By-Law Amendment application with the Town of Ajax and is required to support filing of a Record of Site Condition (RSC) with the Ministry of the Environment, Conservation and Parks (MECP). The Phase Two Property (also referred to as the "Subject Property" or "Site") is contemplated for commercial redevelopment with a two-storey addition after the demolition of the northern half of the current building. The Phase Two ESA Report has been prepared in accordance with Schedule E of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the Environmental Protection Act (EPA).

The assessment consisted of a program of drilling, sampling, laboratory analysis and evaluation of results which characterized the subsurface conditions beneath the Site to establish any environmental contamination affecting the Site.

Conditions noted in this report are general in nature. This report presents the results of the investigation and the conclusions we have drawn regarding the possible impact of the conditions observed.

1.1 Phase Two Property Description

The Phase Two Property is a 0.66-hectare, square shaped, parcel of land located on the north side of Westney Road South, west of the intersection with Finley Avenue in Ajax, Ontario. Building structures on the Site include a 1,436 m^2, single storey commercial/light industrial building which comprises three units. Unit 1 is vacant and was most recently leased by a kitchen renovation company. Unit 2 is leased by Firearms Outlets Canada, a gun wholesaler. Unit 3 is leased by Wraptors Inc., a vehicle detailing company. The remaining parts of the Site comprise asphalt-paved, grass, and landscaped areas.

The subject property is located north of Westney Road South, south of Chisholm Court, and west of Finley Avenue, as shown in **Drawing 1** and the photograph appendix. The municipal address is 725 Westney Road South, Ajax with Property Identification Number (PIN) 26465-0010 (LT).

The legal description of the Phase Two Property is Parcel 1-8, Section 40M1308; Part Block 1 Plan 40M1308, Part 2 Plan 40R9180; S/T Lot 266613, in the Town of Ajax, Province of Ontario.

The center of the Phase Two Property is located in UTM Zone 17, with approximate coordinates of Easting 658702 m and Northing 4854809 m.

1.2 Property Ownership

At the time of the investigation, the Phase Two Property was owned by Pelle Real Estate Holdings Inc. and was occupied by two (2) different tenants including: Firearms Outlets Canada and Wraptors Inc. One of the units was vacant at the time of Palmer's site reconnaissance and was most recently used as an office space for a home renovations business. The authorization for Palmer to proceed with the Phase Two ESA was given by Fred Pellegrino (President) of Firearms Outlets Canada. The contact information for the proponent is provided below:

Company Name:	Firearms Outlets Canada
Company Address:	725 Westney Road South, Ajax
Contact Name:	Fred Pellegrino
Contact email:	soccerfuel74@gmail.com

1.3 Current and Proposed Future Uses

Historically, the Phase Two Property was utilized as a temporary construction office with a mobile trailer depicted at the northeast portion in the early 1980s. The Site was first developed in the early 1990s with the current building. Tenants of the building have included a home renovations business (2022-2023), All-Canadian Tax Service (2021), Bell Mobility (2000), Children's Wish Foundation (2012-2017), Eastway Management Inc (2012-2021), Excell Communications (2000-2017), Gilson Construction Ltd. (1991), Heart and Stroke Foundation of Ontario (2000), Mak Boat Sales (2012-2017), National Bank of Canada Ajax (1991), Novanet Communications (1995-2021), Pickering Audio Visual (2000-2021), Positive Changes Hypnosis (2012), Stationers Marketing of Canada Inc. (1995), Road Lanes Publishing (2021), T L P General Contractors Ltd (1991), Trenway Communications Services Ltd (1995), and UDI Office Centre Canada Ltd (2000).

The current and proposed land uses are as follows:

Current or Proposed	Description of Property Use
Current	Commercial – Multi-unit single storey commercial/light industrial building
Proposed	Commercial – Multi-unit two storey commercial/light industrial building

1.4 Applicable Site Condition Standards

Ontario Regulation 153/04 - Records of Site Condition, Part XV.1 of the Environmental Protection Act as amended - "O.Reg. 153/04, as amended" - establishes the legislative and regulatory requirements for contaminated sites in Ontario. The Ministry of Environment, Conservation and Parks (MECP) document "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act," dated April 15, 2011 sets out the prescribed contaminants and applicable Site Condition Standards (SCS) for those contaminants for the purposes of O. Reg. 153/04, as amended. The MECP SCS are set out in Tables 1 to 9 criteria applicable for various site conditions.

The selection of the appropriate MECP SCS for a Phase Two ESA is dependent upon several site-specific conditions, such as the existing/proposed property use, the existing/potential ground water use, the depth of clean-up, soil texture, depth to bedrock and proximity to the nearest body of water.

The MECP SCS applicable to the Site have been evaluated on the basis of the following rationale:

Site Sensitivity:

- The site does not include, nor is there evidence to suggest it could have an adverse effect on a sensitive environment.
- The borehole drilling program revealed that the bedrock was not encountered by the maximum borehole depth of 9.90 metres (m) below existing grade across the Site. Based on studies conducted in the area, the depth of bedrock is expected to be approximately 100 m below existing grade;
- The glacially-derived native sandy silt materials are of moderate permeability to depths up to at least 9.90 m below ground surface; and
- The subsurface soil pH values are between 7.93 and 7.97. Two (2) soil samples (and one duplicate soil sample) were collected on November 28, 2023 at two of seven boreholes (BH23-3 & BH23-5) between 0.76 and 6.61 m below existing grade, to determine the soil pH for the Phase Two Property.

Land Use:

- The subject site is currently developed with a building to support commercial land uses. Proposed commercial redevelopment is anticipated.

Ground Water Use:

- The site is and will continue to be serviced by a municipal drinking water supply derived from Lake Ontario.

Depth and Soil Texture:

- For the purpose of the report, the assessment criteria corresponding to the full depth option will be used for comparison to the laboratory analytical results.
- One soil sample was collected on November 28, 2023 at the location of BH23-1 between 6.10 and 6.86 m below existing grade, to determine the soil grain size for the Phase Two Property.
- Based upon field observations, and soil grain size analyses conducted by ALS Environmental, the site stratigraphy generally comprises 32 % silt and 22% clay Therefore, for the purpose of this report, the assessment criteria corresponding to medium-fine textured soils were selected for comparison in laboratory analytical results.

- The selected soil texture is applicable to at least one-third of the Site being assessed. Therefore, the medium-fine textured soil SCS can be used, as per Ontario Regulation 153/04, s.42 (1).

Based on the above information, the applicable EPA site assessment criteria selected for use at this Site is the Full Depth Generic SCS in a Non-Potable Ground Water Condition (Table 3) criteria for industrial/commercial/community land uses with medium fine-textured soils.

2. Background Information

The environmental investigation conducted at the Site and the details of our findings are outlined in **Section 3**. The Phase Two ESA was conducted at the Site to address the APECs identified by the Palmer December 20, 2023 Phase One ESA for the Site.

2.1 Physical Setting

The Phase Two Property is located at a topographic elevation of approximately 92 m above mean sea level (masl). Topography at and in the general vicinity of the Site is relatively flat with a drop in elevation to the southwest towards Duffin's Creek and Lake Ontario, as shown in **Figure 8.2.1**.

The Phase Two Property is located within the broad physiographic region known as the Iroquois Plain (Chapman and Putnam, 1984). This region is a slightly sloping plain that is covered with stratified sands of carrying depths in some areas and soil formed directly on the wave-eroded surface of red shale, in others. This region borders Lake Ontario and extends around the western part of Lake Ontario from the Niagara River to the Trent River.

Local surficial geologic mapping (The Ontario Geological Survey, 2003) of the Ajax area indicates that pleistocene stone-poor, carbonate-derived silty to sandy till, underlie the Phase Two Property.

Bedrock geologic mapping of Ontario (The Ontario Geological Survey, 1990) indicates that the glacially derived overburden soil at the Phase Two Property is underlain by Upper Ordovician Age shale, limestone, dolostone, and siltstone of the Blue Mountain Formation.

There are no water bodies on the Phase Two Property. Duffin's Creek is located approximately 800 m northwest of the Phase Two Property, which flows southward to Lake Ontario. Lake Ontario is located approximately 1.38 km south of the Phase Two Property. The regional ground water flow is surmised to be also directed southwestward due to the influence of Duffins Creek and Lake Ontario. The local hydrogeology is controlled by this waterbody, the underlying geology, and the topography and is surmised to be directed southwestward. The static ground water level beneath the Phase Two Property was measured to be between 5.94 and 8.62 m below existing grade.

There are no areas of natural significance on the Phase Two Property or within the Phase One Study Area.

There are no well-head protection areas or other designation identified by the Municipality in its official plan for the protection of ground water on the Phase Two Property or within the Phase One Study Area.

The Phase Two Property is serviced by a municipal drinking water system with potable water derived from Lake Ontario. However, there are two (2) well records within a 250 m search radius. These records relate to monitoring observation wells in the Phase One Study Area.

2.2 Past Investigations

No reports report relating to the environmental conditions at the Phase Two Property were provided by the Client. Palmer conducted a Phase One ESA Report for the Client in December 2023. A summary of the description of relevant report data, analysis and findings relevant to the Phase Two ESA, including the presence of a contaminant on, in or under the Phase Two Property or the existence of an area of potential environmental concern, is as follows:

Report Title: Phase One Environmental Site Assessment 725 Westney Road South, Ajax, Ontario
Date: December 20, 2023
Prepared by: Palmer
Prepared for: Firearms Outlets Canada

Based on the findings of the historical records review, site reconnaissance, and interviews; PCAs and APECs were identified in association with the Phase One Property and/or Phase One Study Area. Refer to Table A in the Executive Summary.

A Phase Two ESA was recommended to assess potential subsurface impacts as a result of the PCAs and APECs identified in the Phase One ESA.

3. Scope of the Investigation

The Phase Two ESA Report has been prepared in accordance with Schedule E of Ontario Regulation 407/19 (amending Ontario Regulation 153/04) under the Environmental Protection Act (EPA). It is Palmer's understanding that the purpose of this Phase Two ESA was to support a Site Plan Approval and Zoning By-Law Amendment application with the Town of Ajax, and is required to support filing of a RSC with MECP. The Phase Two Property is contemplated for commercial redevelopment with a two-storey addition after the demolition of the northern half of the current building.

3.1 Overview of Site Investigation

To address the APECs identified in the Palmer 2023 Phase One ESA, Palmer conducted a Phase Two ESA consisting of drilling boreholes, installing monitoring wells, and sampling and chemical testing of soil and Ground water samples during the Phase Two ESA investigation.

Seven (7) boreholes (BH23-1, BH23-2, BH23-3, BH23-4, BH23-5, BH23-6, BH23-7) were advanced across the Site. All seven (7) of the boreholes were completed as monitoring wells.

The rationale for the selection of borehole/monitoring well locations is shown on **Table 1** below:

Table 1. APEC Locations and Associated Boreholes and Monitoring Wells

Areas of Potential Environmental Concern	Location on Site	Sample Location / Sample ID
APEC #1: Existing Waste Generator & Car Wash Chemicals Manufacturing	Western portion of Phase One Property	BH/MW23-2 to BH/MW23-4
APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank	Northern portion of Phase One Property	BH/MW23-1, BH/MW23-2 and BH/MW23-5
APEC #3: Existing Metal Coating and Treatment	Eastern portion of Phase One Property	BH/MW23-5 to MW23-6/7
APEC #4: Existing Automotive Repair Operations	Northeastern portion of Phase One Property	BH/MW23-1, BH/MW23-5 and MW23-6
APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations	Northeastern portion of Phase One Property	BH/MW23-1, BH/MW23-5 and MW23-6
APEC #6: Automotive Repair Operations	Northeastern portion of Phase One Property	BH/MW23-1, BH/MW23-5 and MW23-6
APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop	Northern portion of Phase One Property	BH/MW23-1, BH/MW23-5 and MW23-6

Areas of Potential Environmental Concern	Location on Site	Sample Location / Sample ID
APEC#8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing	Southeastern Portion of Phase One Property	BH/MW23-5 to MW23-6/7

The scope of work for this Phase Two ESA included the following tasks:

- Planned a site investigation through the preparation of a Sampling and Analysis Plan (refer to **Appendix A1**).
- Acquired utility locates: Prior to the advancement of the boreholes, arranging for the location of underground and overhead utilities including electrical (hydro), natural gas, water supply, sanitary and storm sewer, telephone, cable and communication. Underground utilities were marked by local utility locates company representatives, and a private locator, Premier Locates, was retained to clear the borehole locations prior to drilling of the boreholes.
- Mobilized, drilled, and logged seven (7) sampled boreholes to depths of 8.40 to 9.90 metres below ground surface (mbgs).
- Installed 50-mm diameter perforated polyvinyl chloride (PVC) ground water monitoring wells in seven (7) of the boreholes. All ground water monitoring wells were installed with 3.05 m of slotted PVC intake screen.
- Screened soil sample head-space for soil vapours using a portable photo ionization detector (PID) *Thermo 580B*.
- Measured the static ground water levels in the seven (7) monitoring wells.
- Completed an elevation survey of the seven (7) monitoring wells to obtain a ground water elevation measurement to confirm ground water flow direction at the Site at the time of the field investigation.
- Purged three (3) well casing volumes from each monitoring well or until each well was dry and collected ground water samples from six (6) of the seven (7) monitoring wells due to monitoring well BH/MW23-7 being dry.
- Submitted soil and ground water samples under Chain of Custody protocol to an accredited laboratory to carry out chemical analysis for contaminants of potential concern in accordance with O.Reg. 153/04 - "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the *Environmental Protection Act*" published by the MECP and dated March 9, 2004, as amended by O. Reg. 511/09, s. 22 ("Analytical Protocol").
- Reviewed and interpreted laboratory results of chemical analysis data and observations made during the site investigation.
- Completed an evaluation of the information from the above and preparing a Phase Two Conceptual Site Model (CSM) to identify locations and concentrations of contaminants (if any) above the applicable SCS at the Site.
- Prepared a Phase Two ESA report of the investigation findings, conclusions, and recommendations.

3.2 Media Investigated

The Phase Two ESA included the investigation of soil and ground water at the Site.

Soil and ground water samples were selected for chemical analysis to determine whether any contaminants of potential concern (COPCs) were present in the soil and ground water in the locations of the APECs, outlined in the Palmer December 20, 2023 Phase One ESA.

A total of seventeen (17) soil samples, including five (5) duplicate soil samples, and ten (10) ground water samples, including three (3) duplicate ground water samples and one (1) trip blank sample, were submitted to ALS Environmental, for analysis of various COPCs to investigate the soil and ground water quality related to the aforementioned APECs. These COPC included PHCs, PAHs, VOCs, BTEX, Metals parameters (As, Sb, Se), and Organochlorine (OC) Pesticides. One additional composite soil sample was submitted for Toxicity Characteristic Leaching Procedure Analysis of PHCs, VOCs, PAHs and ICPMS Metals. Borehole and monitoring well locations are presented in **Drawing 2**.

As there is no surface water body on the Site, no sediment sampling is required.

3.3 Phase One Conceptual Site Model

Site Description

The Phase One Property is a 0.66-hectare, square shaped, parcel of land located on the north side of Westney Road South, west of the intersection with Finley Avenue in Ajax, Ontario. Building structures on the Site include a 1,436 m^2, single storey commercial/light industrial building which comprises three units. Unit 1 is vacant and was most recently leased by a kitchen renovation company. Unit 2 is leased by Firearms Outlets Canada, a gun wholesaler. Unit 3 is leased by Wraptors Inc., a vehicle detailing company.

Historically, the Phase One Property was utilized as a temporary construction office with a mobile trailer depicted at the northeast portion in the early 1980s. The Site was first developed in the early 1990s with the current building. Tenants of the building have included a home renovations business (2022-2023), All-Canadian Tax Service (2021), Bell Mobility (2000), Children's Wish Foundation (2012-2017), Eastway Management Inc (2012-2021), Excell Communications (2000-2017), Gilson Construction Ltd. (1991), Heart and Stroke Foundation of Ontario (2000), Mak Boat Sales (2012-2017), National Bank of Canada Ajax (1991), Novanet Communications (1995-2021), Pickering Audio Visual (2000-2021), Positive Changes Hypnosis (2012), Stationers Marketing of Canada Inc. (1995), Road Lanes Publishing (2021), T L P General Contractors Ltd (1991), Trenway Communications Services Ltd (1995), and UDI Office Centre Canada Ltd (2000).

The remaining parts of the Site comprise asphalt-paved, grass, and landscaped areas.

Water Bodies / Areas of Natural Significance

There are no water bodies or areas of natural significance on the Phase One Property. Duffin's Creek is located approximately 800 m northwest of the Phase One Property which flows southward to Lake Ontario. No Areas of Natural Significance are within the Phase One Study Area.

Drinking Water Wells

There are no drinking water well records for the Phase One Property; however there are two (2) well records within a 250 m search radius. These records relate to monitoring observation wells in the vicinity of the Phase One Property.

Neighboring Land Use

The Phase One Study Area is developed with residential, industrial and commercial land uses including automotive repair by Sortech Automotive Corp & Seal Auto Glass & Trim since 2012, chemical manufacturing by Septo-Clean Ltd since 2012, metal fabrication by Ko-Tek Manufacturing & Bayview Metals since 2020, Craftsmen Printers in 1991, and plastics manufacturing by Roven Tool & Mould between 1997 and 2004 at 700 Finley Avenue, metal fabrication by Die-Max Tool & Die Ltd since at least 2007 at 729 Finley Avenue, vehicle maintenance and storage by Rock Brune Bros since at least 1981 at 725 Finley Avenue, automotive repair and metal fabrication since at least 1989 at 717 Finley Avenue, automotive repair since at least 2003 at 711 Finley Avenue, a metal and scrap collection facility Apick Scrap Metal Inc. since at least 2005 at 695 Finley Avenue, a machine shop (E.J. Industries Ltd) and fuel storage operations at 765 Westney Road South, as presented in **Drawing 2**.

Areas of Potential Environmental Concerns (APECs)

Based on the findings of the historical record review, Site reconnaissance, and interviews, any APECs located on the Phase One Property and within the Phase One Study Area are labeled and located, as shown in **Drawing 3**. The following Potentially Contaminating Activities (PCAs) were found to be associated with the current or historical land uses of the Phase One Property and/or Phase One Study Area:

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #1: Existing Waste Generator & Car Wash Chemicals Manufacturing	Western portion of Phase One Property	#33. Metal Treatment, Coating, Plating and Finishing #50. Soap and Detergent Manufacturing, Processing and Bulk Storage #40. Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk	Off-Site – *Besnovo Technologies* generating petroleum wastes and performing laser de-coating since at least 2018; Coopers Agropharm Inc. is registered as pesticides vendor and is a manufacturer of veterinary supplies and drugs between 1991 and 1995; Mondo Products	Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Petroleum Hydrocarbons (PHCs), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine (OC) Pesticides	Soil & Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
		Storage, and Large Scale Applications	Co Ltd operating as a car wash chemicals manufacturer and generating petroleum and hazardous wastes since at least 1999 to at least 2022 adjacent to the Phase One Property at 695 Westney Road South.		
APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank	Northern portion of Phase One Property	#8. Chemical Manufacturing, Processing and Bulk Storage #10. Commercial Autobody shops #31. Ink Manufacturing, Processing and Bulk Storage #34. Metal Fabrication #43. Plastics (including Fiberglass) Manufacturing and Processing #52. Storage, Maintenance, Fueling, And Repair Of Equipment, Vehicles, And Material Used To Maintain Transportation Systems #28. Gasoline and Associated Products Storage in Fixed Tanks	Off-Site – *Seal Auto Glass & Trim* and *Sortech Automotive Corp* operating as automotive repair and auto body shops since at least 2012, *Rapid Packaging Systems Ltd* operating as a plastics manufacturer since at least 2017, *Septo-Clean Ltd* operating as chemical products manufacturer since at least 2012, *Ko-Tek Manufacturing* operating as Metal fabrication since 2012, *Bayview Metals* operating as a machine shop in 2020, *Craftsmen Printers* operating in 1991, *Emifri Shield Plating* operating between 1986 and 1998, *Holscoe Precision Tooling* operating as a machine shop in 2004, *Roven Tool and Mould* operating	Metals, As, Sb, Se, PHCs, Benzene, Toluene, Ethylbenzene, Xylene (BTEX), VOCs	Soil & Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
			as plastics manufacturer between 1997 and 2004 adjacent to the north property boundary of the Phase One Property at 700 Finley Avenue. In addition, one record for an expired 1,750-L storage tank with unknown content is listed for Wooden Paddle Candy Co in 1993.		
APEC #3: Existing Metal Coating and Treatment	Eastern portion of Phase One Property	#34: Metal Fabrication #33: Metal Treatment, Coating, Plating and Finishing	Off-Site – *Die-Max Tool & Die Ltd* operating since at least 2007 and *Progress Machine Co* operating as a woodworking machinery manufacturing facility between 1962 and 2000 at 729 Finley Avenue.	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #4: Existing Automotive Repair Operations	Northeastern portion of Phase One Property	#52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-Site – *Rockbrune Bros* performing vehicle and equipment maintenance and repair since at least 1981 at 725 Finley Avenue	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations	Northeastern portion of Phase One Property	#10: Commercial Autobody Shops #33: Metal Treatment, Coating, Plating and Finishing #39. Paints Manufacturing, Processing and Bulk Storage	Off-Site – *Autobahn East* operating since at least 2013, *Ny-Mould Industries* operating as a machine shop in 1989, and *Red Tower* operating since at least 2017 at 717 Finley Avenue	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #6: Automotive Repair Operations	Northeastern portion of Phase One Property	#10: Commercial Autobody Shops #52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-Site – *Padhiana Auto Ltd.* operating as an autobody shop in 2002 and 2003, *Kelly & Sons Auto Repair* operating since at least 2015 and *Precision Motorsport* operating since at least 2021 at 711 Finley Avenue.	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water
APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop	Northern portion of Phase One Property	#2. Adhesives and Resins Manufacturing, Processing and Bulk Storage #39. Paints Manufacturing, Processing and Bulk Storage #52. Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems #58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	Off-Site – *Apick Scrap Metal Inc* operating as a Metal and scrap collection facility since at least 2005, *Lifestyle Cabinets*, *Bantam Trades and Services* operating in 1984, and *D&K Forklift Services Ltd.* generating wastes from 1992 to 2001 at 695 Finley Avenue.	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Ground Water
APEC#8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing	Southeastern Portion of Phase One Property	#28. Gasoline and Associated Products Storage in Fixed Tanks #33. Metal Treatment,	Off-Site – First Choice Petroleum and Olco Petroleum Group listed as having 13 records for gasoline/diesel storage tanks with	Metals, As, Sb, Se, PHCs, BTEX, VOCs, PAHs	Ground Water

APEC	Location of APEC on the Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
		Coating, Plating and Finishing #34. Metal Fabrication	unknown volume and installation date; Comtrade Petroleum Inc. listed as generator of waste oils and lubricants since at least 1990 to at least 1998; MP Gas Bar operating as a petroleum products supplier in 1991; Bel-Merit operating as a metal machinery fabrication facility in 1996. Pro-Bel operating as metal products manufacturer since at least 1991; E.J. Industries Ltd. Is listed as operating as a machine shop and fabricated metal products since at least 2012 at 765 Westney Road South.		

Additional PCAs that were identified in association with the Phase One Study Area that are **not** considered to pose an APEC on the Phase One Property include:

PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
#34: Metal Fabrication	Off-Site at 20 Barr Road	Metals, As, Sb, Se, PHCs, VOCs	N/A
#12: Concrete, Cement and Lime Manufacturing #34: Metal Fabrication: John Ewing operating in 2000. NA – SPILL: 150L of Diesel Fuel spilled in 2007	Off-Site at 12 Chisholm Court	Metals, As, Sb, Se PHCs, VOCs, PAHs	N/A
#39: Glass Manufacturing #34: Metal Fabrication	Off-Site at 2 Chisholm Court	Metals, As, Sb, Se, PHCs, VOCs, PAHs	N/A

PCA	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern (COPC)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
#51: Solvent Manufacturing, Processing and Bulk Storage			
#33: Metal Treatment, Coating, Plating and Finishing #34: Metal Fabrication	Off-Site at 4 Chisholm Court	Metals, As, Sb, Se, PHC, VOCs	N/A
#19: Electronic and Computer Equipment Manufacturing #27: Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles: Sea Smart Technologies operating as a marine repair facility in 2000. #31: Ink Manufacturing, Processing and Bulk Storage: Applebee Graphics Inc. operating as a printing facility in 1988.	Off-Site at 785 Westney Road South	Metals, As, Sb, Se, PHCs, VOCs, PAHs	N/A
#34: Metal Fabrication	Off-Site at 795 Westney Road South	Metals, As, Sb, Se	N/A

Description of Assessment

PCAs with known or potential to affect the Phase One Property are as follows:

PCA Location	Location of APEC on the Phase One Property	Contaminants of Concern	Impact to Phase One Property (Known or Potential)
695 Westney Road South	Western Portion of Phase One Property	Metals, As, Sb, Se, PHCs, VOCs, PAHs, OC Pesticides	Potential
700 Finley Avenue	Northern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
729 Finley Avenue	Eastern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
725 Finley Avenue	Northeastern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
717 Finley Avenue	Northeastern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
711 Finley Avenue	Northeastern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
695 Finley Avenue	Northern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Potential
765 Westney Road South	Southeastern Portion of Phase One Property	Metals, As, Sb, Se, PHCs, BTEX, PAHs, VOCs	Potential

Additional PCAs that are **not** considered to pose an APEC to the Phase One Property are as follows:

PCA Location	Location of APEC on the Phase One Property	Contaminants of Concern	Impact to Phase One Property (Known or Potential)
12 Chisholm Court	N/A	Metals, As, Sb, Se, PHCs, BTEX, VOCs	N/A
20 Barr Road		Metals, As, Sb, Se, PHCs, BTEX, VOCs	
2 Chisholm Court		Metals, As, Sb, Se, PHCs, BTEX, VOCs	

PCA Location	Location of APEC on the Phase One Property	Contaminants of Concern	Impact to Phase One Property (Known or Potential)
4 Chisholm Court	Properties are inferred to be located hydraulically cross-gradient and/or down-gradient from the Phase One Property	Metals, As, Sb, Se, PHCs, VOCs	Properties are inferred to be located hydraulically cross-gradient and/or down-gradient from the Phase One Property
785 Westney Road South		Metals, As, Sb, Se, PHCs, BTEX, VOCs	
795 Westney Road South		Metals, As, Sb, Se, PHCs, BTEX, VOCs	

Underground utilities are expected to be present on the subject property (sanitary sewer, storm sewer, city water, natural gas, telephone, electricity) and could potentially act as preferential pathways.

Local surficial geologic mapping (The Ontario Geological Survey, 2003) of the Ajax area indicates that pleistocene stone-poor, carbonate-derived silty to sandy till, underlie the Phase One Property.

The Phase One Property is located approximately 800 m southeast of Duffin's Creek, which flows southward into Lake Ontario. The local hydrogeology is controlled by this waterbody, the underlying geology, and the topography, and local ground water flow is expected to be southwestward. The regional ground water flow is expected to be southward towards Lake Ontario.

The exemption set out in Section 49.1 of Ontario Regulation 153/04 is being relied upon relating to the use of road salt for de-icing operations on the eastern and southern portion of the Phase One Property. An interview with the existing tenant indicated the use of road salt for de-icing operations for the safety of vehicular and/or pedestrian traffic under conditions of snow or ice or both. Observations conducted during the field sampling program confirmed the use of road salt on the eastern and southern portion of the Phase One Property for safety purposes due to snow and/or ice. Therefore, the exemption applies to the Phase One Property and is not considered to be an environmental concern that requires further investigation.

It is not expected that any uncertainty or absence of information would affect the validity of the Conceptual Site Model (CSM).

3.4 Deviations from Sampling and Analysis Plan

The field investigation and sampling program was carried out following the requirements of the Sampling and Analysis Plan (SAP) (shown in **Appendix A1**) with the following exceptions.

- Due to the lack of ground water in BH/MW23-7, ground water sampling did not occur.

3.5 Impediments

There were no impediments at the Site during the Phase Two ESA on-site investigation.

4. Investigation Method

Fieldwork for this investigation began on November 28, 2023 by soil sampling from a total of seven (7) exterior boreholes drilled to depths of 8.40 to 9.90 m below existing grade with the installation of seven (7) monitoring wells at the locations shown in **Figure 8.2.2**. The boreholes on the Phase Two Property were strategically placed to address the PCAs and APECs identified in Table A.

4.1 General

This section of the report describes the various investigation methods used in the Phase Two ESA, including drilling, soil sampling, monitoring well installation, ground water sampling and analytical testing.

The Phase Two ESA was carried out in accordance with Palmer's SAP (**Appendix A1**).

The borehole locations were established in the field by Palmer staff prior to drilling. *Ontario One-Call* was contracted to locate and clear buried utility lines including telephone cables, natural gas mains, and hydro power lines. All the detected underground lines were identified on the ground by marking paints of various colours, as shown in **Drawing 2**.

Soil

Representative soil samples were recovered at each of the borehole locations. The soil stratigraphy was logged during drilling as soil samples were collected with dedicated dual tubes. Visual observations of any foreign materials or odours were also logged. The Finalized Field Logs are presented in **Appendix A2**.

Soil samples were split into portions that were collected into a plastic bag and a sample jar. Head space vapour concentrations were determined by allowing the bags to warm up to ambient temperature, probing into partially opened bags using a monitoring probe, and measuring the sample head space with a PID. Selected samples were placed in laboratory-supplied glass jars or vials and stored in a cooler during transport to the laboratory.

Ground Water

Upon completion of drilling, a 50-mm diameter PVC monitoring well was installed in seven (7) boreholes for ground water monitoring. Initial ground water levels were measured and a dedicated length of low-density polyethylene (LDPE) tubing was inserted into the wells.

The wells were purged to waste in sealed drums and fresh ground water samples were drawn for chemical analyses using a low-flow peristaltic pump. Samples were also placed in laboratory-supplied glass bottles or vials and stored in a cooler on ice during transport to the laboratory.

4.2 Drilling and Excavating

Boreholes were advanced by using a CME 55 mounted on a track equipped with augers and dual tubes, supplied and operated by Davis Drilling under the direction of Palmer staff.

Disposable nitrile gloves were used and replaced between the handling of samples and all soil sampling equipment (stainless steel trowels, spatulas, etc.) was thoroughly decontaminated between soil sample locations to prevent potential cross-contamination. Decontamination activities included physical removal of any adhered debris, wash/scrub in “Alconox” soap solution, distilled water rinse, methanol rinse, and air dry.

Samples were collected continuously from the dual tubes. Samples submitted to the laboratory were based on visual observations, results of headspace screening, and identified APECs and associated parameters of concern.

4.3 Soil: Sampling

All soil samples were collected in accordance with strict environmental sampling protocols to ensure reliable results. The equipment used to collect the soil samples was previously discussed in Section 4.0, 4.1, and 4.2.

The observed soil stratigraphy generally comprised surficial asphalt pavement or grass overlying sand and/or gravel, topsoil, clayey silt, silty clay or sandy silt fill, which was underlain by a stratum of sandy silt till, as described in **Table 2** below. The Finalized Field Logs are provided in **Appendix A2**.

Table 2. Soil Stratigraphy Summary

Borehole/ Monitoring Well ID	Soil Stratigraphy	Depth (m)	Observations
BH/MW23-1	Asphalt Pavement	0 to 0.08	No staining observed on the surface
	Clayey Silt Fill	0.08 to 0.88	No staining or odour observed in this stratum
	Sandy Silt Fill	0.88 to 3.88	Staining and odour observed in this stratum
	Sandy Silt Till, trace gravel and cobbles	3.88 to 8.48	No staining; some odour observed in this stratum
BH/MW23-2	Asphalt Pavement	0 to 0.09	No staining observed on the surface
	Sand and gravel Fill, trace silt	0.09 to 0.89	Odour identified in this stratum
	Clayey Silt Fill, trace gravel and cobbles	0.89 to 1.59	No staining or odour observed in this stratum
	Silty Clay Fill, trace organics and cobbles	1.59 to 3.89	No staining or odour observed in this stratum
	Clayey Silt Till, trace gravel and cobbles, grey	3.89 to 4.69	No staining or odour observed in this stratum
	Sandy Silt Till, trace clay and gravel	4.69 to 9.99	No staining or odour observed in this stratum
BH/MW23-3	Asphalt Pavement	0 to 0.08	No staining observed on the surface
	Sand and gravel Fill, trace cobbles	0.08 to 1.58	No staining or odour observed in this stratum

Borehole/ Monitoring Well ID	Soil Stratigraphy	Depth (m)	Observations
	Silty Clay Fill, trace gravel	1.58 to 3.88	No staining or odour observed in this stratum
	Sandy Silt Till, trace boulders and cobbles	3.88 to 9.98	No staining or odour observed in this stratum
BH/MW23-4	Asphalt Pavement	0 to 0.08	No staining observed on the surface
	Clayey Silt Fill, trace gravel and sand	0.08 to 3.18	No staining or odour observed in this stratum
	Sandy Silt Till, trace gravel	3.18 to 8.48	No staining or odour observed in this stratum
BH/MW23-5	Asphalt Pavement	0 to 0.08	No staining or odour observed on the surface
	Clayey Silty Fill, trace sand and gravel	0.08 to 4.57	Odour and staining observed in this stratum
	Sandy Silt Till, trace gravel	4.57 to 8.48	Odour identified in this stratum
BH/MW23-6	No Stratum observed, Straight auger for Well Installation	0 to 8.70	No staining or odour observed in auger cuttings
BH/MW23-7			

4.4 Soil: Field Screening Methods

All soil samples were screened in the field for evidence of staining and odours. Soil sample headspace screening was also performed to facilitate sample selections for laboratory analysis and to provide an assessment of the vertical contaminant distributions at each borehole location.

The soil sample headspace screening was conducted with a PID Thermo 580B calibrated to a known isobutylene gas. The PID readings were recorded in parts per million (ppm), as shown in the Finalized Field Logs in **Appendix A2**.

4.5 Ground Water: Monitoring Well Installations

Upon completion of drilling, a 50-mm diameter, flush-joint threaded PVC monitoring well was installed in seven (7) of the boreholes for ground water monitoring by Davis Drilling under the direction of Palmer staff.

The monitoring wells included a 3 m length of slotted PVC intake screen. The wells were then extended from the top of the intake screen to the ground surface using solid PVC riser pipe. A silica sand filter pack was placed between the intake screen and the wall of the borehole. The filter pack was extended approximately 0.6 m above the top of the well screen to allow for settlement of the sand packs and to accommodate expansion of the overlying well seals. A bentonite seal was placed above the sand pack and extended to approximately 0.3 mbgs. Concrete and a flushmount well casing or aluminum stick-up casing were installed between 0.3 mbgs and the ground surface. No glue was used in the construction of the monitoring well.

Elevations and associated monitoring well construction details are shown in **Table 8.1.1**. The location of the monitoring wells are shown in **Figure 8.2.3**, and the well completion diagrams are also shown on the Finalized Field Logs in **Appendix A2**.

All ground water monitoring wells installed at the Phase Two Property were instrumented with sufficient lengths of LDPE tubing to facilitate well development and purging requirements. Following the initial installation, depths to the static water level were measured and each monitoring well was developed by purging either three (3) well casing volumes or until the well went dry at least once. The well development occurred in order to remove any fluids that may have been introduced into the well during drilling, to remove particulates that may have become entrained in the well and filter pack, to stabilize and grade the filter pack, improve connectivity between the well and the formation, and restore ground water that may have been disturbed or altered during the drilling process to ensure the samples to be representative of true formation waters. The purging activities were carried out using the dedicated LDPE tubing and a low-flow peristaltic pump.

Purging of the five installed monitoring wells was completed on December 7, 2023 and was as follows:

Table 3. Monitoring Well Development Details

Monitoring Well ID	Date of Development/Purging	Time of Development/Purging	Volume of Fluid Removed from Well (L)
MW23-1	December 7, 2023	12:50	11.20
MW23-2	December 7, 2023	1:30	3.70
MW23-3	December 7, 2023	7:20	10.15
MW23-4	December 7, 2023	7:40	10.30
MW23-5	December 7, 2023	11:30	12.30
MW23-6	December 7, 2023	3:30	1.70
MW23-7	December 7, 2023	-	DRY

The development was completed on the aforementioned date as six (6) of the seven (7) monitoring wells were purged until dry. MW23-7 was observed to have no ground water.

4.6 Ground Water: Field Measurement of Ground water Quality Parameters

On December 7, 2023, after the monitoring wells were purged until dry, the following water quality field parameters were measured using a Quanta multi-probe prior to sampling:

Table 4. Ground Water Quality Parameters

Monitoring Well ID	pH (pH units)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)
MW23-1	7.12	3.398	8.63	12.65
MW23-2	7.05	1.530	12.86	11.74
MW23-3	7.16	2.165	6.52	12.43
MW23-4	7.24	0.657	4.28	12.33

Monitoring Well ID	pH (pH units)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Temperature (°C)
MW23-5	6.47	1.250	17.86	11.66
MW23-6	7.02	1.232	5.65	11.23

4.7 Ground Water: Sampling

All ground water samples were collected in accordance with strict environmental sampling protocols to ensure reliable results. Any equipment used to collect the ground water samples are previously discussed in *Section 4.0, 4.1,* and *4.2*.

The wells were purged to waste in sealed drums and fresh ground water samples were drawn for chemical analyses. During the sampling round, ground water samples were collected using a low-flow peristaltic pump, with dedicated tubing installed in each of the monitoring wells. This method minimizes the velocity of the formation water entering the well screen, as the drawdown is kept to a minimum (i.e., less than 10 cm) by adjusting the pumping rate. The samples were placed in laboratory-supplied glass bottles or vials and stored in a cooler on ice during transport to the laboratory.

Ground water monitoring, including measuring the depth to the stabilized water level, was conducted on December 7 and 14, 2023. Measurements of ground water depth were made using an electronic oil water interface probe. Ground water level measurements are shown in **Table 8.1.2**.

In addition, the ground water was screened in the field (during all monitoring events) for evidence of free product including presence of liquid petroleum hydrocarbons (LPH), sheen (iridescence), odour and colour, as summarized in **Table 8.1.3**.

4.8 Sediment: Sampling

As no water bodies are present on the Site, sediment sampling was not within the scope of this Phase Two ESA.

4.9 Analytical Testing

ALS Environmental (ALS) performed chemical analysis on soil and ground water samples collected from boreholes/monitoring wells at the Site. ALS is an accredited laboratory under the Standards Council of Canada (SCC) and the Canadian Association for Laboratory Accreditation (CALA), in accordance with the international standard ISO/IE 17025:2005 – General Requirements for the Competence of Testing and Calibration. ALS is accredited for all parameters required under Ontario Regulation 153/04 – Record of Site Condition, as outlined in MECP Technical Update entitled “Laboratory Accreditation Requirements under the New Records of Site Condition Regulation (O. Reg. 153/04).

Based on visual observations, results of headspace screening, and identified APECs and associated parameters of concern, thirty (30) selected soil samples (representative of fill materials and native soils), and thirty-two (32) ground water samples were submitted to ALS Environmental, for the following analyses:

- PHCs and BTEX on six (6) soil and seven (7) ground water samples (including one (1) QA/QC sample for soil and one (1) QA/QC sample for ground water);

- VOCs on six (6) soil and eight (8) ground water samples (including one (1) QA/QC sample for soil and one (1) QA/QC sample and one (1) Trip Blank sample for ground water);
- PAHs on four (4) soil and six (6) ground water samples (including one (1) QA/QC sample for soil and one (1) QA/QC sample for ground water);
- OC Pesticides on four (4) soil and four (4) ground water samples (including one (1) QA/QC sample for soil and one (1) QA/QC sample for ground water);
- Metals on six (6) soil and seven (7) ground water samples (including one (1) QA/QC sample for soil and one (1) QA/QC sample for ground water);
- pH on three (3) soil samples (including one (1) QA/QC sample); and,
- Grain Size Hydrometer Sieve on one (1) soil sample.

The Laboratory Certificate of Analyses and Analytical Reports are reproduced in **Appendix A3**.

4.10 Residue Management Procedures

All soil cuttings from the borehole drilling activities, water from the well development and purging, and all fluids from equipment cleaning are stored in secure containers on the Phase Two Property.

The secure containers will be collected from the Site for off-Site disposal after conclusion of the Geotechnical Investigation.

4.11 Elevation Surveying

The ground surface elevation of borehole and monitoring wells was surveyed by Palmer personnel. The elevations were surveyed based on a marked local benchmark. The benchmark is at Station 0011910U002, located at Pickering C.N. Railway, bridge over Duffin Creek, 0.8 km east of station, bolt in north face of north stone retaining wall at east end of bridge. The elevation at this point is understood to be at Ellipsoidal Elev. 88.99 metres.

A legal survey of the Phase Two Property can be seen in **Appendix A4**.

4.12 Quality Assurance and Quality Control Measures

A Quality Assurance and Quality Control (QA/QC) program, developed as part of the SAP, was followed by Palmer to ensure the integrity of all soil and ground water samples was maintained and that they were representative of the Site conditions. The QA/QC program was developed in accordance with the Analytical Protocol.

The jars and preservatives (where applicable) used in the collection of soil and ground water samples were supplied by ALS Environmental. The soil samples intended to be submitted for analysis of VOCs and PHC F1 were immediately preserved in laboratory provided methanol vials to sequester the volatile compounds.

The soil samples from the boreholes which were advanced using solid stem augers were collected with split spoon samplers which were decontaminated after the extraction of each sample.

The soil and ground water samples were labelled as they were collected. Samples were stored in ice-packed coolers, until the samples were transported to the laboratory for chemical analysis.

The soil and ground water samples were handed over to the laboratory by Palmer staff. Chains of Custody of the samples were logged with Chain of Custody Forms.

As discussed in Section 4.4 above, the monitoring wells were installed by direct drilling with solid stem augers. All drilling equipment arrived at the Site in a pre-cleaned condition. The augers were cleaned with a brush and washed between monitoring well locations.

The stainless-steel sampling tool (trowel) was decontaminated between sampling locations in the following sequence: cleaned with a brush to remove adhered soil and/or debris, rinsed with distilled water and allowed to air dry.

Field duplicate samples for both soil and ground water were submitted to ALS for chemical analysis for QA/QC purposes.

For soil samples, five (5) duplicate samples (23-2-2D, duplicate of 23-2-2, 23-2-4D, duplicate of 23-2-4, 23-4-4D, duplicate of 23-4-4, 23-5-2D, duplicate of 23-5-2, and 23-5-3D, duplicate of 23-5-3) were submitted to ALS for analysis.

For ground water samples, three (3) duplicate ground water samples (23-3D, duplicate of 23-3, 23-4D, duplicate of 23-4, and 23-5D, duplicate of 23-5) and one (1) trip blank were submitted to ALS for analysis.

The laboratory quality assurance program included the analysis of laboratory duplicate samples, methods blanks, matrix spikes and samples of reference materials, in accordance with the Analytical Protocol.

5. Review and Evaluation

5.1 Geology

The subsurface profiles and associated below grade elevations encountered at the Phase Two Property are described in the Finalized Field Logs in **Appendix A2**.

The estimated thickness range of each geologic unit is as follows:

Table 5. Summary of Geology

	Geologic Unit	Range Depth (m)
Surface	Asphalt Pavement	0.00 to 0.09
Fill Strata	Grass	0.00 to 0.03
	Clayey Silt Fill	0.08 to 4.57
	Gravel or Sand Fill	0.08 to 1.58
	Sandy Silt Fill	0.88 to 3.88
	Silty Clay Fill	1.58 to 3.89
Till Strata	Clayey Silt Till (trace gravel and cobbles)	3.89 to 4.69
	Sandy Silt Till (trace gravel, cobbles, boulders)	3.18 to 9.99
Bedrock	Not encountered, based on nearby studies, bedrock is expected to be ~100 m below ground elevation	

The soil across the property is considered to be medium-fine textured for the purpose of this ESA.

5.2 Ground Water: Elevations and Flow Direction

Ground water levels were measured in the monitoring wells on December 14, 2023, using a Solinst Interface Probe. Ground water levels and measured elevations are presented on the borehole logs and are summarized below:

Table 6. Summary of Ground Water Conditions

Monitoring Well ID	Date	Ground Surface Elevation (mAMSL)	Depth to GW (mbgs)	GW Elevation (mAMSL)	Observations
BH/MW23-1	12/14/23	92.38	5.94	86.44	None
BH/MW23-2	12/14/23	92.17	8.27	83.90	None
BH/MW23-3	12/14/23	91.53	7.73	83.80	None
BH/MW23-4	12/14/23	91.18	6.12	85.06	None
BH/MW23-5	12/14/23	92.55	6.10	86.45	None
MW23-6	12/14/23	92.54	8.39	84.15	None

Monitoring Well ID	Date	Ground Surface Elevation (mAMSL)	Depth to GW (mbgs)	GW Elevation (mAMSL)	Observations
MW23-7	12/14/23	92.40	-	-	Dry

The results of the ground water monitoring indicated that the primary near surface water table resides within the sandy silt native (till) layer.

As summarized in **Table 8.1.3**, no free-product was observed in any of the monitoring wells monitored on the Phase Two Property.

Based on the overburden ground water elevations, the ground water is interpreted to generally flow across the Site in a southwesterly direction. The ground water elevations and interpreted flow direction is presented in **Figure 8.2.3**.

Temporal variability in the ground water flow direction could not be assessed during this Phase Two investigation since ground water elevations were obtained during two (2) field visits in Winter 2023 and no historical ground water data is available.

5.3 Ground water Hydraulic Gradients

The horizontal hydraulic gradient was estimated for the water table based on the December 14, 2023 ground water elevations.

The horizontal hydraulic gradient is calculated using the following equation:

$i = \Delta h/\Delta s$

Where,

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

The following horizontal hydraulic gradient calculations using ground water monitoring data across the site revealed lower hydraulic gradients within the upper till unit on the Phase Two Property:

		Horizontal Hydraulic Gradient in Native (Till) Unit (m/m)
Horizontal	Average	0.009
	Maximum	0.123
	Minimum	0.007

It should be noted that vertical hydraulic gradients were not evaluated for the Site and ground water impacts were not vertically distributed at the depths investigated at the Phase Two Property.

The hydraulic conductivity of the Sandy Silt Till unit was derived by using Puckett's formula, which uses the percentage of clay or percentage of the sample finer than 0.002 mm by weight (refer to laboratory grain size analyses provided in **Appendix A3**). Based on grain size analysis testing, the hydraulic conductivity of the native till is on the order of $5.54x10^{-7}$ m/s. Therefore, the soil's ability to transmit water across the site (in the native till materials) is slow and verifies that the potential for vertical migration of contamination is limited on the Phase Two Property. Furthermore, a hydraulic conductivity of $5.54x10^{-8}$ m/s is consistent with an unconsolidated deposit of glacial till with silt and loess (Freeze and Cherry, 1979) and represents a moderately impermeable aquitard unit.

5.4 Fine-Medium Soil Texture

Fine-medium soil texture was used for this investigation, as soil grain size analyses conducted by ALS Environmental on one (1) soil sample collected from the native till unit (BH23-1), revealed medium-fine loam (a mixture of sand, silt, and clay) till. Grain size analysis for this sample revealed 32.08% silt and 22.1% clay, corresponding to 54.18% of medium to fine textured soil, which is greater than 50%. Therefore, medium to fine texture soil standards are applicable to Site.

5.5 Soil: Field Screening

Sample headspace screening with the PID yielded readings from non-detect to 25 ppm, as shown in the Finalized Field Logs in **Appendix A2**.

These readings and any field observations (staining, odours, etc.) were considered when selecting soil samples for laboratory analyses.

5.6 Soil Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative "worst case" soil samples was based on visual and/or olfactory evidence of impacts, known historical contamination and the presence of potential water bearing zones. The results of the soil sample analyses, and their respective Table 3 SCS, are summarized in **Table Series 8.1.4**.

A total of seventeen (17) soil samples, including five (5) duplicate soil samples were submitted to ALS Environmental, for analysis of various COPCs to investigate the soil and ground water quality related to the aforementioned APECs. These COPC included PHCs, PAHs, VOCs, BTEX, Metals parameters (As, Sb, Se), Organochlorine (OC) Pesticides, pH and Gravimetric Hydrometer & Sieve. One additional soil sample was submitted for Toxicity Characteristic Leaching Procedure Analysis of PHCs, VOCs, PAHs and ICPMS Metals.

Based on current soil sampling results, no exceedances in soil have been identified in comparison with the Table 3 SCS on the Phase Two Property, as shown in **Drawings 4a-e.**

Soil maximum concentration data can also be seen in **Table Series 8.1.7**.

5.7 Ground Water Quality

A total of ten (10) ground water samples, including three (3) duplicate ground water samples and one (1) trip blank sample, were submitted to ALS Environmental, for analysis of various COPCs to investigate the soil and ground water quality related to the aforementioned APECs. On December 14, 2023, ten (10) ground water samples, including three (3) duplicates and one (1) trip blank were collected from monitoring wells BH/MW23-1 – BH/MW23-6 to assess ground water quality at the Site. Ground water samples were not collected from monitoring well BH/MW23-7 due to the well being dry. The results of the ground water sample analyses, and their respective Table 3 SCS, are summarized in **Table Series 8.1.5**.

No evidence of free product (i.e. visible film or sheen), or odour was observed during well purging and ground water sampling from the newly installed wells and existing wells. Ground water samples that were analyzed for metal parameters were field filtered at the time of collection.

The samples collected were analysed for one or more of the COPCs, including PHCs, PAHs, VOCs, BTEX, Metals parameters (As, Sb, Se), and Organochlorine (OC) Pesticides.

Based on current ground water sampling results, no exceedances in ground water have been identified in comparison with the Table 3 SCS on the Phase Two Property, as shown in **Drawings 5a-e.**

Ground water maximum concentration data can also be seen in **Table Series 8.1.7**.

5.8 Sediment Quality

Sediment sampling was not part of this investigation, as previously discussed in *Section 4.8* and **Table 8.1.6**.

5.9 Quality Assurance and Quality Control Results

The QA/QC samples for this Phase Two ESA investigation included field duplicates for soil and ground water, and a trip blank for QA/QC purposes. The trip blank was submitted with ground water samples for analysis of VOCs.

The purpose of the duplicate samples is to measure the precision or reproducibility of the field and laboratory methodology used in the collection and analysis of the samples. The precision is evaluated in terms of the relative percent difference (RPD). The RPDs of the primary and duplicate samples were not calculated in situations where the concentrations of both primary and duplicate samples were at least 5 times less than the laboratory Reporting Detection Limits (RDLs) for the parameters analyzed.

Laboratory quality control limits for duplicate, method blank, method blank spike, matrix spike and surrogate recoveries were within the acceptable limits.

No tested parameters were detected in the trip blank.

All of the samples were handled in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (Analytical Protocol) with respect to preservation methods, storage requirements, or container type without any exception. Holding times were met for all samples.

The RPDs for all remaining reported concentrations were not calculated considering that the results were below the laboratory minimum detection limits or less than 5 times of the method detection limit in both samples. No other QA/QC concerns were noted.

Based on the review of QA/QC sample results of soil and ground water, it is certified that:

- All Certificates of Analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47 (3);
- A Certificate of Analysis report has been received for each sample submitted for analysis; and
- All Certificates of Analysis or analytical reports received have been included in full in **Appendix A3** of this Phase Two ESA report.

ALS has certified that the analytical methods and data meet the requirements of the Analytical Protocol and that holding times were met for all samples.

Laboratory quality control limits for duplicate, method blank, method blank spike, matrix spike and surrogate recoveries were within the acceptable limits.

The sampling program was carried out in accordance with the SAP. All requirements of the Analytical Protocol were met.

In summary, decision making was not affected by the quality of the data obtained and the overall objectives of the assessment were met.

5.10 Phase Two Conceptual Site Model

Section i. A description and assessment of the Phase Two Property:

The Phase Two Property comprises a 1,436 m^2, single storey commercial/light industrial building which comprises three (3) units. Unit 1 is vacant and was most recently leased by a kitchen renovation company, Unit 2 is leased by Firearms Outlets Canada, a gun wholesaler, and Unit 3 is leased by Wraptors Inc., a vehicle detailing company. Historically, the Phase Two Property was first developed in the early 1990s with the current building. Tenants of the building have included a home renovations business (2022-2023), All-Canadian Tax Service (2021), Bell Mobility (2000), Children's Wish Foundation (2012-2017), Eastway Management Inc (2012-2021), Excell Communications (2000-2017), Gilson Construction Ltd. (1991), Heart and Stroke Foundation of Ontario (2000), Mak Boat Sales (2012-2017), National Bank of Canada Ajax (1991), Novanet Communications (1995-2021), Pickering Audio Visual (2000-2021), Positive Changes Hypnosis (2012), Stationers Marketing of Canada Inc. (1995), Road Lanes Publishing (2021), T L P General Contractors Ltd (1991), Trenway Communications Services Ltd (1995), and UDI Office Centre Canada Ltd (2000).

A. Potentially Contaminating Activities (PCAs)	There are twenty-five (25) PCAs within the Phase One Study Area.		
	PCA 1 (Item #33)	Off-Site – 695 Westney Road South	Laser Stripping Facility
	PCA 2 (Item #40)	Off-Site – 695 Westney Road South	Former Pesticide Supply Facility
	PCA 3 (Item #50)	Off-Site – 695 Westney Road South	Car Wash Chemical Manufacturing Facility
	PCA 4 (Item #8)	Off-Site – 700 Finley Avenue	Chemical Manufacturing Facility
	PCA 5 (Item #10)	Off-Site – 700 Finley Avenue	Automotive Detailing Facility
	PCA 6 (Item #28)	Off-Site – 700 Finley Avenue	Former Tank Facility
	PCA 7 (Item #31)	Off-Site – 700 Finley Avenue	Former Printing Facility
	PCA 8 (Item #34)	Off-Site – 700 Finley Avenue	Metal Fabrication Facility
	PCA 9 (Item #43)	Off-Site – 700 Finley Avenue	Plastics Manufacturing Facility
	PCA 10 (Item #52)	Off-Site – 700 Finley Avenue	Automotive Repair Garage
	PCA 11 (Item #33)	Off-Site – 729 Finley Avenue	Former Metal Treatment Facility
	PCA 12 (Item #34)	Off-Site – 729 Finley Avenue	Metal Fabrication Facility
	PCA 13 (Item #52)	Off-Site – 725 Finley Avenue	Automotive Repair Garage
	PCA 14 (Item #10)	Off-Site – 717 Finley Avenue	Automotive Detailing Facility
	PCA 15 (Item #33)	Off-Site – 717 Finley Avenue	Former Machine Shop
	PCA 16 (Item #39)	Off-Site – 717 Finley Avenue	Coating Operations
	PCA 17 (Item #10)	Off-Site – 711 Finley Avenue	Former Automotive Detailing Facility
	PCA 18 (Item #52)	Off-Site – 711 Finley Avenue	Automotive Repair Garage
	PCA 19 (Item #2)	Off-Site – 695 Finley Avenue	Former Woodworking Facility
	PCA 20 (Item #39)	Off-Site – 695 Finley Avenue	Former Woodworking Facility
	PCA 21 (Item #52)	Off-Site – 695 Finley Avenue	Former Automotive Repair Garage

	PCA 22 (Item #58)	Off-Site – 695 Finley Avenue	Scrap Metal Facility
	PCA 23 (Item #28)	Off-Site – 765 Westney Road South	Former Petroleum Products Supplier
	PCA 24 (Item #33)	Off-Site – 765 Westney Road South	Metal Treatment Facility
	PCA 35 (Item #34)	Off-Site – 765 Westney Road South	Metal Fabrication Facility

Refer to **Drawing 3.**

B. Areas of Potential Environmental Concerns (APECs)

There are eight (8) APECs on the Phase Two Property where PCAs (off-Site) may have affected the soil and/or ground water at the Phase Two Property:

APEC 1	Existing Waste Generator & Car Wash Chemicals Manufacturing, Former Pesticides Supply Facility
APEC 2	Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
APEC 3	Existing Metal Coating and Treatment
APEC 4	Existing Automotive Repair Operations
APEC 5	Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
APEC 6	Automotive Repair Operations
APEC 7	Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
APEC 8	Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

Refer to **Drawing 3**.

COPC associated with the abovementioned APECs include the following:

APEC	COPC	Media Potentially Impacted	Borehole/ Monitoring Well Location Sampled for COPC
1	Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Petroleum Hydrocarbons (PHCs), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine (OC) Pesticides	Soil & Ground Water	BH/MW23-2 to BH/MW23-4
2	Metals, As, Sb, Se, PHCs, Benzene, Toluene, Ethylbenzene, Xylene (BTEX), VOCs	Soil & Ground Water	BH/MW23-1, BH/MW23-2 and BH/MW23-5
3	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water	BH/MW23-5 to MW23-6/7
4	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water	BH/MW23-1, BH/MW23-5 and MW23-6
5	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water	BH/MW23-1, BH/MW23-5 and MW23-6
6	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Ground Water	BH/MW23-1, BH/MW23-5 and MW23-6
7	PHCs, BTEX, VOCs, Metals, As, Sb, Se	Ground Water	BH/MW23-1, BH/MW23-5 and MW23-6
8	Metals, As, Sb, Se, PHCs, BTEX, VOCs, PAHs	Ground Water	BH/MW23-5 to MW23-6/7

Soil samples associated with APEC 1 were collected at depths between ground surface and 5.33 mbgs and deeper than 6 mbgs in ground water in relation to the potential impacts from the adjacent PCAs to the west.

Soil samples associated with APEC 2 were collected at depths between ground surface and 5.33 mbgs and deeper than 5 mbgs in ground water in relation to potential impacts from the adjacent PCAs to the north.

	Refer to **Cross-Section A-A' and B-B'**.
C. Any subsurface structures and utilities on, in, or under the Phase Two Property	Subsurface utilities identified on, in, or under the Phase Two Property include: • Sanitary sewer, storm sewer, and municipal water service; and • Enbridge Gas, Elexicon Energy West, Bell Canada, Rogers, Cogeco, and Zayo Canada Fibre. Refer to **Drawing 2**. Site-wide, subsurface structures and utilities are generally installed above the ground water table at the site.

Section ii. A description of the physical setting of the Phase Two Property:

The Phase Two Property is a 0.66-hectare, square shaped, parcel of land located on the north side of Westney Road South, west of the intersection with Finley Avenue in Ajax, Ontario. Refer to **Drawing 2.**

A. Stratigraphy from ground surface to the deepest aquifer or aquitard investigated

The observed soil stratigraphy comprised:

	Geologic Unit	Depth Range (m)
Surface	Asphalt Pavement	0.00 to 0.09
	Grass	0.00 to 0.03
Fill Strata	Clayey Silt Fill	0.08 to 4.57
	Gravel or Sand Fill	0.08 to 1.58
	Sandy Silt Fill	0.88 to 3.88
	Silty Clay Fill	1.58 to 3.89
Till Strata	Clayey Silt Till (trace gravel and cobbles)	3.89 to 4.69
	Sandy Silt Till (trace gravel, cobbles, boulders)	3.18 to 9.99
Bedrock	Not encountered, based on nearby studies, bedrock is expected to be ~100 m below ground elevation Not Encountered.	

Fill strata was identified between 0.083 and 3.89 m below existing grade; however, no evidence of any man-made materials (i.e., waste, debris, concrete, etc.) was observed in the strata. Therefore, the observed fill material is considered to be re-worked native materials.

Refer to **Cross-Sections A-A' and B-B'**.

One (1) soil sample was collected in the till strata between 6.10 and 6.86 mbg to determine the soil grain size for the Phase Two Property. Soil grain size analyses conducted by the laboratory classified the soil as sand and silt and some clay comprising

<table>
<tr><td></td><td>approximately 54.18% silt and clay. Since more than 50% of the particles were smaller than 75 micrometres in diameter, the assessment criteria corresponding to medium-fine textured soils were selected for comparison in laboratory analytical results.</td></tr>
<tr><td>B. Hydrogeological characteristics</td><td>The results of the ground water monitoring indicated that the primary near surface water table resides within the clayey silt native (till) layer.

Ground water flow is interpreted to flow across the Site in a southwesterly direction. Refer to Figure 8.2.3.

The following horizontal hydraulic gradient calculations using ground water monitoring data across the site revealed lower hydraulic gradients within the upper fill unit on the Phase Two Property:

<table>
<tr><th></th><th></th><th>Native (Till) Unit</th></tr>
<tr><td rowspan="3">Horizontal</td><td>Average</td><td>0.009 m/m</td></tr>
<tr><td>Maximum</td><td>0.123 m/m</td></tr>
<tr><td>Minimum</td><td>0.007 m/m</td></tr>
</table>

Based on grain size analysis testing, the hydraulic conductivity of the native till is 5.54x10-7 m/s. Therefore, the soil’s ability to transmit water across the site (in the native till materials) is slow and verifies that the potential for migration of contamination is limited on the Phase Two Property.</td></tr>
<tr><td>C. Approximate depth of bedrock</td><td>Bedrock was not encountered during this investigation.

Well and Borehole records within the Phase One Study Area indicated that bedrock exists approximately 100 mbgs in the vicinity of the Phase Two Property.</td></tr>
<tr><td>D. Approximate depth to water table</td><td>Ground water was observed between 5.94 to 8.62 mbgs generally in the native (till) unit.</td></tr>
<tr><td>E. Any respect in which Section 35, 41, or 43.1 of the regulation applies to the property</td><td>Section 35, non-potable site condition standards, applies to the Phase Two Property based on the following:

• The property and all properties located within a 250 m radius of the property are supplied by a municipal drinking water system, as defined in the Safe Drinking Water Act, 2002 (shown in Drawing 3);
• The proposed use of the Phase Two Property is commercial use;
• The property is not located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater, and there are no wells on the property or within the Phase One Study Area used for human consumption or agriculture; and,</td></tr>
</table>

	• The local and regional municipality have consented in writing to the application of the non-potable site condition standards. Section 41 and 43.1 do not apply to the Phase Two Property.
F. Areas on, in, or under the Phase Two Property where excess soil is finally placed	Excess soil has not been placed at the Site for backfilling and/or regrading purposes.
G. Approximate locations, if known, of any proposed buildings and other structures	The proposed redevelopment will be commercial. The commercial redevelopment will comprise a two-storey extension of the existing building following the demolition of the north half of the existing structure. The proposed building addition location is shown in **Drawing 2**.

Section iii. Where a contaminant is present on, in, or under the Phase Two Property at a concentration greater than the applicable site condition standard, identification of:

A. Each area where a contaminant is present on, in or under the Phase Two Property	Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property. Refer to **Drawings 4 and 5**.
B. The contaminants associated with each of the areas referred to in subparagraph A	Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property.
C. Each medium in which a contaminant associated with an area referred to in subparagraph is present	Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property.
D. A description and assessment of what is known about each of the areas referred to in subparagraph A	Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property.
E. The distribution, in each of the areas referred to in subparagraph A	Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property. **Figure 8.2.2** shows the profile locations for **Cross-Sections A-A' and B-B'** and depict the soil stratigraphy and samples locations within the Phase Two Property. No areas of soil or ground water contamination were identified during the investigation.

F.	Anything known about the reason for the discharge of the contaminants present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard into the natural environment	See Item A.
G.	Anything known about migration of the contaminants present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard away from any area of potential environmental concern, including the identification of any preferential pathways	This does not apply to the Phase Two Property. No areas of contamination were identified on, in, or under the Phase Two Property during this investigation.
H.	Climatic or meteorological conditions that may have influenced distribution and migration of the contaminants	Meteorological conditions may have influenced the distribution and migration of the contaminants by raising the ground water table. However, the calculated hydraulic conductivity revealed the soil's ability to transmit water across the site (in the native till materials) is slow and verifies that the potential for migration of contamination is limited on the Phase Two Property. Ground water data for the Site does not suggest considerable influence on seasonal ground water levels due to climatic or meteorological conditions.
I.	If applicable, information concerning soil vapour intrusion of the contaminants into building including, (1) relevant construction features of a building, such as a basement or crawl space, (2) building heating, ventilation and air conditioning design and operation, (3) subsurface utilities	Soil vapor samples were not collected as part of this Phase Two ESA.

Section iv. Where contamination is present on, in, or under the Phase Two Property at a concentration greater than the applicable site condition standard, one or more cross-sections:

Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property. Refer to **Cross-Section A-A' and Cross-Section B-B'.**

Section v. For each area where a contaminant is present on, in or under the property at a concentration greater than the applicable site condition standard for the contaminant, a diagram identifying the release mechanisms, contaminant transport pathway, the human and ecological receptors located on, in, or under the Phase Two Property, receptor exposure points, and routes of exposure:

Not applicable, as no contaminants were identified in concentrations greater than the applicable SCS on, in, or under the Phase Two Property. Therefore, no routes of exposure are present. Refer to **Drawing 6.**

Section vi. If a non-standard delineation was conducted in accordance with Section 7.1 of Schedule E as part of preparing the Phase Two ESA:

A non-standard delineation was not conducted as part of this Phase Two ESA

Section vii. If the exemption set out in paragraph 1 or 2 of Section 49.1 is being relied upon:

The exemption set out in paragraph 1 of Section 49.1 of Ontario Regulation 153/04 is being relied upon as part of this Phase Two ESA as road salt for de-icing operations likely occurred during winter months. Therefore, the exemption applies to the Phase Two Property and no further investigation and/or remediation is required. The exemption set out in paragraph 2 of Section 49.1 of Ontario Regulation 153/04 is not being relied upon as part of this Phase Two ESA.

Section viii. If the exemption set out in paragraph 3 of Section 49.1 is being relied upon:

The exemption set out in paragraph 3 of Section 49.1 of Ontario Regulation 153/04 is not being relied upon as part of this Phase Two ESA.

Summary of Remedial Activities:

Results of the Phase Two ESA revealed that all soil and ground water samples collected and analyzed for the COPCs were below the applicable Table 3 SCS. Remedial activities were not required at the Phase Two Property.

6. Conclusions

In comparison with the (2011) *Ontario Soil, Ground Water, and Sediment Standards for Use Under Part XV.1 of the* EPA criteria, the results of the laboratory analyses revealed no exceedances in the soil or ground water within the Phase Two Property in comparison to the Table 3 SCS for industrial/commercial/community (ICC) property uses with fine-medium textured soils in a non-potable ground water condition.

As the soil and ground water analytical results did not exceed the Table 3 SCS on the Phase Two Property, remedial activities are not required.

6.1 Limitations

This report was prepared by Palmer for the account of Firearms Outlets Canada in accordance with the professional services agreement.

The conclusions and recommendations detailed in this report are based upon the information available at the time of preparation of the report. No investigative method eliminates the possibility of obtaining imprecise or incomplete information. Professional judgement was exercised in gathering and analyzing the information obtained and in the formulation of our conclusions and recommendations.

The nature of the sampling works makes it possible that contrary conditions may be identified in locations which were not sampled. However, it does suggest that the conditions will be localized and not extensive. The soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations made during drilling and therefore should not be interpreted as exact planes of geological change.

The disclosure of any information contained in this report is the sole responsibility of the intended recipient. The material in it reflects Palmer's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Palmer accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This limitations statement is considered part of this report.

Unless stated otherwise in this report, provided that the report is still reliable, and less than 18 months old, Palmer may issue a third-party reliance letter to parties, client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on Palmer's report, by such reliance agree to be bound by our proposal and Palmer's standard reliance letter. Palmer's standard reliance letter indicates that in no event shall Palmer be liable for any damages, howsoever arising, relating to third-party reliance on Palmer's report. No reliance by any party is permitted without such agreement. This report is not to be given over to any third party for any purpose whatsoever without the written permission of Palmer.

The original of the technology-based document sent herewith has been authenticated and will be retained by Palmer for a minimum of five years. Since the file transmitted is now out of Palmer's control and its integrity can no longer be ensured, no guarantee may be given with regards to any modifications made to this document.

6.2 Signatures and Certification

This report was prepared by Sasha Grabovskyy, B.ES who is currently an Environmental Scientist with Palmer. He has experience in conducting Phase One and Two ESAs at various land use types, in accordance with Ontario Regulation 153/04 and 511/09 and the CSA Z768-01 environmental protocols.

This report was prepared by Sylvia Babiarz, M.Eng,Sc, who is an Environmental Scientist with Palmer and has experience in conducting Phase One and Two ESAs at various land use types, in accordance with Ontario Regulation 153/04 and 511/09 and the CSA Z768-01 environmental protocols.

The report was reviewed by Kalina Naydenova, M.Sc., who is an Environmental Scientist with Palmer. She has over fourteen years' experience conducting numerous Phase One and Two ESAs at various land use types, conducting soil and ground water sampling procedures in accordance with ASTM 1527-13 and ASTM E1903-19, as well as experience with Ontario Regulation 153/04 and 511/09 and the CSA Z768-01 and Z769-00 environmental protocols.

This report was reviewed by Sarah Vlantis, B.Sc., P.Geo (limited), QP_{ESA}, Principal Environmental Scientist and Environment and Construction Team Lead in of Palmer. She has over 14 years' experience conducting Phase One and Two ESAs, soil and ground water sampling, and site remediation in accordance with Ontario Regulation 153/04 and 511/09, the CSA Z768-01 and Z769-00 environmental protocols, the Consulting Engineers of Ontario's Generally Accepted Standards for Environmental Investigations, and the Canadian Mortgage and Housing Corporation (CMHC) environmental site investigation procedures for mortgage loan insurance. The aforementioned ESAs have covered all land use types across Canada. Sarah also has numerous years of experience in preparing and filing Record of Site Conditions (RSCs) with the MECP. Sarah also has experience conducting Excess Soil Reuse Planning assessments and soil management in accordance with Ontario Regulation 406/19. Sarah is a Professional Geoscientist (P.Geo. (limited)) and is a Qualified Person (QP) under O. Reg. 153/04.

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Sarah Vlantis, B.Sc, P.Geo (limited), QP_{ESA}
Principal, Environment & Construction Team Lead

7. References

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  - http://atlas.nrcan.gc.ca/Site/english/toporama/index.html
- Chapman and Putnam, The Physiography of Southern Ontario, 1984;
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- The Ontario Geological Survey, 2003.

8. Tables and Figures

8.1 Tables

8.1.1 Monitoring Well Installation

Monitoring Well ID	Ground Surface Elevation (mAMSL)	Monitoring Well Construction Details	Associated Elevations Below Grade (m)
MW23-1	92.38	50-mm PVC solid riser pipe	0.0 – 4.52
		50-mm PVC slotted intake screen	4.52 – 7.57
MW23-2	92.17	50-mm PVC solid riser pipe	0.0 – 6.14
		50-mm PVC slotted intake screen	6.14 – 9.19
MW23-3	91.53	50-mm PVC solid riser pipe	0.0 – 6.13
		50-mm PVC slotted intake screen	6.13 – 9.18
MW23-4	91.18	50-mm PVC solid riser pipe	0.0 – 4.57
		50-mm PVC slotted intake screen	4.57 – 7.62
MW23-5	92.55	50-mm PVC solid riser pipe	0.0 – 4.57
		50-mm PVC slotted intake screen	4.57 – 7.62
MW23-6	92.54	50-mm PVC solid riser pipe	0.0 – 5.53
		50-mm PVC slotted intake screen	5.53 – 8.58
MW23-7	92.40	50-mm PVC solid riser pipe	0.0 – 5.57
		50-mm PVC slotted intake screen	5.57 – 8.62

8.1.2 Water Levels

Monitoring Well ID	Date	Ground Surface Elevation (mAMSL)	Depth to GW (mbgs)	GW Elevation (mAMSL)
MW23-1	12/14/23	92.38	5.94	86.44
MW23-2	12/14/23	92.17	8.27	83.90
MW23-3	12/14/23	91.53	7.73	83.80
MW23-4	12/14/23	91.18	6.12	85.06
MW23-5	12/14/23	92.55	6.10	86.45
MW23-6	12/14/23	92.54	8.39	84.15
MW23-7	12/14/23	92.40	-	-

8.1.3 LNAPLs and DNAPLs

No light or dense non-aqueous phase liquid measurements were detected at the Phase Two Property, as discussed in *Sections 4.7, 5.2*, and *5.7*.

8.1.4 Soil Data

8.1.4.1 PHCs with BTEX

Soil Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

				PHCs					BTEX			
				F1 (C6-C10)	F1 (C6-C10) - BTEX*	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes, Total (Xylene Mixture)
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				65	65	250	2500	6600	0.4	78	19	30
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date									
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	69	<50	<0.005	<0.05	<0.015	<0.05
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	58	<50	<0.005	<0.05	<0.015	<0.05
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05

Notes:

1. --- *In guideline row(s) denotes no criteria for that parameter*
2. --- *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils*
6. * *F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result*

8.1.4.2 VOCs

Soil Analytical Results: Volatile Organic Compounds (VOCs)

Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroform	Dibromochloromethane	1,2-Dichlorobenzene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				28	0.4	18	1.7	0.05	1.5	2.7	0.18	13	8.5
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Sample Location	Sample ID	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	1,2-Dichloropropane	1,3-Dichloropropylene (cis) + (trans)	Ethylbenzene	Ethylene Dibromide	Hexane (n)	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Methyl tert-Butyl Ether (MTBE)	Methylene Chloride	Styrene	1,1,1,2-Tetrachloroethane
		µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011)		12	0.84	25	21	0.05	0.48	37	9.3	0.68	0.21	19	0.05	88	88	210	3.2	2	43	0.11
BH23-1	23-1-6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05
BH23-2	23-2-1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05
BH23-3	23-3-7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05
BH23-4	23-4-4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05
BH23-5	23-5-3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05
BH23-5	23-5-3D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05

Sample Location	Sample ID	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl Chloride	Xylenes, Total (Xylene Mixture)	1,4-Dioxane
		µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011)		0.094	21	78	12	0.11	0.61	5.8	0.25	30	1.8
BH23-1	23-1-6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-2	23-2-1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-3	23-3-7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-4	23-4-4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-

Notes:

1.	---	*In guideline row(s) denotes no criteria for that parameter*
2.	---	*In data row(s) denotes parameter not analyzed*
3.	mbgs	*Denotes metres below ground surface*
4.	**BOLD**	*Denotes entries exceed the criteria*
5.		*Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils*

8.1.4.3 Metals

Soil Analytical Results: Metals

				Metals																		
				Antimony	Arsenic	Barium	Beryllium	Boron (total)	Boron (Hot Water Soluble)*	Cadmium	Chromium Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				50	18	670	10	120	2	1.9	160	100	300	120	40	340	5.5	50	---	3.3	33	86	340
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																				
BH23-1	23-1-4	2.29 - 3.05	28-Nov-23	<0.10	2.38	41.1	0.32	5.4	-	0.069	11.9	5.62	10.5	6.03	0.5	12.5	<0.20	<0.10	-	0.165	0.488	20.4	26.2
BH23-2	23-2-4	2.29 - 3.05	28-Nov-23	<0.10	2.44	44.1	0.29	<5.0	-	0.067	11.7	6.96	12	6.48	0.49	13.7	<0.20	<0.10	-	0.163	0.48	20.1	26.7
BH23-2	23-2-4D	2.29 - 3.05	28-Nov-23	<0.10	2.62	48	0.29	5.1	-	0.071	13.2	7.7	11.9	6.62	0.55	16.2	<0.20	<0.10	-	0.2	0.523	22.3	28
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.10	2.19	61	0.29	6	-	0.085	12.2	5.39	9.76	5.52	0.32	11.5	<0.20	<0.10	-	0.132	0.485	22.5	27.9
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.10	2.63	60.1	0.3	6.6	-	0.078	12	7.07	10	6.63	0.53	16	<0.20	<0.10	-	0.178	0.589	22.1	28.5
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.10	2.89	76.4	0.33	6.7	-	0.08	14	8.41	11.8	9.09	0.82	19.9	<0.20	<0.10	-	0.265	0.572	22.6	27.7

Notes:

1. --- *In guideline row(s) denotes no criteria for that parameter*
2. --- *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils*
6. * *Denotes the boron standards are for hot water soluble extract for all surface soils. For subsurface soils the standards are for total boron (mixed strong acid digest), as ecological criteria are not considered*

8.1.4.4 PAHs

Soil Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

				PAHs																	
				Methylnaphthalenes, 2-(1-)***	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				85	96	0.17	0.74	0.96	0.3	0.96	9.6	0.96	9.6	0.1	9.6	69	0.95	28	16	96
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																		
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<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
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<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
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<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
BH23-4	23-4-4D	2.29 - 3.05	28-Nov-23	<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

Notes:

1. --- *In guideline row(s) denotes no criteria for that parameter*
2. --- *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils*
6. *** *The methyl naphthalenes standards are applicable to both 1-methyl naphthalene and 2-methyl naphthalene with the provision that if both are detected the sum of the two must not exceed the standard*

8.1.4.5 OC Pesticides

Soil Analytical Results: Organochlorine (OC) Pesticides

				OC Pesticides														
				DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				4.6	0.65	1.4	0.11	0.05	0.11	0.38	0.04	0.19	0.05	0.66	0.095	0.43	0.063	1.6
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date															
BH23-2	23-2-2	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-2	23-2-2D	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02

Notes:

1. --- *In guideline row(s) denotes no criteria for that parameter*
2. --- *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils*

8.1.5 Ground Water Data

8.1.5.1 PHCs with BTEX

Ground Water Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

			PHCs					BTEX				
			F1 (C6-C10)	F1-BTEX	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			750	750	150	500	500	430	18000	2300	4200	
Sample Location	Sample ID	Sample Date										
MW23-1	23-1	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-2	23-2	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-3	23-3	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-4	23-4	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-5	23-5	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-5	23-5D	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	
MW23-6	23-6	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50	

Notes:

1. - *In guideline row(s) denotes no criteria for that parameter*
2. - *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Uses with Medium-Fine Textured Soils*
6. * *F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result*

8.1.5.2 VOCs

Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

Sample Location	Sample ID	Sample Date	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Dibromochloromethane	Chloroform	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			130000	430	85000	770	56	8.4	630	82000	22	0.83	9600	9600	67	4400
MW23-1	23-1	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-2	23-2	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-3	23-3	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-4	23-4	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5D	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
MW23-6	23-6	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50
-	TRIPBLANK	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50

VOCs

Sample Location	Sample ID	Sample Date	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Methylene Chloride	1,2-Dichloropropane	cis-1,3-Dichloropropylene	trans-1,3-Dichloropropylene	1,3-Dichloropropylene (cis & trans)	Ethylbenzene	n-Hexane	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	MTBE	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			3100	12	17	17	17	5500	140	-	-	45	2300	520	1500000	580000	1400	9100	28	15	17	18000	6700	30
MW23-1	23-1	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-2	23-2	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-3	23-3	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-4	23-4	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5D	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW23-6	23-6	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
-	TRIPBLANK	14-Dec-23	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Sample Location	Sample ID	Sample Date	Trichloroethylene	Trichlorofluoromethane	Vinyl chloride	o-Xylene	m+p-Xylenes	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			17	2500	1.7	4200	7300000	
MW23-1	23-1	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-2	23-2	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-3	23-3	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-4	23-4	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5D	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-6	23-6	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
-	TRIPBLANK	14-Dec-23	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50

Notes:

1.	-	*In guideline row(s) denotes no criteria for that parameter*
2.	-	*In data row(s) denotes parameter not analyzed*
3.	mbgs	*Denotes metres below ground surface*
4.	**BOLD**	*Denotes entries exceed the criteria*
5.		*Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Uses with Medium-Fine Textured Soils*

8.1.5.3 Metals

Ground Water Analytical Results: Metals

			Metals																	
			Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Lead (Pb)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Selenium (Se)-Dissolved	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Thallium (Tl)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			20000	1900	29000	67	45000	2.7	810	66	87	25	9200	490	63	1.5	2300000	510	420	250	1100
Sample Location	Sample ID	Sample Date																			
MW23-1	23-1	14-Dec-23	<1.0	<1.0	332	<0.2	109	0.338	<5.0	23.2	2.61	<0.5	12.5	19	2.74	<0.1	316000	0.12	8.18	<5.0	11.2
MW23-2	23-2	14-Dec-23	1.24	0.68	171	<0.02	160	0.122	<0.5	18.5	3.6	0.055	18.8	11.5	2.66	<0.01	119000	0.06	4.25	0.82	20.7
MW23-3	23-3	14-Dec-23	1.14	0.53	205	<0.02	135	0.0477	<0.5	7.04	1.88	<0.05	18.8	6.62	2.3	<0.01	262000	0.05	4.64	0.91	8.1
MW23-4	23-4	14-Dec-23	1.45	1.04	174	<0.02	180	0.0112	<0.5	0.4	3.53	<0.05	15	0.87	0.88	<0.01	23000	0.03	2.37	1.5	13.1
MW23-5	23-5	14-Dec-23	<0.1	0.63	293	<0.02	71	0.0069	<0.5	1.3	0.39	<0.05	0.373	1.14	0.06	<0.01	26000	<0.01	0.47	0.6	2.7
MW23-5	23-5D	14-Dec-23	<0.1	0.67	295	<0.02	76	0.0073	<0.5	1.35	0.4	<0.05	0.362	1.45	0.05	<0.01	25900	<0.01	0.48	0.6	2.8
MW23-6	23-6	14-Dec-23	<1.0	<1.0	228	<0.2	233	0.189	<5.0	21.6	2.5	<0.5	4.51	36.4	0.94	<0.1	344000	0.15	13.8	<5.0	15.4

Notes:

1. - *In guideline row(s) denotes no criteria for that parameter*
2. - *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Uses with Medium-Fine Textured Soils*

8.1.5.4 PAHs

Ground Water Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

			PAHs																	
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1+2-Methylnaphthalenes*	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			1700	1.8	2.4	4.7	0.81	0.75	0.2	0.4	1	0.52	130	400	0.2	1800	1800	1800	6400	580	68
Sample Location	Sample ID	Sample Date																			
MW23-2	23-2	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3D	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-4	23-4	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-5	23-5	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-6	23-6	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01

Notes:

1. - *In guideline row(s) denotes no criteria for that parameter*
2. - *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Uses with Medium-Fine Textured Soils*
6. * *The methyl naphthalenes standards are applicable to both 1-methyl naphthalene and 2-methyl naphthalene with the provision that if both are detected the sum of the two must not exceed the standard*

8.1.5.5 OC Pesticides

Ground Water Analytical Results: Organochlorine (OC) Pesticides

			OC Pesticides														
			DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			45	20	2.8	8.5	28	0.75	1.5	0.48	2.5	0.048	3.1	4.5	200	1.2	6.5
Sample Location	Sample ID	Sample Date															
MW23-2	23-2	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-3	23-3	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4D	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008

Notes:

1. - *In guideline row(s) denotes no criteria for that parameter*
2. - *In data row(s) denotes parameter not analyzed*
3. mbgs *Denotes metres below ground surface*
4. **BOLD** *Denotes entries exceed the criteria*
5. *Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for All Types of Property Uses with Medium-Fine Textured Soils*

8.1.6 Sediment Data

Sediment sampling was not part of this investigation, as a water body is not on the Phase Two Property.

8.1.7 Soil and Ground Water Maximum Concentration Data

8.1.7.1 Soil Maximum Concentration Data

Parameter	MECP Table 3 ICC SCS (µg/g)	Maximum Soil Concentration (µg/g)	Location of Maximum Concentration	Sample Depth (m)
VOCs - BTEX				
Benzene	0.4	<0.005	All Boreholes	0.0 – 5.33
Ethylbenzene	19	<0.015	All Boreholes	0.0 – 5.33
Toluene	78	<0.05	All Boreholes	0.0 – 5.33
Xylene Mixture	30	<0.05	All Boreholes	0.0 – 5.33
Metals				
Barium	670	76.4	BH23-5	1.52 – 2.29
Beryllium	10	0.33	BH23-5	1.52 – 2.29
Boron (total)	120	6.7	BH23-5	1.52 – 2.29
Cadmium	1.9	0.085	BH23-3	2.29 – 3.05
Chromium Total	160	14	BH23-5	1.52 – 2.29
Cobalt	100	8.41	BH23-5	1.52 – 2.29
Copper	300	12	BH23-2	2.29 – 3.05
Lead	120	9.09	BH23-5	1.52 – 2.29
Molybdenum	40	0.82	BH23-5	1.52 – 2.29
Nickel	340	19.9	BH23-5	1.52 – 2.29
Silver	50	<0.10	All Boreholes	1.52 – 6.86
Thallium	3.3	0.265	BH23-5	1.52 – 2.29
Uranium	33	0.589	BH23-4	2.29 – 3.05
Vanadium	86	22.6	BH23-5	1.52 – 2.29
Zinc	340	28.5	BH23-4	2.29 – 3.05
Metals – Hydride Forming				
Antimony	50	<0.10	All Boreholes	1.52 – 6.86
Arsenic	18	2.89	BH23-5	1.52 – 2.29
Selenium	5.5	<0.20	All Boreholes	1.52 – 6.86
OC Pesticides				
Aldrin	0.11	<0.02	BH23-2 – BH23-4	0.76 – 3.05
Chlordane	0.05	<0.03	BH23-2 – BH23-4	0.76 – 3.05
DDD	4.6	<0.03	BH23-2 – BH23-4	0.76 – 3.05
DDE	0.65	<0.03	BH23-2 – BH23-4	0.76 – 3.05

Parameter	MECP Table 3 ICC SCS (µg/g)	Maximum Soil Concentration (µg/g)	Location of Maximum Concentration	Sample Depth (m)
DDT	1.4	<0.03	BH23-2 – BH23-4	0.76 – 3.05
Dieldrin	0.11	<0.02	BH23-2 – BH23-4	0.76 – 3.05
Endosulfan	0.38	<0.03	BH23-2 – BH23-4	0.76 – 3.05
Endrin	0.04	<0.02	BH23-2 – BH23-4	0.76 – 3.05
Heptachlor	0.19	<0.02	BH23-2 – BH23-4	0.76 – 3.05
Heptachlor Epoxide	0.05	<0.02	BH23-2 – BH23-4	0.76 – 3.05
Hexachlorobenzene	0.66	<0.01	BH23-2 – BH23-4	0.76 – 3.05
Hexachlorobutadiene	0.095	<0.01	BH23-2 – BH23-4	0.76 – 3.05
Hexachlorocyclohexane Gamma-	0.063	<0.01	BH23-2 – BH23-4	0.76 – 3.05
Hexachloroethane	0.43	<0.01	BH23-2 – BH23-4	0.76 – 3.05
Methoxychlor	1.6	<0.02	BH23-2 – BH23-4	0.76 – 3.05
PAHs				
Acenaphthene	96	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Acenaphthylene	0.17	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Anthracene	0.74	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Benz(a)anthracene	0.96	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Benzo(a)pyrene	0.3	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Benzo(b)fluoranthene	0.96	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Benzo(g,h,i)perylene	9.6	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Benzo(k)fluoranthene	0.96	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Chrysene	9.6	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Dibenzo(a,h)anthracene	0.1	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Fluoranthene	9.6	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Fluorene	69	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Indeno(1,2,3-cd)pyrene	0.95	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Methlynaphthalene, 2-(1-)	85	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Naphthalene	28	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Phenanthrene	16	<0.05	BH23-2 – BH23-4	0.0 – 5.33
Pyrene	96	<0.05	BH23-2 – BH23-4	0.0 – 5.33
PHCs				
Petroleum Hydrocarbons F1	65	<5.0	All Boreholes	0.0 – 5.33
Petroleum Hydrocarbons F2	250	19	BH23-1 & BH 23-3	4.57 – 5.33
Petroleum Hydrocarbons F3	2500	69	BH23-1	4.57 – 5.33

Parameter	MECP Table 3 ICC SCS (µg/g)	Maximum Soil Concentration (µg/g)	Location of Maximum Concentration	Sample Depth (m)
Petroleum Hydrocarbons F4	6600	<50	-	-
VOCs – Trihalomethanes				
Bromodichloromethane	18	<0.05	All Boreholes	0.0 – 5.33
Bromoform	1.7	<0.05	All Boreholes	0.0 – 5.33
Dibromochloromethane	13	<0.05	All Boreholes	0.0 – 5.33
VOCs				
Acetone	28	<0.50	All Boreholes	0.0 – 5.33
Bromomethane	0.05	<0.05	All Boreholes	0.0 – 5.33
Carbon Tetrachloride	1.5	<0.05	All Boreholes	0.0 – 5.33
Chlorobenzene	2.7	<0.05	All Boreholes	0.0 – 5.33
Chloroform	0.18	<0.05	All Boreholes	0.0 – 5.33
Dichlorobenzene, 1,2-	8.5	<0.05	All Boreholes	0.0 – 5.33
Dichlorobenzene, 1,3-	12	<0.05	All Boreholes	0.0 – 5.33
Dichlorobenzene, 1,4-	0.84	<0.05	All Boreholes	0.0 – 5.33
Dichlorodifluoromethane	25	<0.05	All Boreholes	0.0 – 5.33
Dichloroethane, 1,1-	21	<0.05	All Boreholes	0.0 – 5.33
Dichloroethane, 1,2-	0.05	<0.05	All Boreholes	0.0 – 5.33
Dichloroethylene, 1,1-	0.48	<0.05	All Boreholes	0.0 – 5.33
Dichloroethylene , 1,2-cis-	37	<0.05	All Boreholes	0.0 – 5.33
Dichloroethylene, 1,2-trans-	9.3	<0.05	All Boreholes	0.0 – 5.33
Dichloropropane, 1,2-	0.68	<0.05	All Boreholes	0.0 – 5.33
Dichloropropene, 1,3-	0.21	<0.05	All Boreholes	0.0 – 5.33
Ethylene Dibromide	0.05	<0.05	All Boreholes	0.0 – 5.33
Hexane (n)	88	<0.05	All Boreholes	0.0 – 5.33
Methyl Ethyl Ketone	88	<0.50	All Boreholes	0.0 – 5.33
Methyl Isobutyl Ketone	210	<0.50	All Boreholes	0.0 – 5.33
Methyl tert-Butyl Ether (MTBE)	3.2	<0.04	All Boreholes	0.0 – 5.33
Methylene Chloride	2	<0.05	All Boreholes	0.0 – 5.33
Styrene	43	<0.05	All Boreholes	0.0 – 5.33
Tetrachloroethane, 1,1,1,2-	0.11	<0.05	All Boreholes	0.0 – 5.33
Tetrachloroethane, 1,1,2,2-	0.094	<0.05	All Boreholes	0.0 – 5.33
Tetrachloroethylene	21	<0.05	All Boreholes	0.0 – 5.33
Trichloroethane, 1,1,1-	12	<0.05	All Boreholes	0.0 – 5.33

Parameter	MECP Table 3 ICC SCS (µg/g)	Maximum Soil Concentration (µg/g)	Location of Maximum Concentration	Sample Depth (m)
Trichloroethane, 1,1,2-	0.11	<0.05	All Boreholes	0.0 – 5.33
Trichloroethylene	0.61	<0.01	All Boreholes	0.0 – 5.33
Trichlorofluoromethane	5.8	<0.05	All Boreholes	0.0 – 5.33
Vinyl Chloride	0.25	<0.02	All Boreholes	0.0 – 5.33

Note:

1. ND represents Non-Detect.
2. Bold entries exceed the Criteria.
3. Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community Property Use with Medium-Fine Textured Soils.

8.1.7.2 Ground Water Maximum Concentration Data

Parameter	MECP Table 3 RPIICC SCS (µg/L)	Maximum Ground Water Concentration (µg/L)	Location of Maximum Concentration
VOCs - BTEX			
Benzene	430	<0.50	All MWs
Ethylbenzene	2300	<0.50	All MWs
Toluene	18000	<0.50	All MWs
Xylene Mixture	4200	<0.50	All MWs
Metals			
Barium	29000	332	
Beryllium	67	<0.2	MW23-1 & MW23-6
Boron (total)	45000	233	MW23-6
Cadmium	2.7	0.338	MW23-1
Chromium Total	810	<5.0	MW23-1 & MW23-6
Cobalt	66	23.2	MW23-1
Copper	87	3.6	MW23-2
Lead	25	<0.5	MW23-1 & MW23-6
Molybdenum	9200	18.8	MW23-2 & MW23-3
Nickel	490	36.4	MW23-6
Silver	1.5	<0.1	MW23-1 & MW23-6
Thallium	510	0.15	MW23-6
Uranium	420	13.8	MW23-6
Vanadium	250	<5.0	MW23-1 & MW23-6
Zinc	1100	20.7	MW23-2
Metals – Hydride Forming			
Antimony	20000	1.45	MW23-4
Arsenic	1900	1.04	MW23-4
Selenium	63	2.74	MW23-1
Na Sodium			
Sodium	2300000	344000	MW23-6
OC Pesticides			

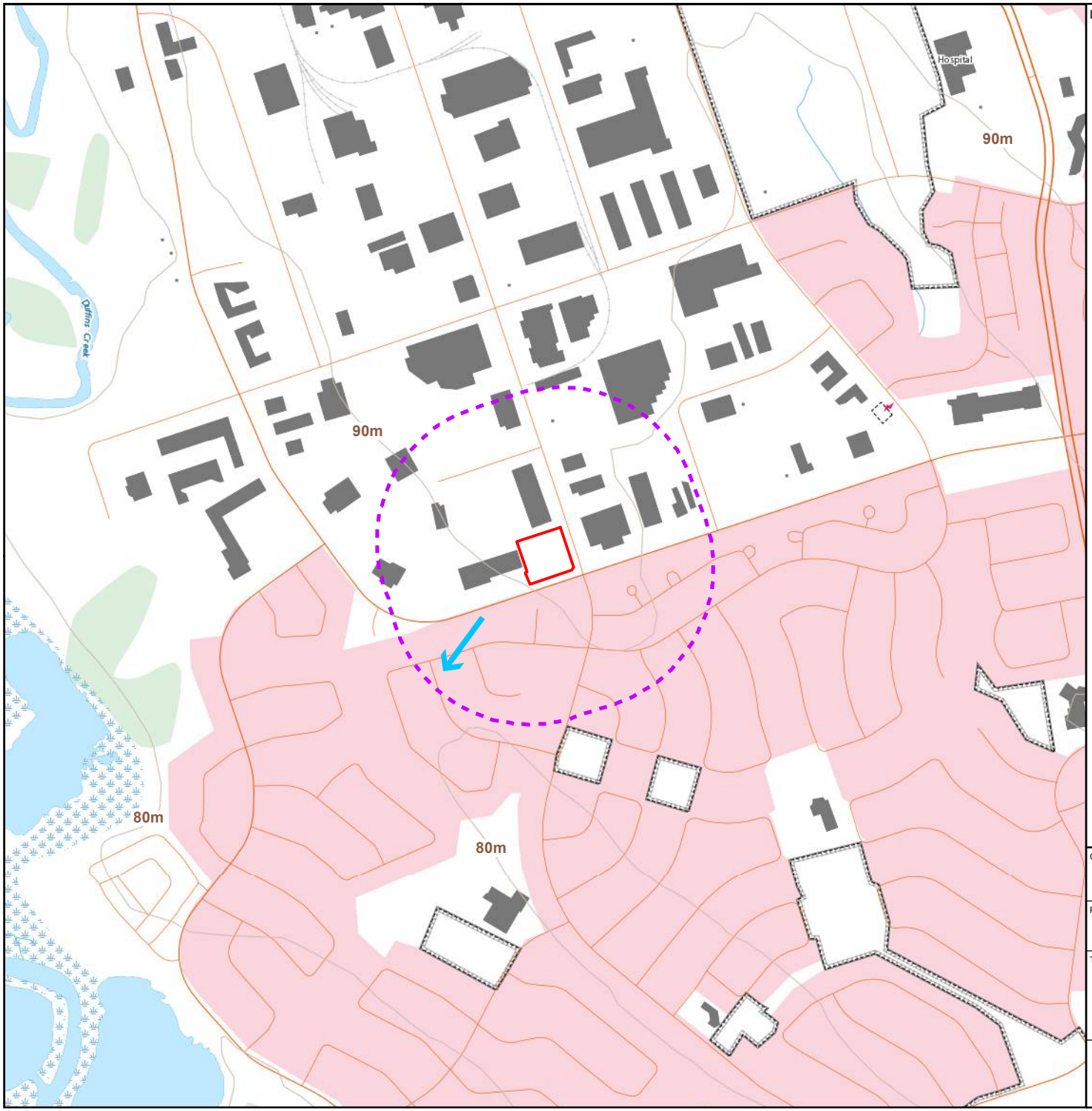
Parameter	MECP Table 3 RPIICC SCS (µg/L)	Maximum Ground Water Concentration (µg/L)	Location of Maximum Concentration
Aldrin	8.5	<0.008	All MWs
Chlordane	28	<0.011	All MWs
DDD	45	<0.006	All MWs
DDE	20	<0.004	All MWs
DDT	2.8	<0.006	All MWs
Dieldrin	0.75	<0.008	All MWs
Endosulfan	1.5	<0.01	All MWs
Endrin	0.48	<0.01	All MWs
Heptachlor	2.5	<0.008	All MWs
Heptachlor Epoxide	0.048	<0.008	All MWs
Hexachlorobenzene	3.1	<0.008	All MWs
Hexachlorobutadiene	4.5	<0.008	All MWs
Hexachlorocyclohexane Gamma-	1.2	<0.008	All MWs
Hexachloroethane	200	<0.008	All MWs
Methoxychlor	6.5	<0.008	All MWs
PAHs			
Acenaphthene	1700	<0.016	All MWs
Acenaphthylene	1.8	<0.01	All MWs
Anthracene	2.4	<0.01	All MWs
Benz(a)anthracene	4.7	<0.01	All MWs
Benzo(a)pyrene	0.81	<0.005	All MWs
Benzo(b)fluoranthene	0.75	<0.01	All MWs
Benzo(g,h,i)perylene	0.2	<0.01	All MWs
Benzo(k)fluoranthene	0.4	<0.01	All MWs
Chrysene	1	<0.01	All MWs
Dibenzo(a,h)anthracene	0.52	<0.005	All MWs
Fluoranthene	130	<0.01	All MWs
Fluorene	400	<0.01	All MWs
Indeno(1,2,3-cd)pyrene	0.2	<0.01	All MWs
Methlynaphthalene, 2-(1-)	1800	<0.015	All MWs
Naphthalene	6400	<0.05	All MWs
Phenanthrene	580	<0.02	All MWs
Pyrene	68	<0.01	All MWs

Parameter	MECP Table 3 RPIICC SCS (µg/L)	Maximum Ground Water Concentration (µg/L)	Location of Maximum Concentration
PHCs			
Petroleum Hydrocarbons F1	750	<25	All MWs
Petroleum Hydrocarbons F2	150	<100	All MWs
Petroleum Hydrocarbons F3	500	<250	All MWs
Petroleum Hydrocarbons F4	500	<250	All MWs
VOCs – Trihalomethanes			
Bromodichloromethane	85000	<0.50	All MWs
Bromoform	770	<0.50	All MWs
Dibromochloromethane	82000	<0.50	All MWs
VOCs			
Acetone	130000	<20	All MWs
Bromomethane	56	<0.50	All MWs
Carbon Tetrachloride	8.4	<0.20	All MWs
Chlorobenzene	630	<0.50	All MWs
Chloroform	22	<0.50	All MWs
Dichlorobenzene, 1,2-	9600	<0.50	All MWs
Dichlorobenzene, 1,3-	9600	<0.50	All MWs
Dichlorobenzene, 1,4-	67	<0.50	All MWs
Dichlorodifluoromethane	4400	<0.50	All MWs
Dichloroethane, 1,1-	3100	<0.50	All MWs
Dichloroethane, 1,2-	12	<0.50	All MWs
Dichloroethylene, 1,1-	17	<0.50	All MWs
Dichloroethylene , 1,2-cis-	17	<0.30	All MWs
Dichloroethylene, 1,2-trans-	17	<0.30	All MWs
Dichloropropane, 1,2-	140	<0.50	All MWs
Dichloropropene, 1,3-	140	<0.50	All MWs
Ethylene Dibromide	0.83	<0.20	All MWs
Hexane (n)	520	<0.50	All MWs
Methyl Ethyl Ketone	1500000	<20	All MWs
Methyl Isobutyl Ketone	580000	<20	All MWs
Methyl tert-Butyl Ether (MTBE)	1400	<0.50	All MWs
Styrene	9100	<0.50	All MWs
Tetrachloroethane, 1,1,1,2-	28	<0.50	All MWs

Parameter	MECP Table 3 RPIICC SCS (µg/L)	Maximum Ground Water Concentration (µg/L)	Location of Maximum Concentration
Tetrachloroethane, 1,1,2,2-	15	<0.50	All MWs
Tetrachloroethylene	17	<0.50	All MWs
Trichloroethane, 1,1,1-	6700	<0.50	All MWs
Trichloroethane, 1,1,2-	30	<0.50	All MWs
Trichloroethylene	17	<0.50	All MWs
Trichlorofluoromethane	2500	<0.50	All MWs
Vinyl Chloride	1.7	<0.50	All MWs

Note:

1. ND represents Non-Detect.
2. Bold entries exceed the Criteria.
3. Criteria is Ontario Regulation 153/04, Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Industrial/Commercial/Community Property Use with All-Textured Soils.



LEGEND

- Phase Two Property
- Phase One Study Area
- Regionally Inferred Ground Water Flow Direction

0 50 100 200 300 400 500

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:10,000
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Basemap:
Toporama web map service

NORTH

CLIENT

Firearms Outlets Canada

PROJECT

725 Westney Rd S, Ajax

TITLE

Areas of Natural Significance and Water Bodies

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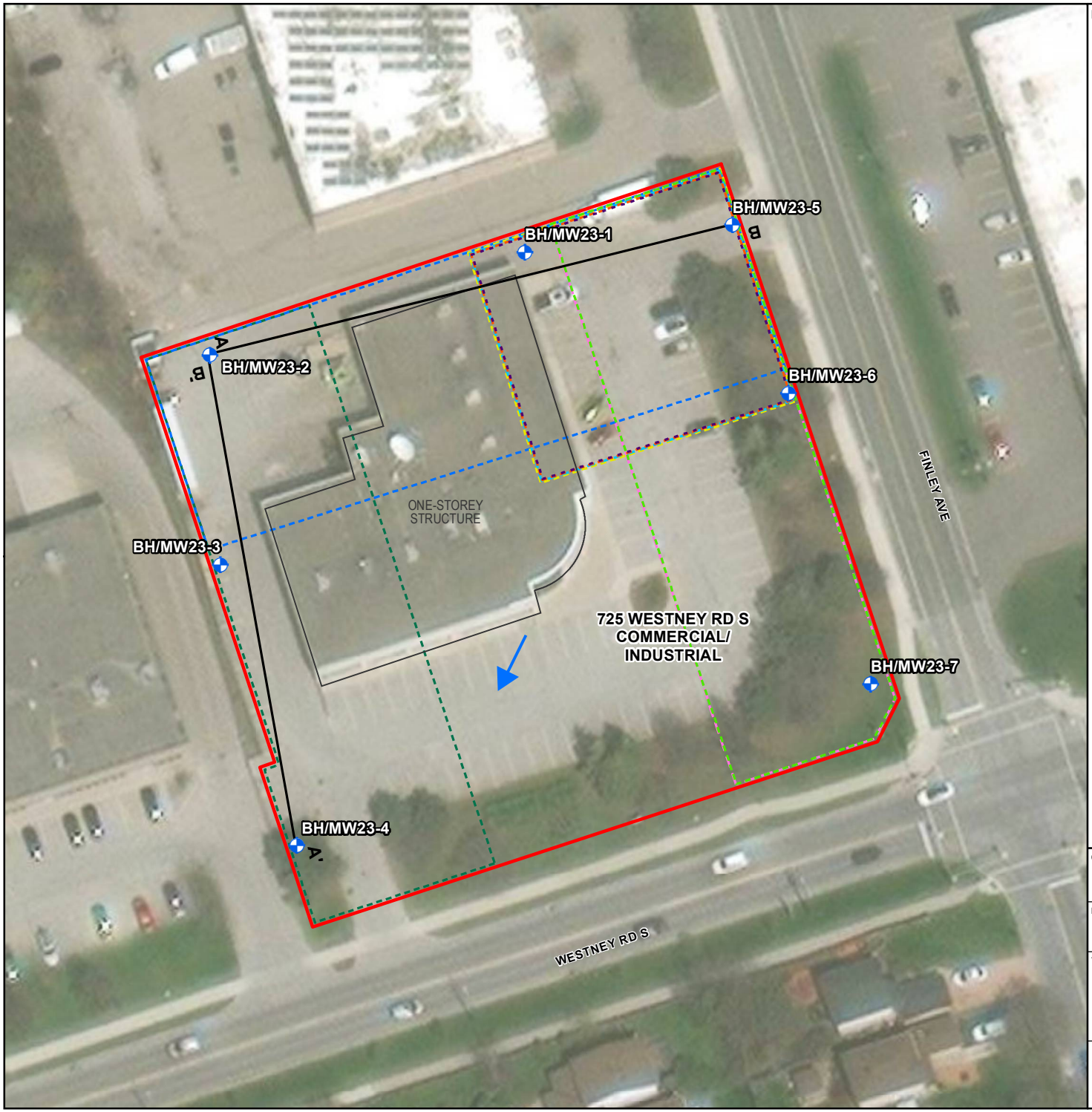
REF. NO. 1904320-MR-121-1

Figure 8.2.1

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\120-PhTwoFig\1904320-MR-121-1 (Fig 8.2.1 - Areas of Natural Significance).mxd



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
- APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
- APEC #3: Existing Metal Coating and Treatment
- APEC #4: Existing Automotive Repair Operations
- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

0 4 8 16 24 32 40
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Property Before Actions Taken to Reduce the Concentration of Contaminants

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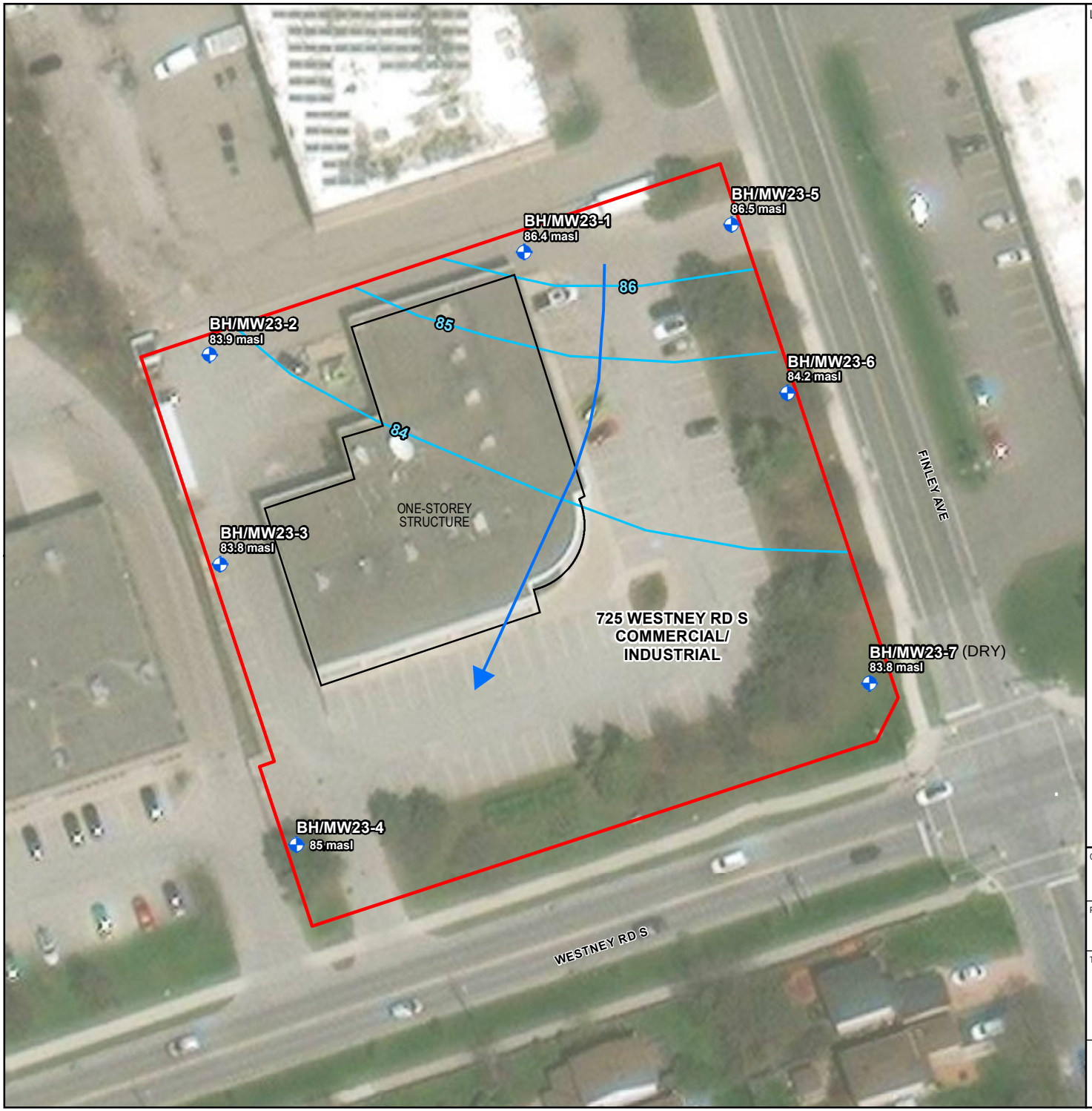
REF. NO. 1904320-MR-122-1

Figure 8.2.2

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\120-PhTwoFig\1904320-MR-122-1 (Fig 8.2.2 - Property Before Actions Taken).mxd



LEGEND

- Borehole/Monitoring Well Location
- Ground Water Elevation Contour (masl)
- Inferred Ground Water Flow Direction
- Phase Two Property

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

CLIENT

Firearms Outlets Canada

PROJECT

725 Westney Rd S, Ajax

TITLE

Interpreted Contours of Ground Water Elevations

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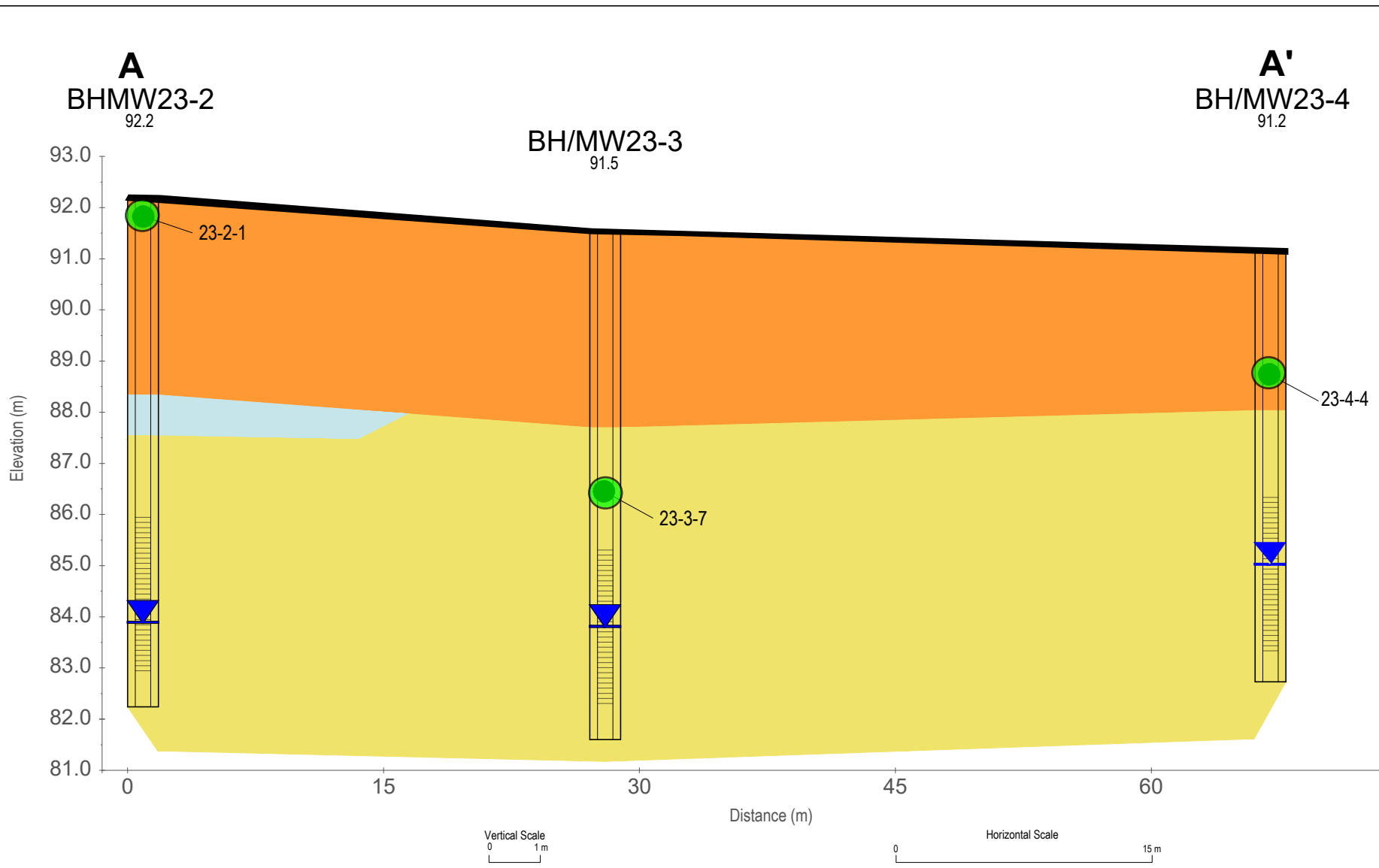
REF. NO. 1904320-MR-123-1

Figure 8.2.3

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\120-PhTwoFig\1904320-MR-123-1 (Fig 8.2.3 - Interpreted Contours of GW).mxd

Soil Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

				PHCs					BTEX			
				F1 (C6-C10)	F1 (C6-C10) - BTEX*	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes, Total (Xylene Mixture)
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				65	65	250	2500	6600	0.4	78	19	30
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date									
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	58	<50	<0.005	<0.05	<0.015	<0.05
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Soil - PHCs/BTEX	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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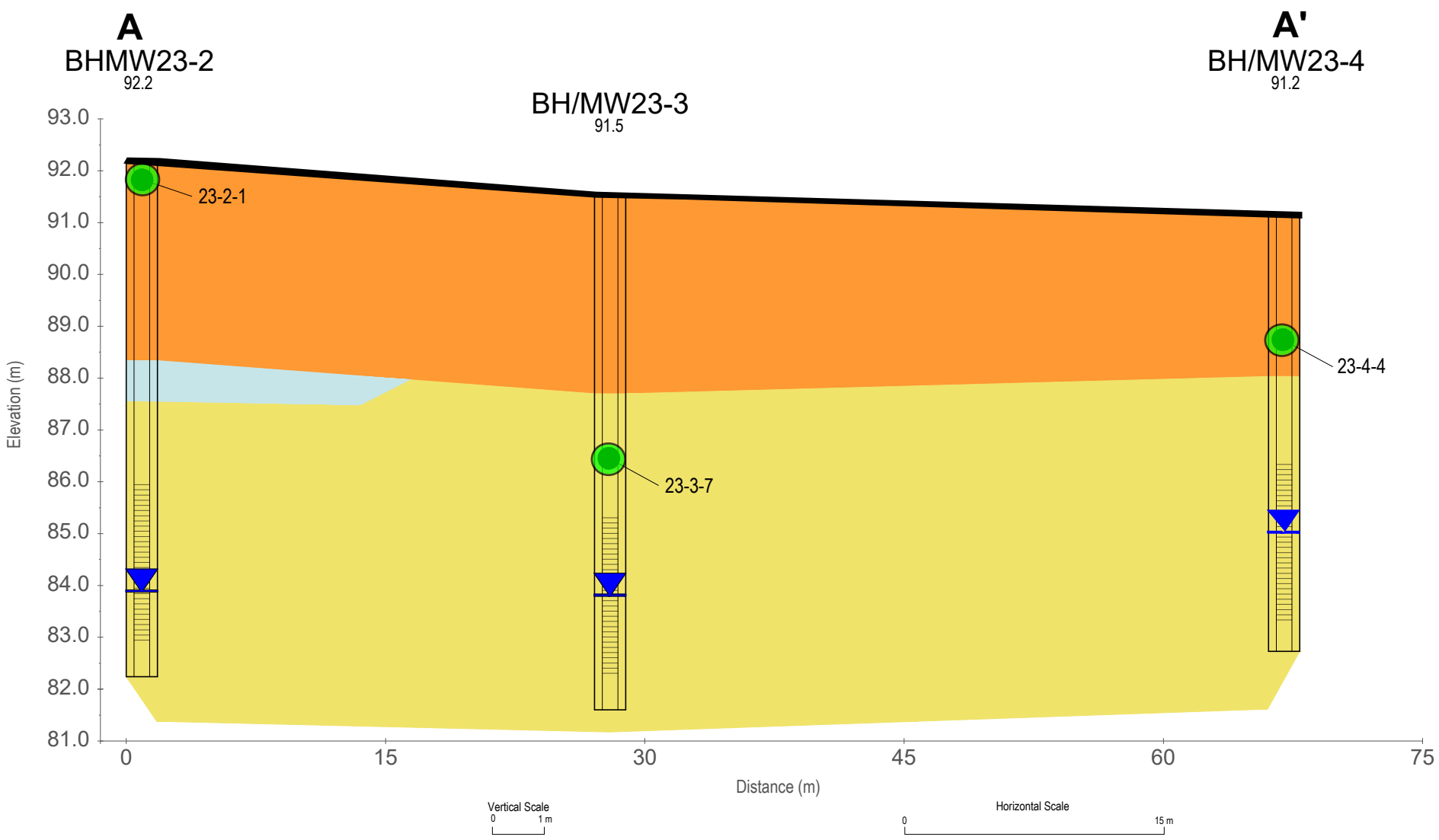
Soil Analytical Results: Volatile Organic Compounds (VOCs)

				VOCs															
				Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroform	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				28	0.4	18	1.7	0.05	1.5	2.7	0.18	13	8.5	12	0.84	25	21	0.05	0.48	37	9.3
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																		
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.50	<0.005	<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
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<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
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.50	<0.005	<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

Soil Analytical Results: Volatile Organic Compounds (VOCs)

				VOCs																	
				1,2-Dichloropropane	1,3-Dichloropropylene (cis) + (trans)	Ethylbenzene	Ethylene Dibromide	Hexane (n)	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Methyl tert-Butyl Ether (MTBE)	Methylene Chloride	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl Chloride	Xylenes, Total (Xylene Mixture)	1,4-Dioxane
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				0.68	0.21	19	0.05	88	88	210	3.2	2	43	0.11	0.094	21	78	12	0.11	0.61	5.8	0.25	30	1.8
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																					
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Soil - VOCs	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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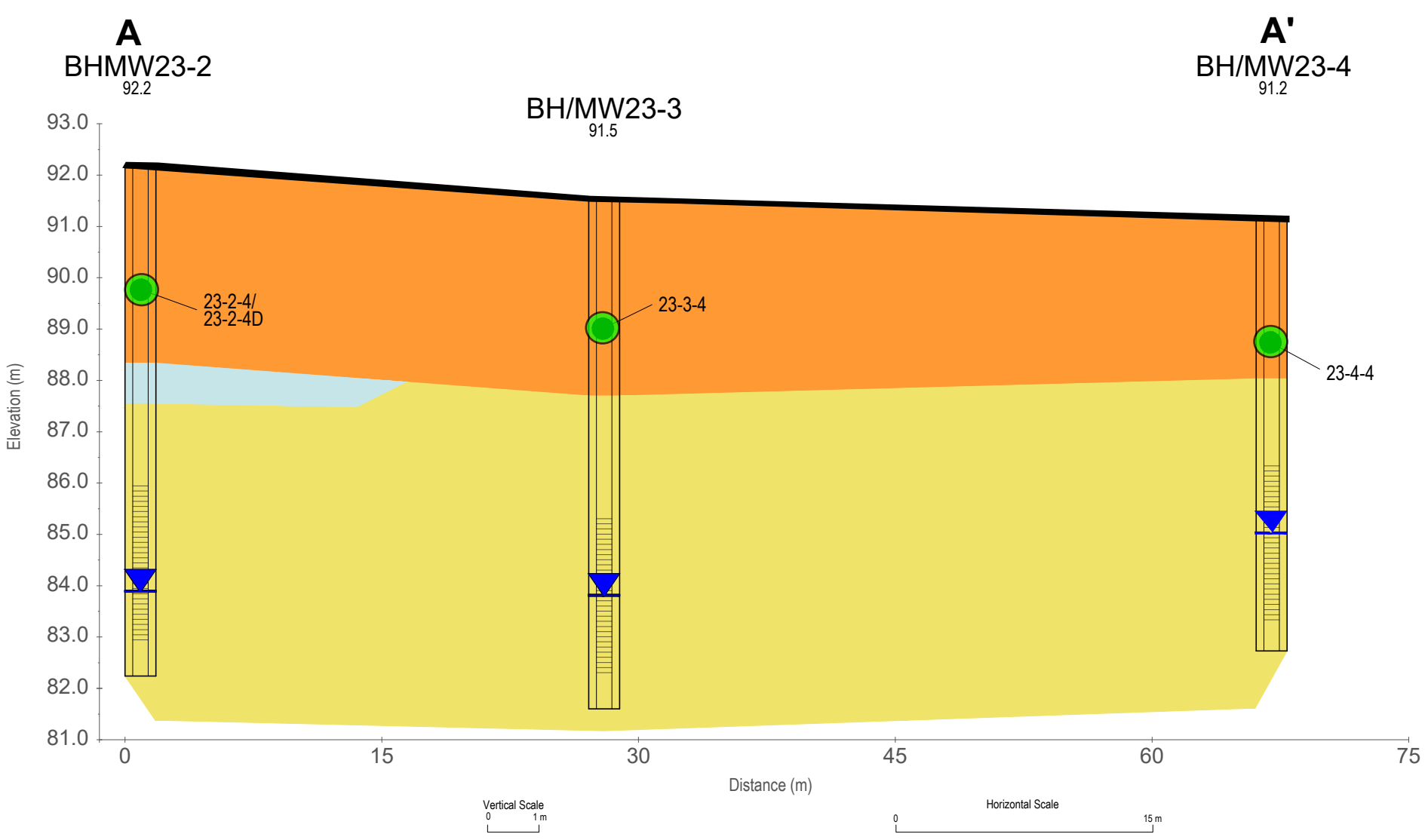
Oakville, ON
L6L 6L7

Soil Analytical Results: Metals

				Metals																	
				Antimony	Arsenic	Barium	Beryllium	Boron (total)	Boron (Hot Water Soluble)*	Cadmium	Chromium Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				50	18	670	10	120	2	1.9	160	100	300	120	40	340	5.5	50	---	3.3	33	86	340
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																				
BH23-2	23-2-4	2.29 - 3.05	28-Nov-23	<0.10	2.44	44.1	0.29	<5.0	-	0.067	11.7	6.96	12	6.48	0.49	13.7	<0.20	<0.10	-	0.163	0.48	20.1	26.7
BH23-2	23-2-4D	2.29 - 3.05	28-Nov-23	<0.10	2.62	48	0.29	5.1	-	0.071	13.2	7.7	11.9	6.62	0.55	16.2	<0.20	<0.10	-	0.2	0.523	22.3	28
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.10	2.19	61	0.29	6	-	0.085	12.2	5.39	9.76	5.52	0.32	11.5	<0.20	<0.10	-	0.132	0.485	22.5	27.9
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.10	2.63	60.1	0.3	6.6	-	0.078	12	7.07	10	6.63	0.53	16	<0.20	<0.10	-	0.178	0.589	22.1	28.5



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Soil - Metals	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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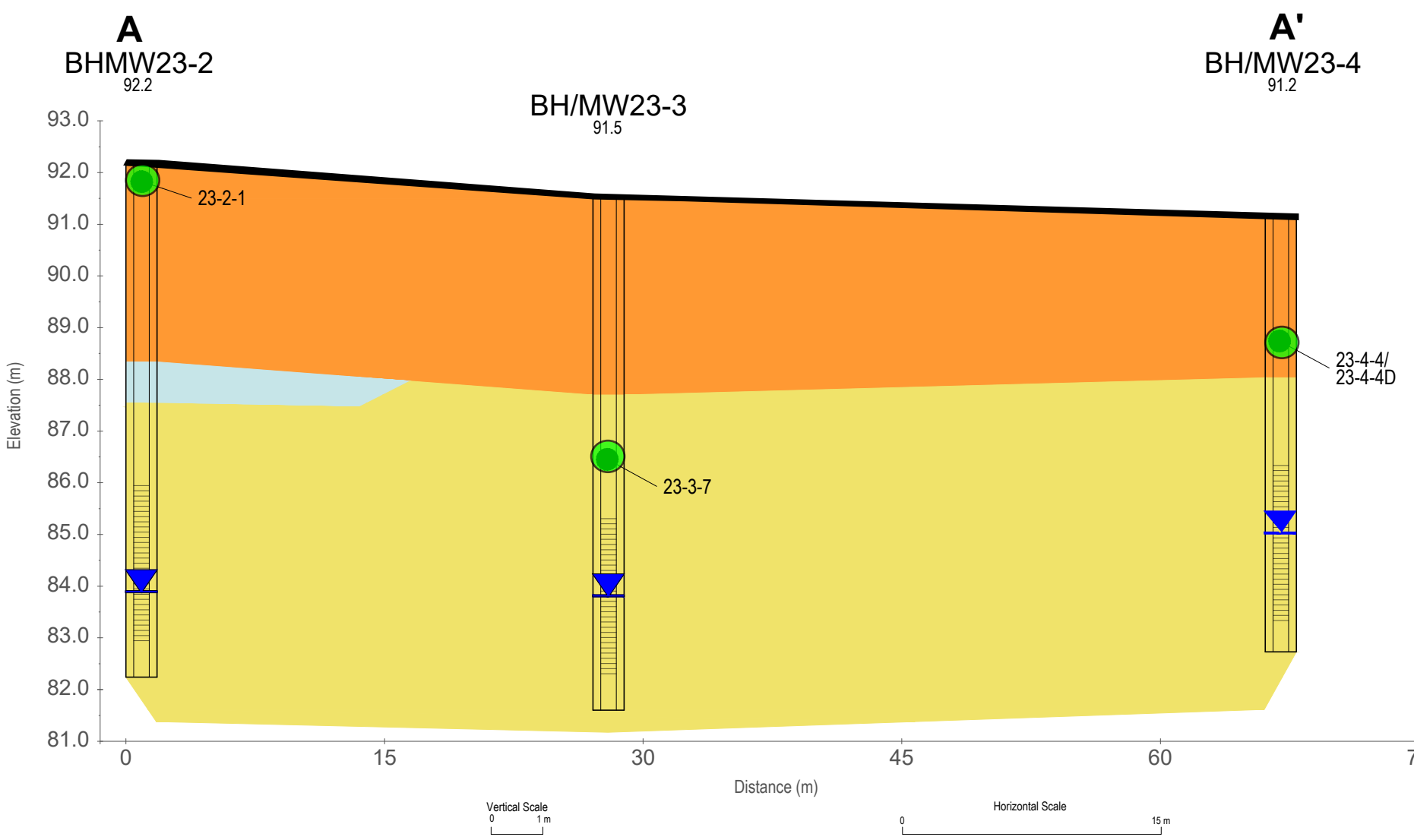
Soil Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

				PAHs																	
				Methylnaphthalenes, 2-(1-)***	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				85	96	0.17	0.74	0.96	0.3	0.96	9.6	0.96	9.6	0.1	9.6	69	0.95	28	16	96
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																		
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<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
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<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
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<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
BH23-4	23-4-4D	2.29 - 3.05	28-Nov-23	<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



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Soil - PAHs	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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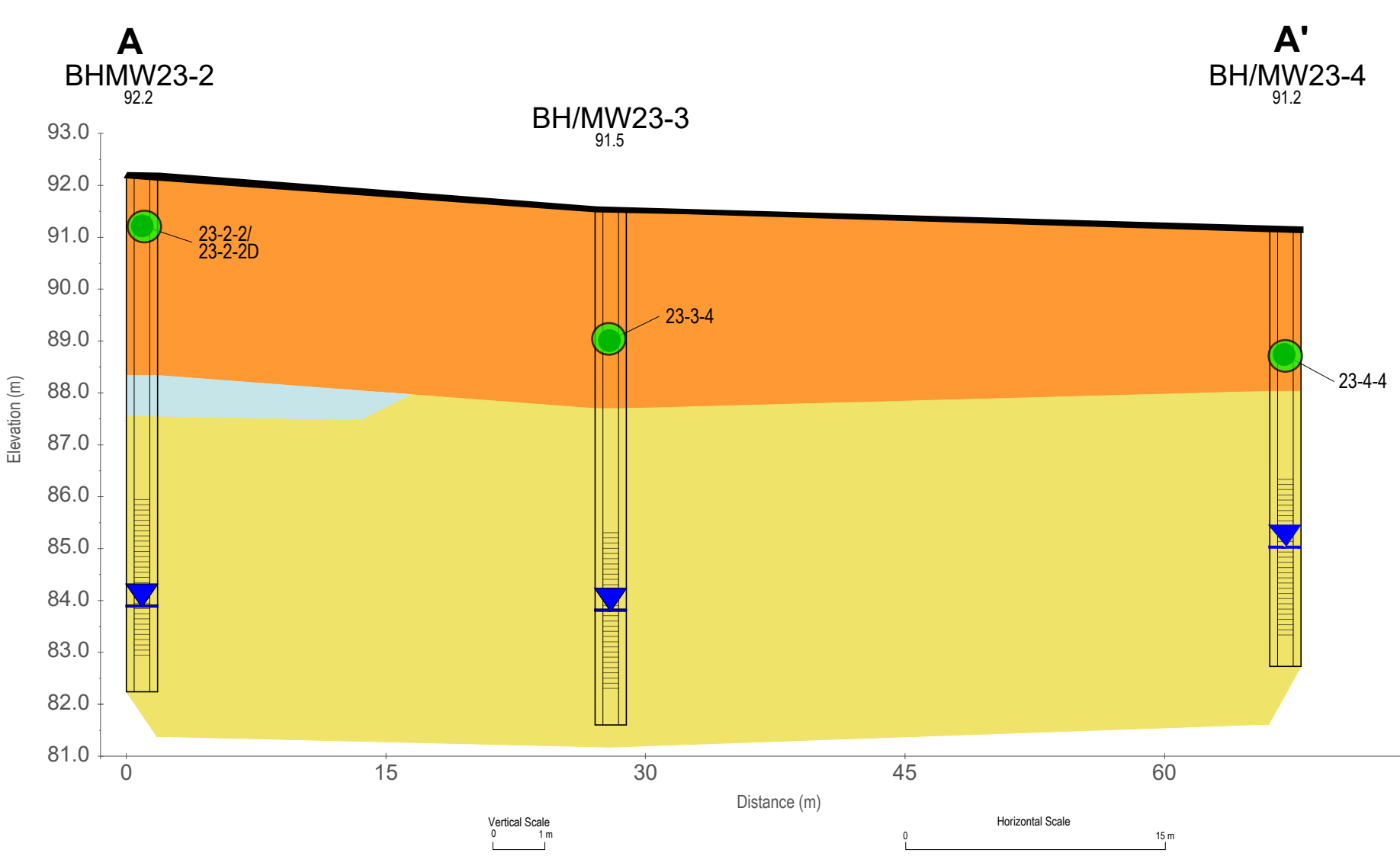
Soil Analytical Results: Organochlorine (OC) Pesticides

				OC Pesticides													
				DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				4.6	0.65	1.4	0.11	0.05	0.11	0.38	0.04	0.19	0.05	0.66	0.095	0.43	0.063	1.6
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date															
BH23-2	23-2-2	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-2	23-2-2D	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Soil - OC Pesticides	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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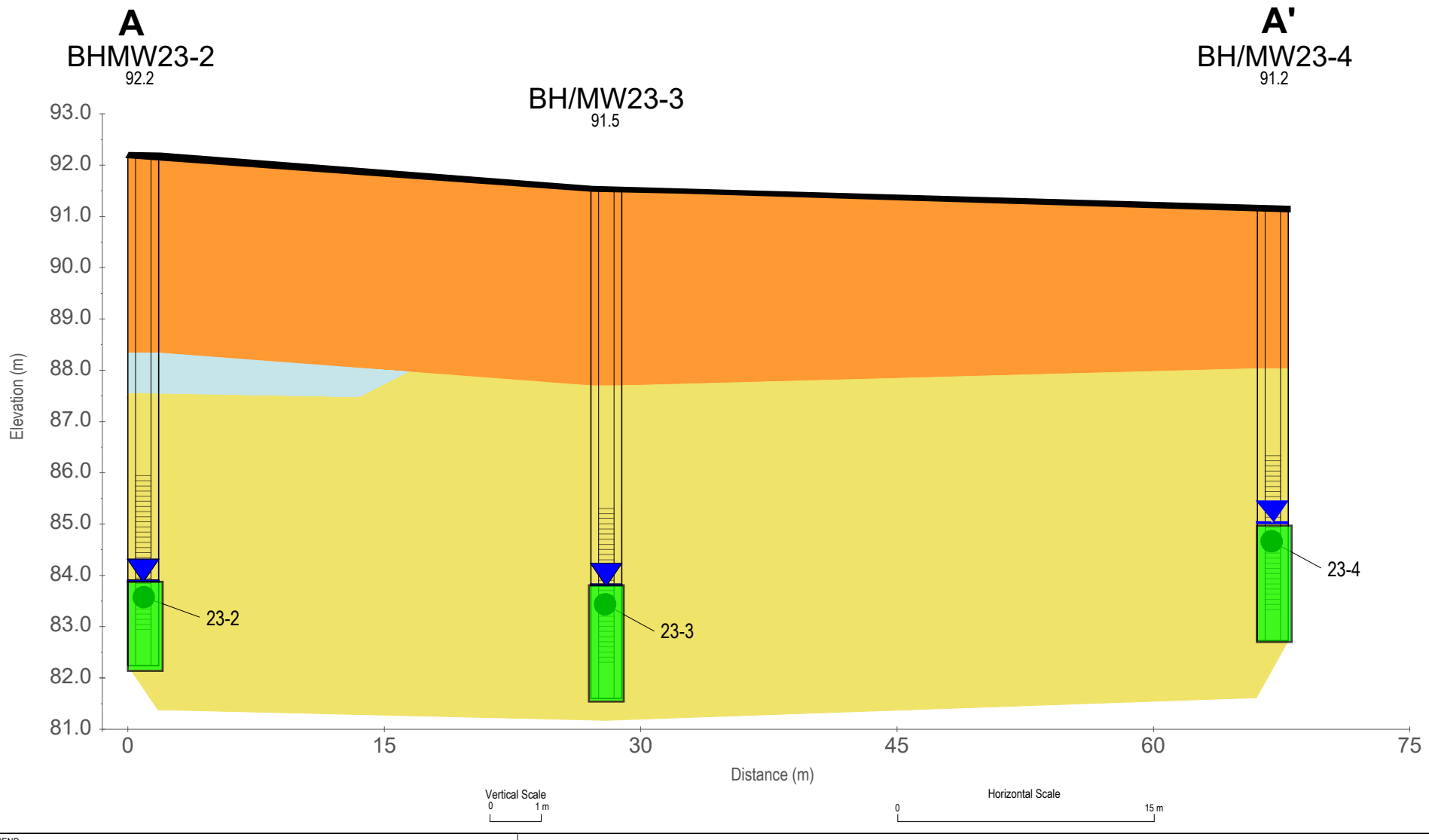
Ground Water Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

			PHCs					BTEX			
			F1 (C6-C10)	F1-BTEX	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			750	750	150	500	500	430	18000	2300	4200
Sample Location	Sample ID	Sample Date									
MW23-2	23-2	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-3	23-3	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-4	23-4	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

X-X-X Sample Location

Ground Water met Table 3 SCS

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Ground Water - PHCs/BTEX	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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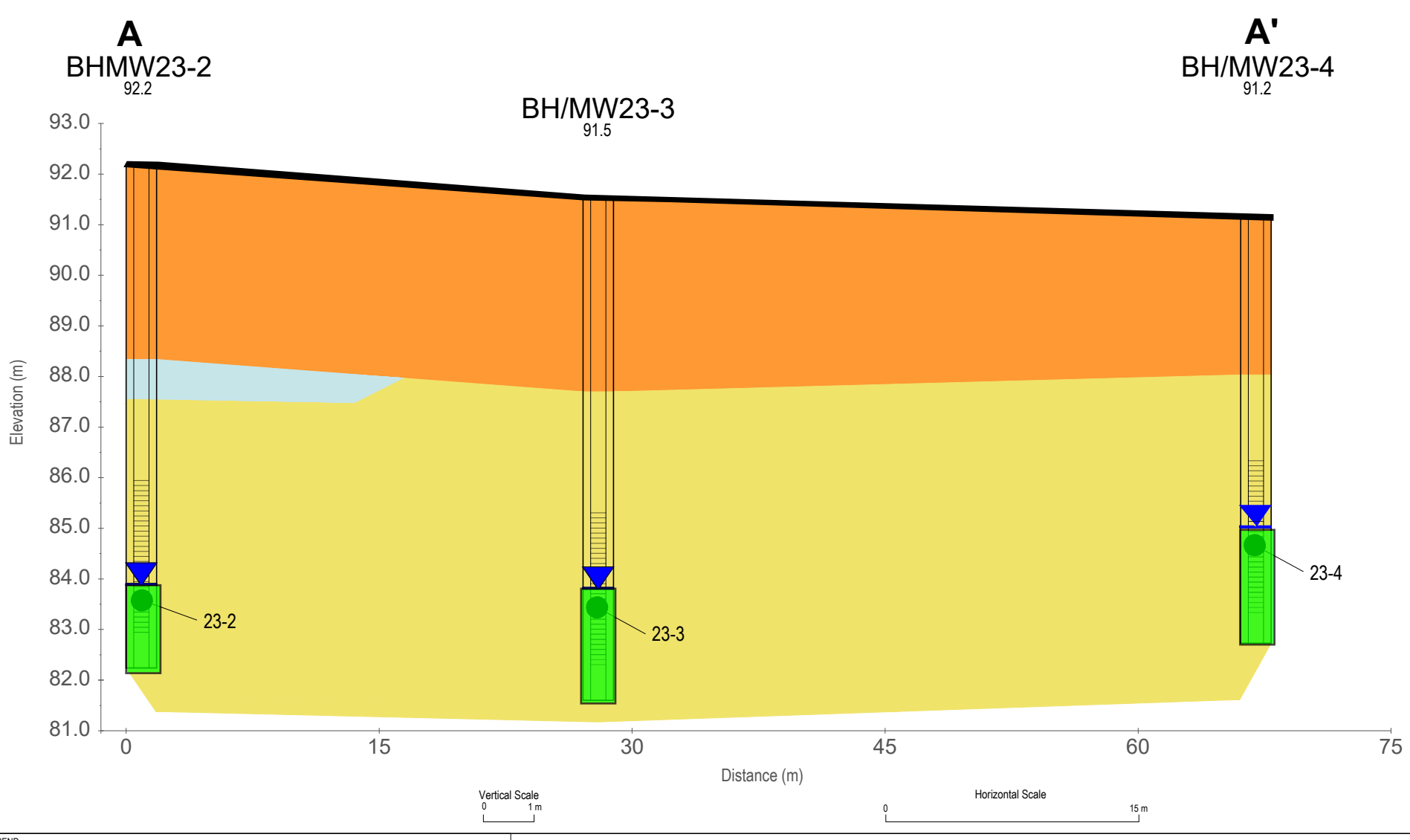
Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																				
			Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Dibromochloromethane	Chloroform	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Methylene Chloride	1,2-Dichloropropane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			130000	430	85000	770	56	8.4	630	82000	22	0.83	9600	9600	67	4400	3100	12	17	17	17	5500	140
Sample Location	Sample ID	Sample Date																					
MW23-2	23-2	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-3	23-3	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-4	23-4	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
-	TRIPBLANK	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50

Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																				
			cis-1,3-Dichloropropylene	trans-1,3-Dichloropropylene	1,3-Dichloropropylene (cis & trans)	Ethylbenzene	n-Hexane	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	MTBE	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl chloride	o-Xylene	m+p-Xylenes	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			-	-	45	2300	520	1500000	580000	1400	9100	28	15	17	18000	6700	30	17	2500	1.7	4200	7300000	
Sample Location	Sample ID	Sample Date																					
MW23-2	23-2	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-3	23-3	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-4	23-4	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
-	TRIPBLANK	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt

Ground Water met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Ground Water - VOCs	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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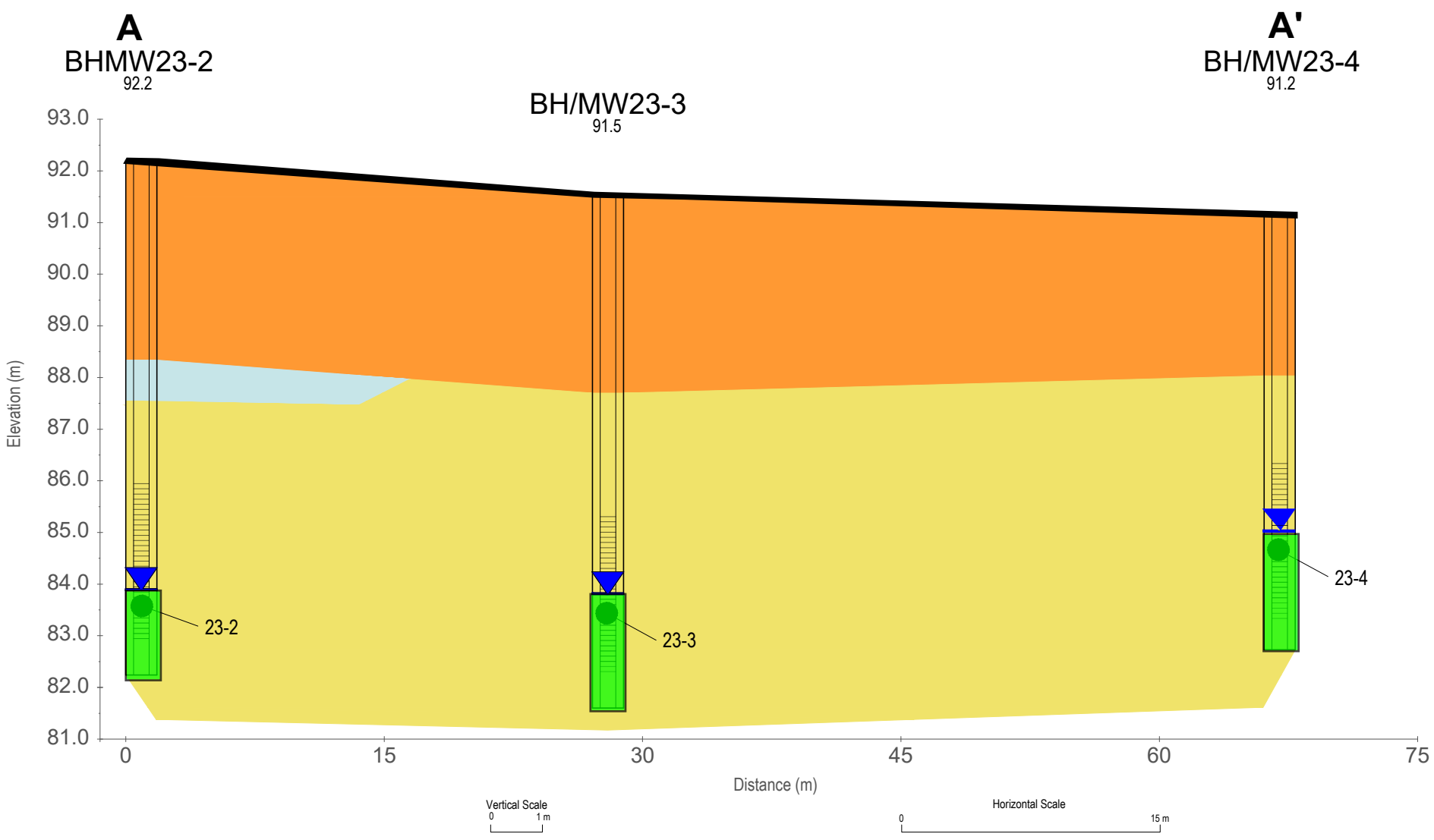
Ground Water Analytical Results: Metals

			Metals																	
			Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Lead (Pb)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Selenium (Se)-Dissolved	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Thallium (Tl)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			20000	1900	29000	67	45000	2.7	810	66	87	25	9200	490	63	1.5	2300000	510	420	250	1100
Sample Location	Sample ID	Sample Date																			
MW23-2	23-2	14-Dec-23	1.24	0.68	171	<0.02	160	0.122	<0.5	18.5	3.6	0.055	18.8	11.5	2.66	<0.01	119000	0.06	4.25	0.82	20.7
MW23-3	23-3	14-Dec-23	1.14	0.53	205	<0.02	135	0.0477	<0.5	7.04	1.88	<0.05	18.8	6.62	2.3	<0.01	262000	0.05	4.64	0.91	8.1
MW23-4	23-4	14-Dec-23	1.45	1.04	174	<0.02	180	0.0112	<0.5	0.4	3.53	<0.05	15	0.87	0.88	<0.01	23000	0.03	2.37	1.5	13.1



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt

Ground Water met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Ground Water - Metals	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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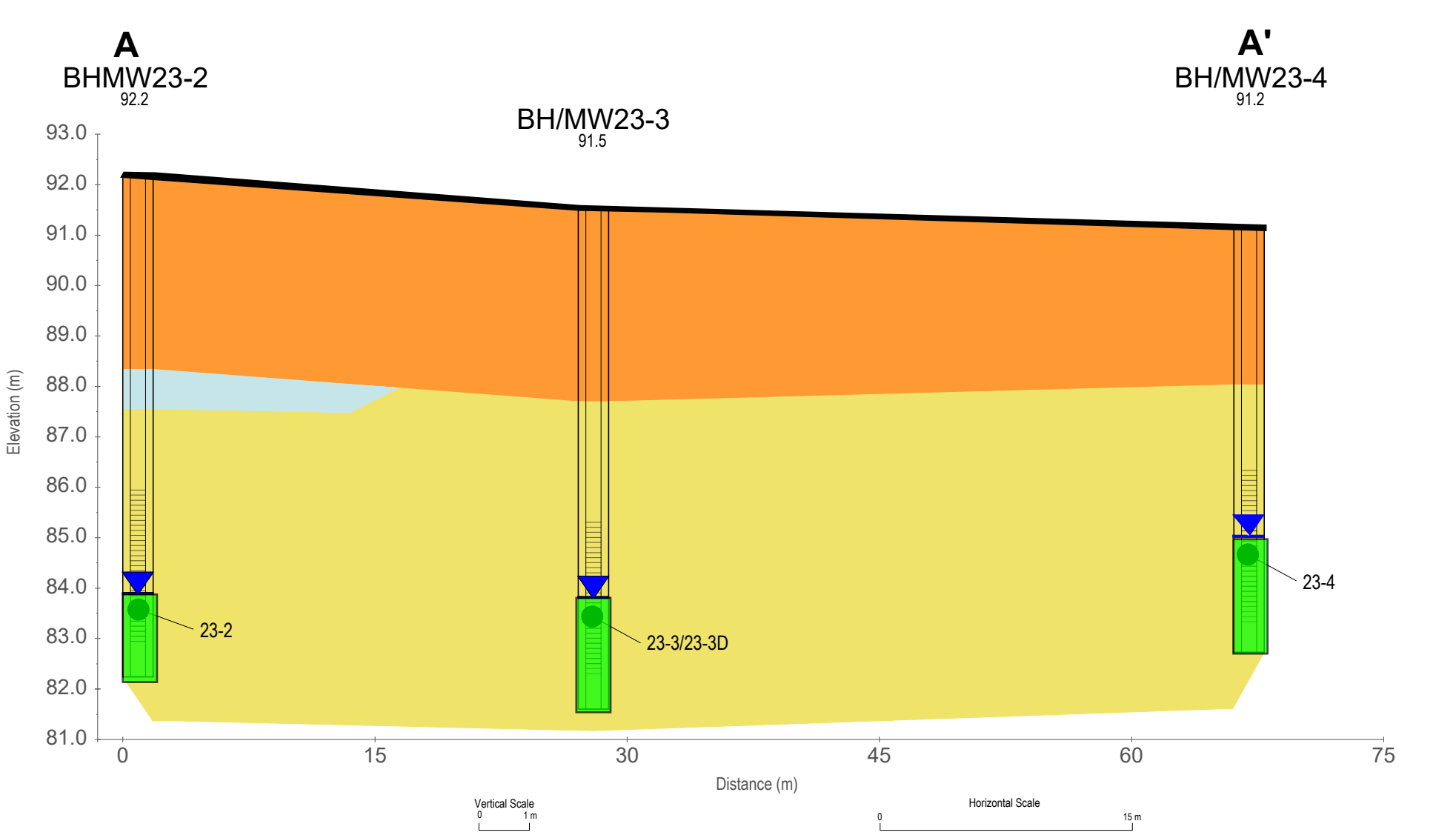
Ground Water Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

			PAHs																	
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1+2-Methylnaphthalenes*	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			1700	1.8	2.4	4.7	0.81	0.75	0.2	0.4	1	0.52	130	400	0.2	1800	1800	1800	6400	580	68
Sample Location	Sample ID	Sample Date																			
MW23-2	23-2	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3D	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-4	23-4	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt

Ground Water met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Ground Water - PAHs	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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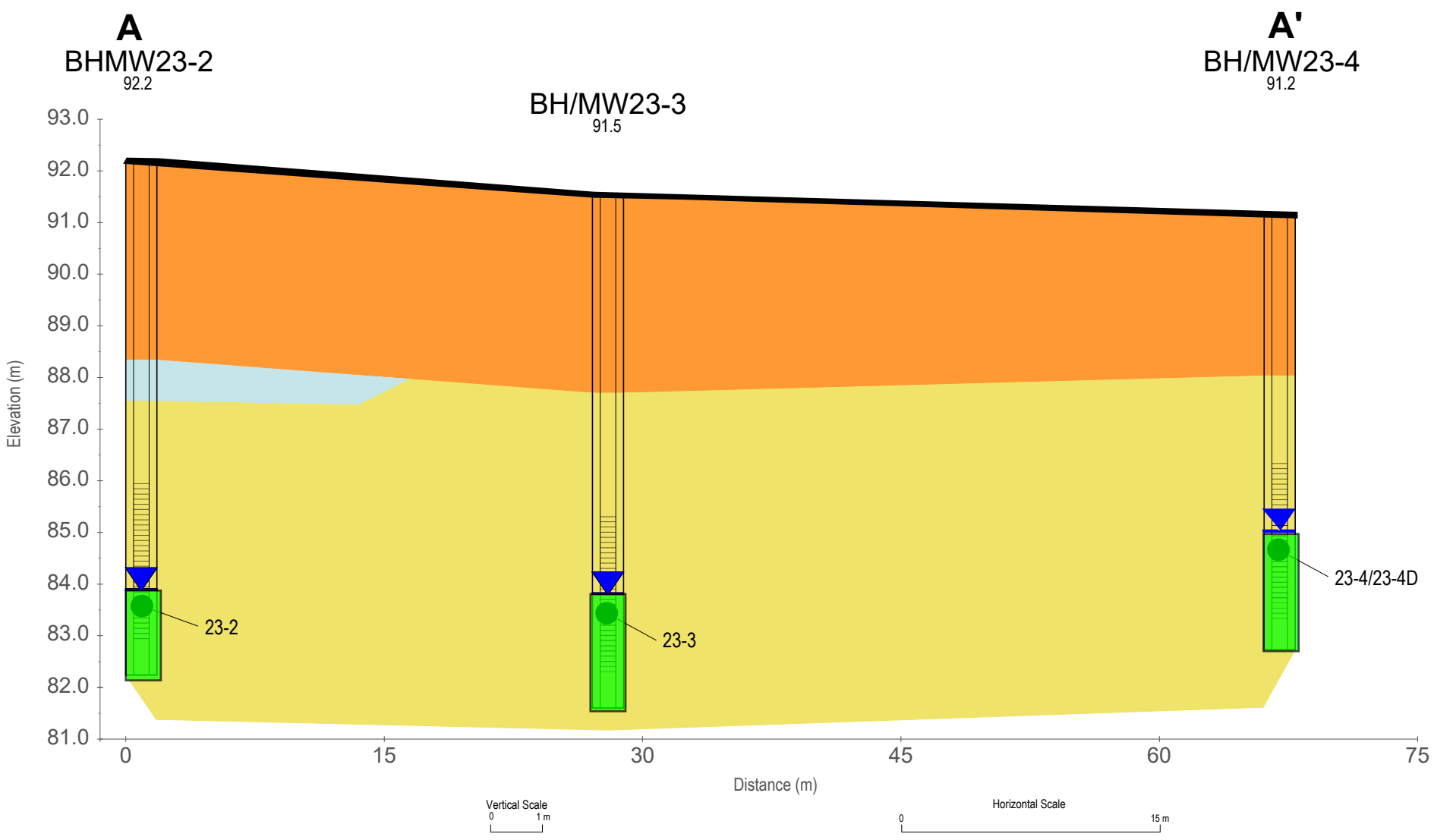
Ground Water Analytical Results: Organochlorine (OC) Pesticides

			OC Pesticides													
			DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			45	20	2.8	8.5	28	0.75	1.5	0.48	2.5	0.048	3.1	4.5	200	1.2	6.5
Sample Location	Sample ID	Sample Date															
MW23-2	23-2	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-3	23-3	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4D	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt

- Ground Water met Table 3 SCS
- X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides

Ground Water Contaminants Tested

BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-3: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-4: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XA	TITLE: Ground Water - OC Pesticides	Cross Section A-A'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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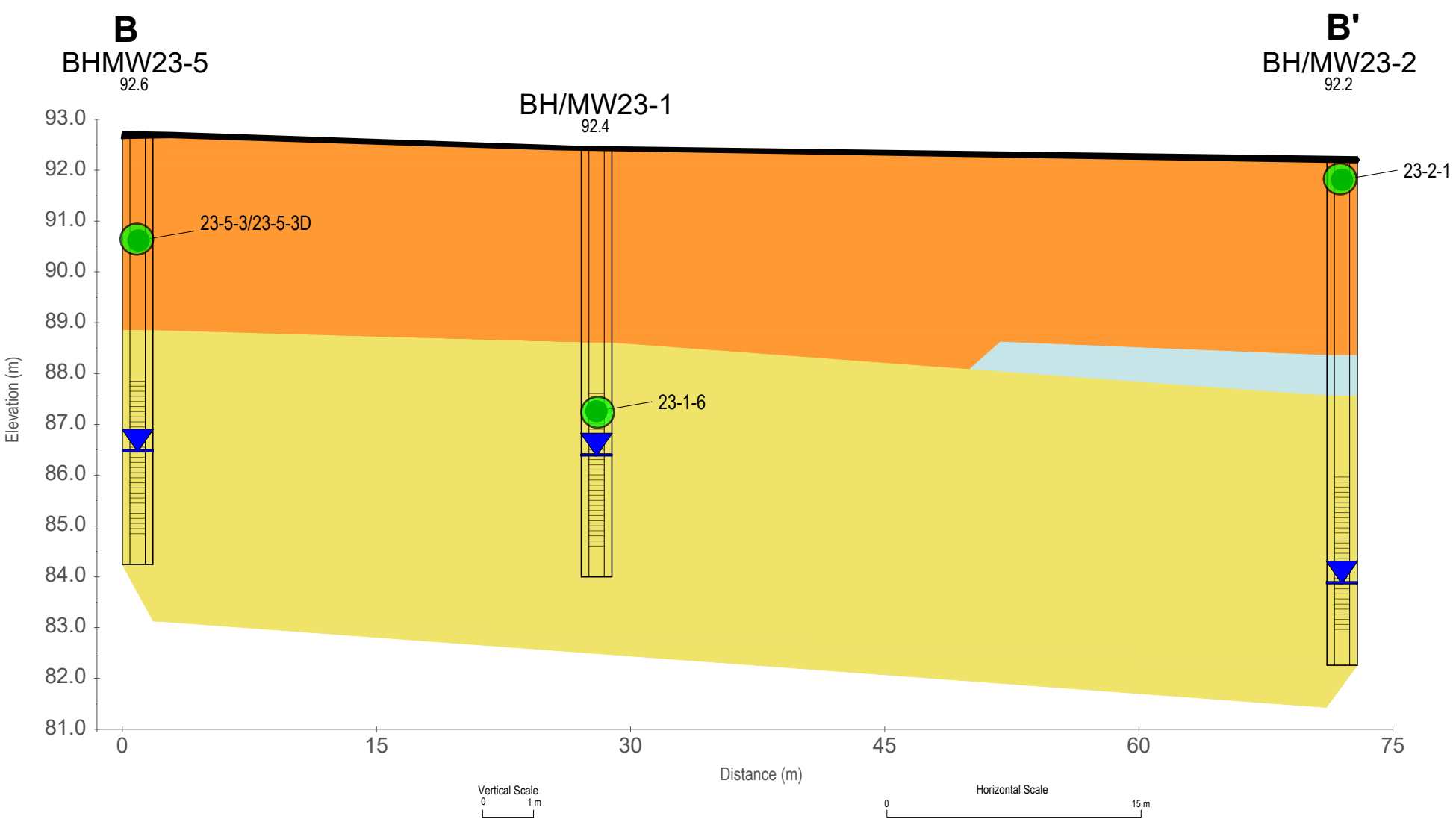
Soil Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

				PHCs					BTEX			
				F1 (C6-C10)	F1 (C6-C10) - BTEX*	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes, Total (Xylene Mixture)
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				65	65	250	2500	6600	0.4	78	19	30
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date									
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	69	<50	<0.005	<0.05	<0.015	<0.05
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Soil - PHCs/BTEX	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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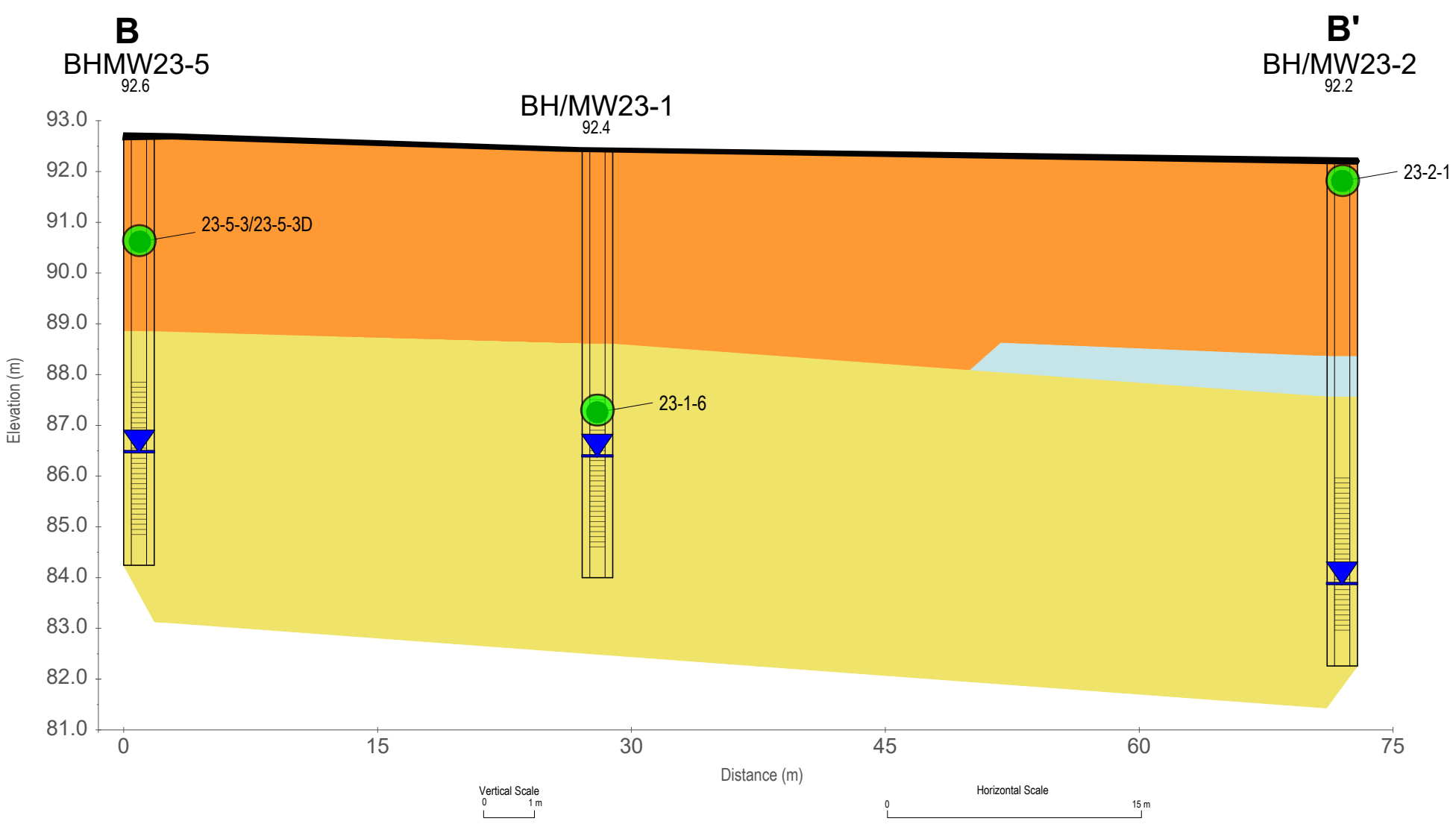
Soil Analytical Results: Volatile Organic Compounds (VOCs)

				VOCs															
				Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroform	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				28	0.4	18	1.7	0.05	1.5	2.7	0.18	13	8.5	12	0.84	25	21	0.05	0.48	37	9.3
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																		
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<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
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.50	<0.005	<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
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<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
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<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

Soil Analytical Results: Volatile Organic Compounds (VOCs)

				VOCs																	
				1,2-Dichloropropane	1,3-Dichloropropylene (cis) + (trans)	Ethylbenzene	Ethylene Dibromide	Hexane (n)	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Methyl tert-Butyl Ether (MTBE)	Methylene Chloride	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl Chloride	Xylenes, Total (Xylene Mixture)	1,4-Dioxane
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				0.68	0.21	19	0.05	88	88	210	3.2	2	43	0.11	0.094	21	78	12	0.11	0.61	5.8	0.25	30	1.8
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																				
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Soil - VOCs	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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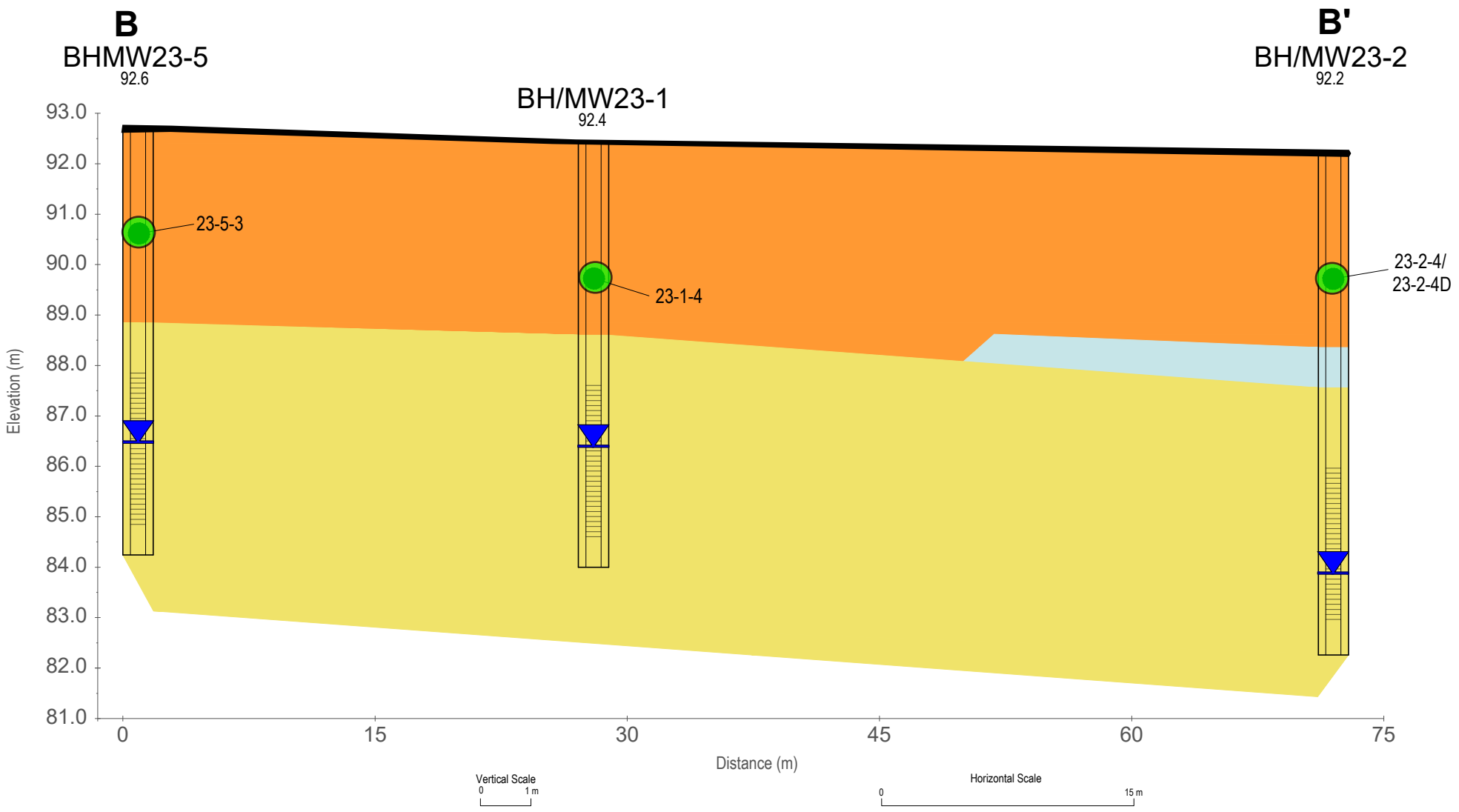
Soil Analytical Results: Metals

				Metals																	
				Antimony	Arsenic	Barium	Beryllium	Boron (total)	Boron (Hot Water Soluble)*	Cadmium	Chromium Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				50	18	670	10	120	2	1.9	160	100	300	120	40	340	5.5	50	---	3.3	33	86	340
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																				
BH23-1	23-1-4	2.29 - 3.05	28-Nov-23	<0.10	2.38	41.1	0.32	5.4	-	0.069	11.9	5.62	10.5	6.03	0.5	12.5	<0.20	<0.10	-	0.165	0.488	20.4	26.2
BH23-2	23-2-4	2.29 - 3.05	28-Nov-23	<0.10	2.44	44.1	0.29	<5.0	-	0.067	11.7	6.96	12	6.48	0.49	13.7	<0.20	<0.10	-	0.163	0.48	20.1	26.7
BH23-2	23-2-4D	2.29 - 3.05	28-Nov-23	<0.10	2.62	48	0.29	5.1	-	0.071	13.2	7.7	11.9	6.62	0.55	16.2	<0.20	<0.10	-	0.2	0.523	22.3	28
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.10	2.89	76.4	0.33	6.7	-	0.08	14	8.41	11.8	9.09	0.82	19.9	<0.20	<0.10	-	0.265	0.572	22.6	27.7



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Soil - Metals	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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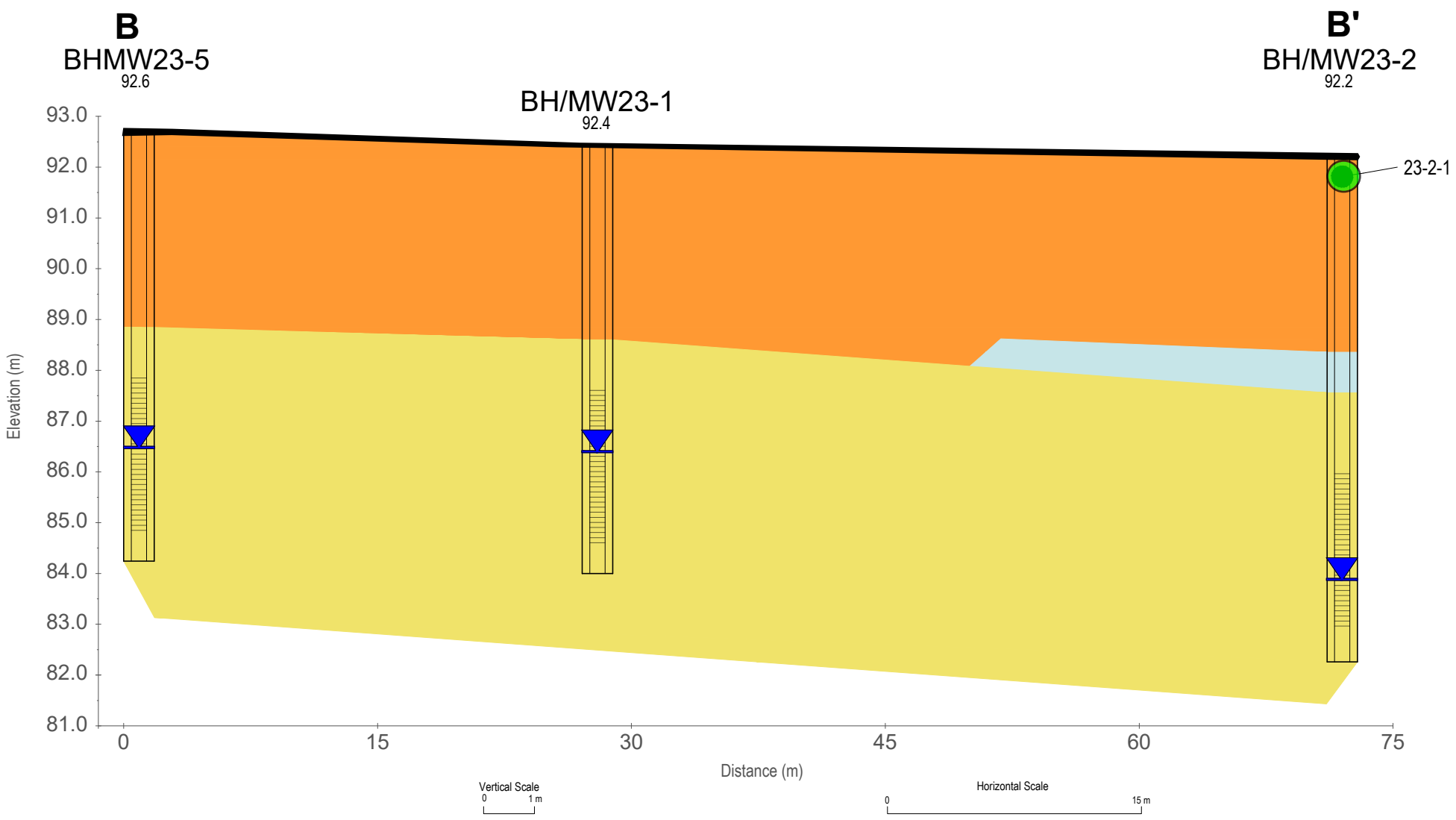
Soil Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

				PAHs																	
				Methylnaphthalenes, 2-(1-)***	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				85	96	0.17	0.74	0.96	0.3	0.96	9.6	0.96	9.6	0.1	9.6	69	0.95	28	16	96
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																	
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<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



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Soil - PAHs	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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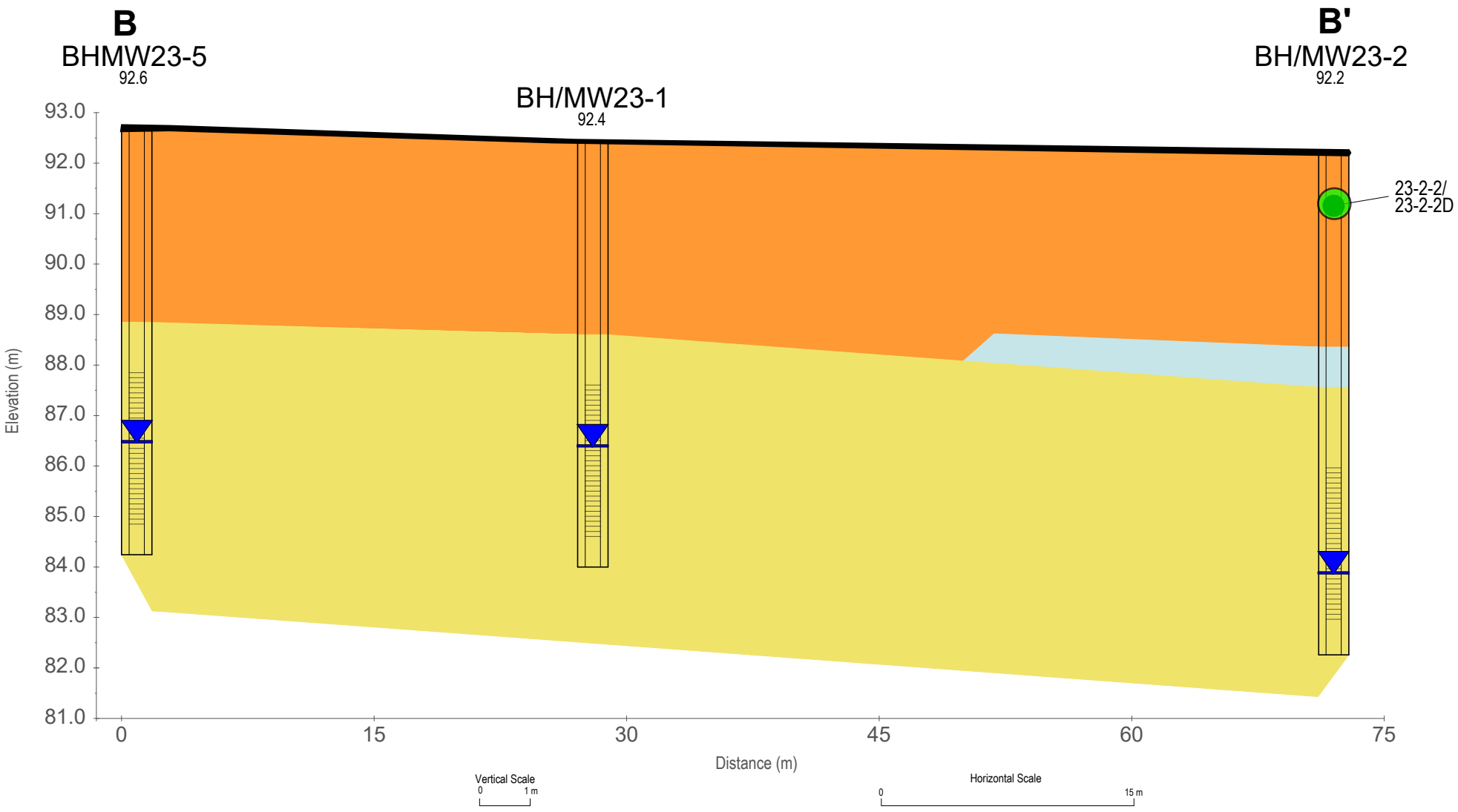
Soil Analytical Results: Organochlorine (OC) Pesticides

				OC Pesticides													
				DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				4.6	0.65	1.4	0.11	0.05	0.11	0.38	0.04	0.19	0.05	0.66	0.095	0.43	0.063	1.6
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date															
BH23-2	23-2-2	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-2	23-2-2D	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Soil met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Soil - OC Pesticides	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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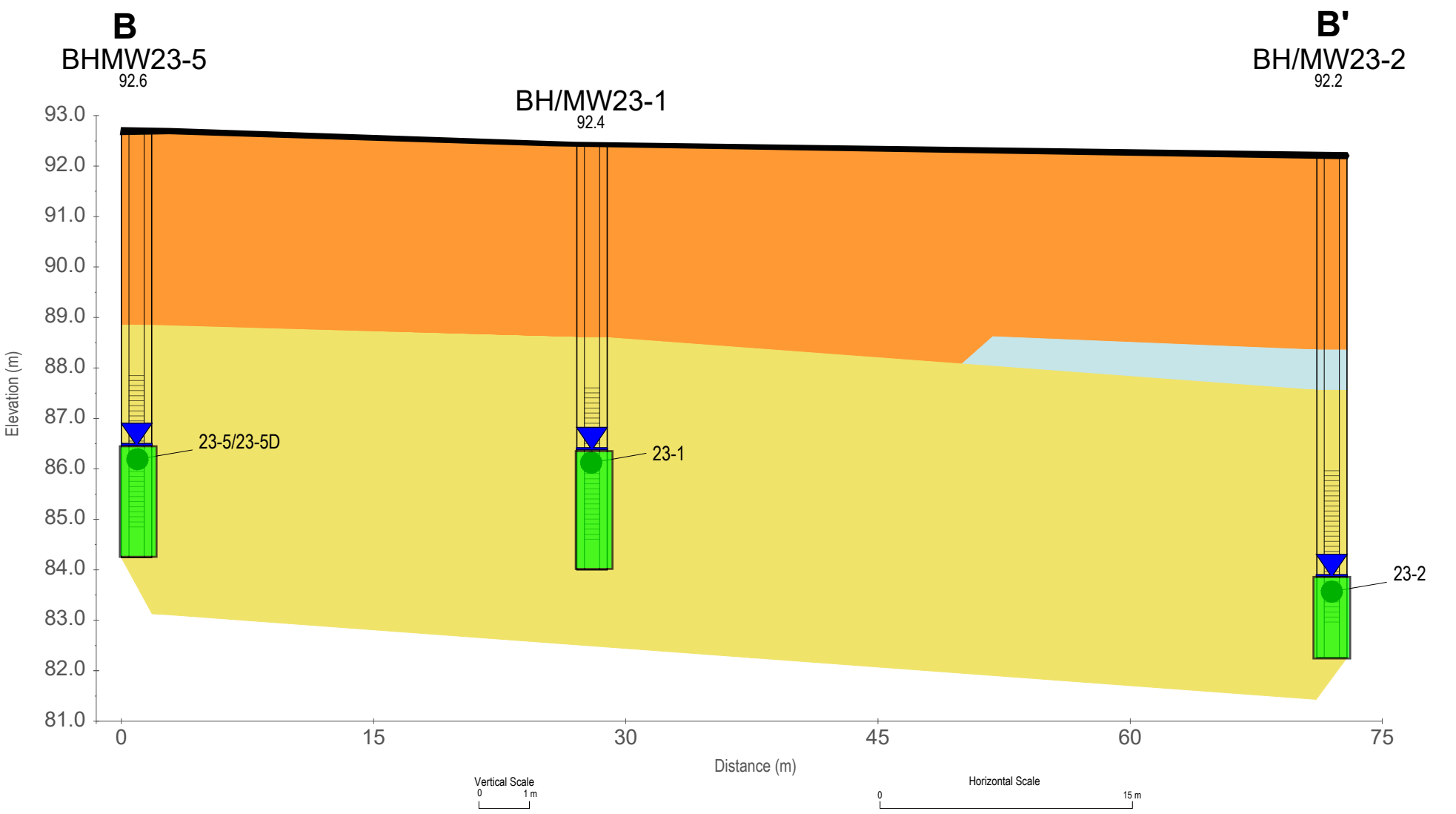
Ground Water Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

			PHCs					BTEX			
			F1 (C6-C10)	F1-BTEX	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			750	750	150	500	500	430	18000	2300	4200
Sample Location	Sample ID	Sample Date									
MW23-1	23-1	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-2	23-2	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5D	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

- Ground Water met Table 3 SCS
- X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Ground Water - PHCs/BTEX	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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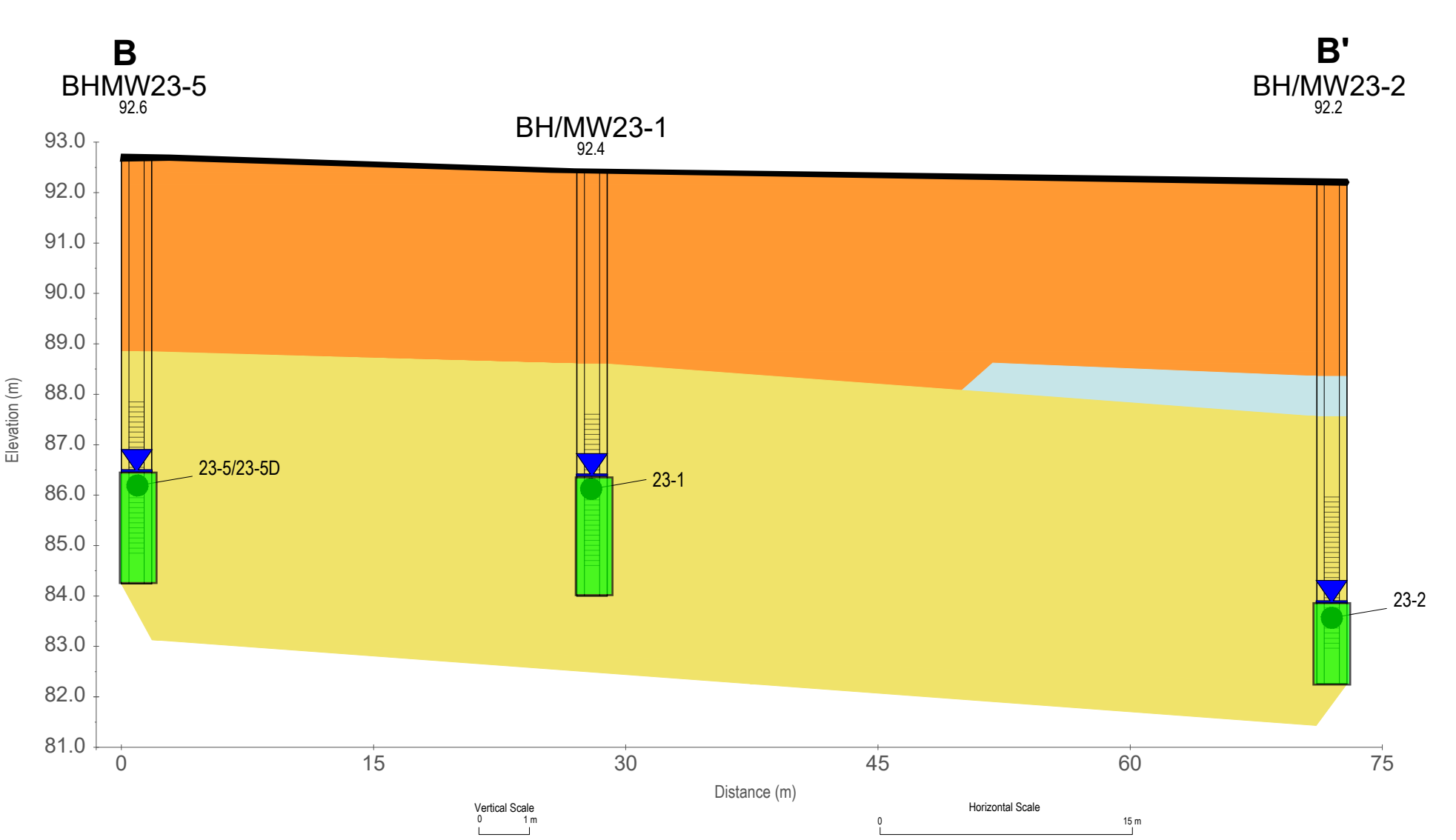
Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																		
			Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Dibromochloromethane	Chloroform	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Methylene Chloride	1,2-Dichloropropane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			130000	430	85000	770	56	8.4	630	82000	22	0.83	9600	9600	67	4400	3100	12	17	17	17	5500	140
Sample Location	Sample ID	Sample Date																					
MW23-1	23-1	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-2	23-2	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-5	23-5	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-5	23-5D	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
-	TRIPBLANK	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50

Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																			
			cis-1,3-Dichloropropylene	trans-1,3-Dichloropropylene	1,3-Dichloropropylene (cis & trans)	Ethylbenzene	n-Hexane	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	MTBE	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl chloride	o-Xylene	m+p-Xylenes	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			-	-	45	2300	520	1500000	580000	1400	9100	28	15	17	18000	6700	30	17	2500	1.7	4200	7300000	
Sample Location	Sample ID	Sample Date																					
MW23-1	23-1	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-2	23-2	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5D	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
-	TRIPBLANK	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

- Ground Water met Table 3 SCS
- X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Ground Water - VOCs	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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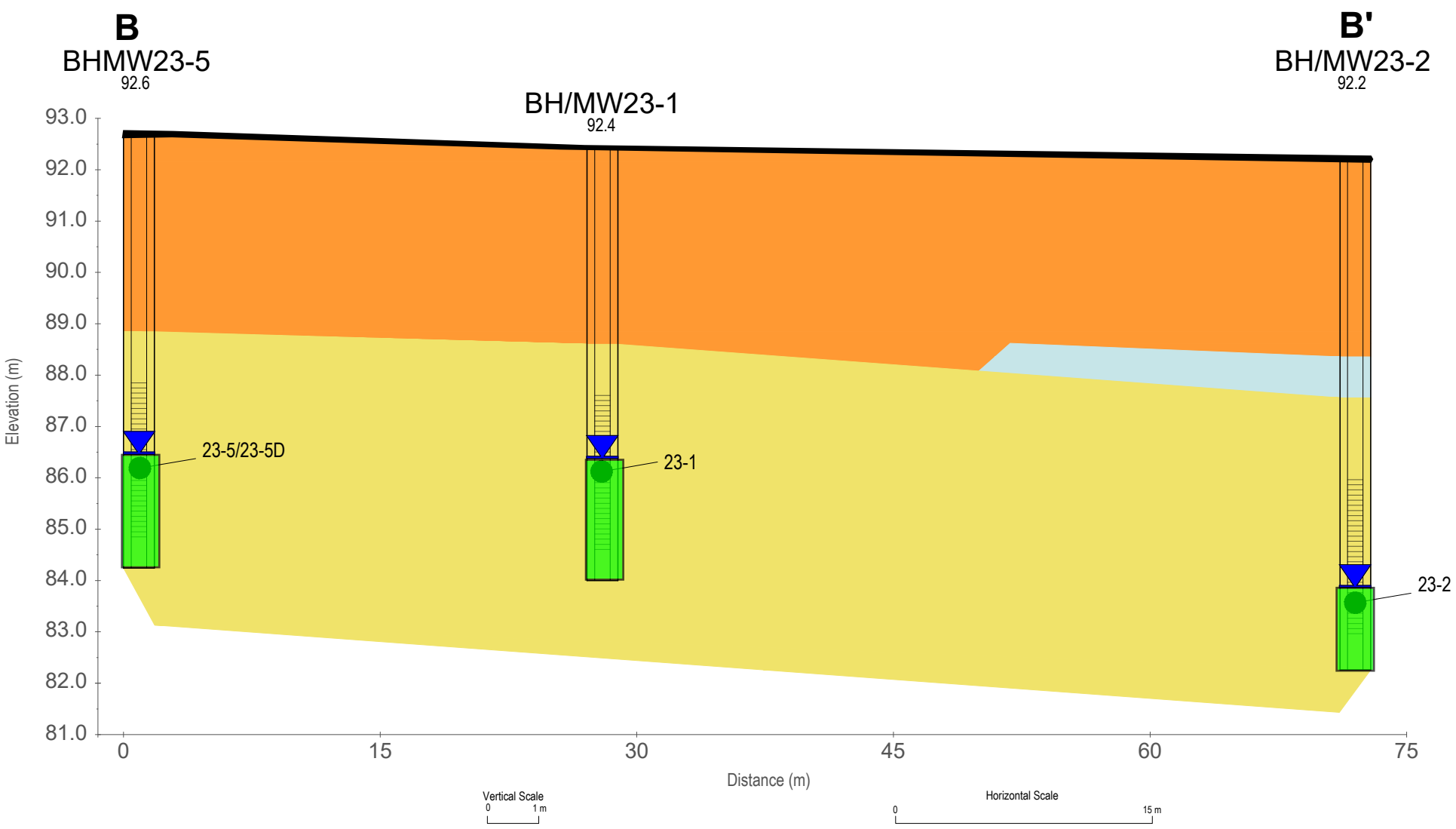
Ground Water Analytical Results: Metals

			Metals																	
			Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Lead (Pb)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Selenium (Se)-Dissolved	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Thallium (Tl)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			20000	1900	29000	67	45000	2.7	810	66	87	25	9200	490	63	1.5	2300000	510	420	250	1100
Sample Location	Sample ID	Sample Date																			
MW23-1	23-1	14-Dec-23	<1.0	<1.0	332	<0.2	109	0.338	<5.0	23.2	2.61	<0.5	12.5	19	2.74	<0.1	316000	0.12	8.18	<5.0	11.2
MW23-2	23-2	14-Dec-23	1.24	0.68	171	<0.02	160	0.122	<0.5	18.5	3.6	0.055	18.8	11.5	2.66	<0.01	119000	0.06	4.25	0.82	20.7
MW23-5	23-5	14-Dec-23	<0.1	0.63	293	<0.02	71	0.0069	<0.5	1.3	0.39	<0.05	0.373	1.14	0.06	<0.01	26000	<0.01	0.47	0.6	2.7
MW23-5	23-5D	14-Dec-23	<0.1	0.67	295	<0.02	76	0.0073	<0.5	1.35	0.4	<0.05	0.362	1.45	0.05	<0.01	25900	<0.01	0.48	0.6	2.8



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

- Ground Water met Table 3 SCS
- X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Ground Water - Metals	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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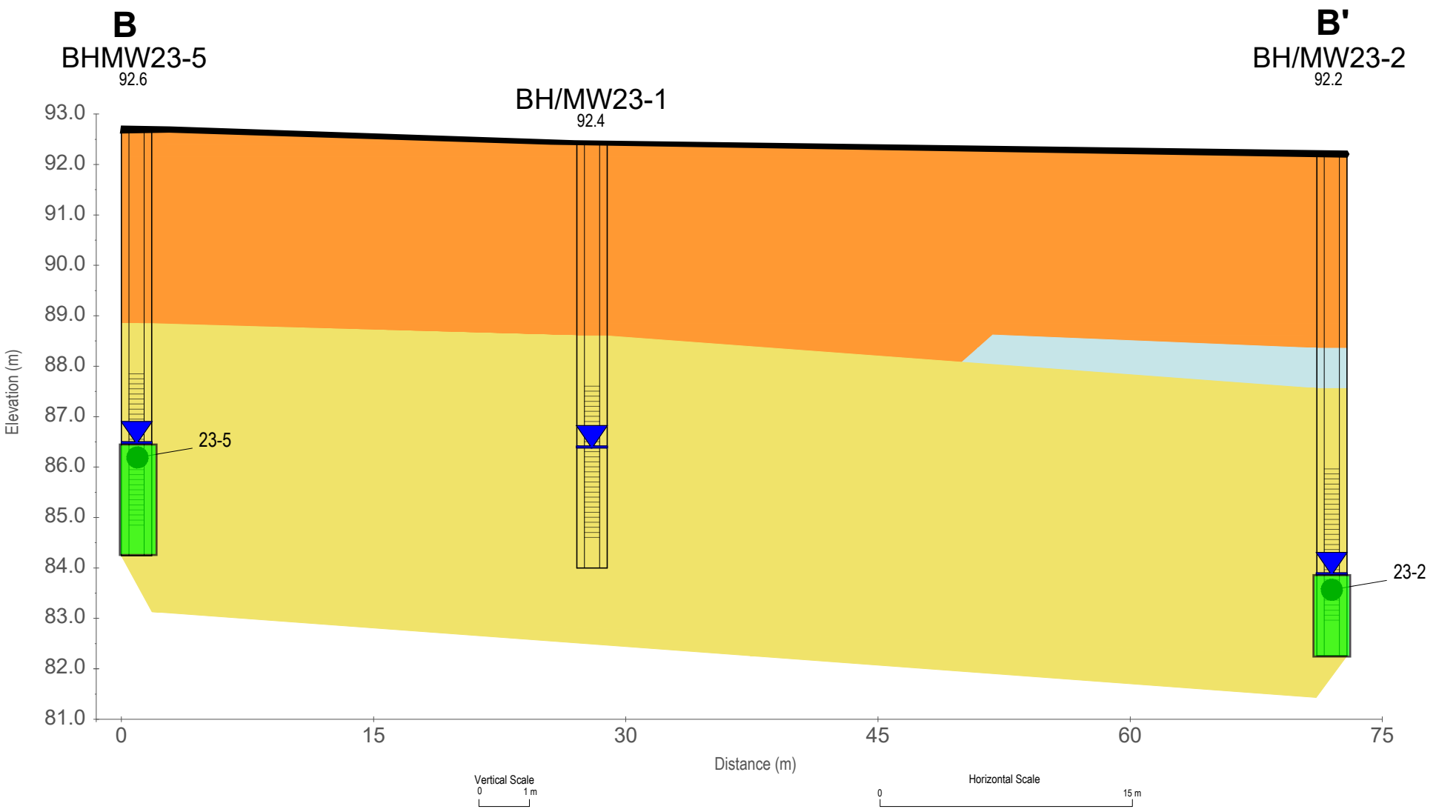
Ground Water Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

			PAHs															
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1+2-Methylnaphthalenes*	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			1700	1.8	2.4	4.7	0.81	0.75	0.2	0.4	1	0.52	130	400	0.2	1800	1800	1800	6400	580	68
Sample Location	Sample ID	Sample Date																			
MW23-2	23-2	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-5	23-5	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

- Ground Water met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Ground Water - PAHs	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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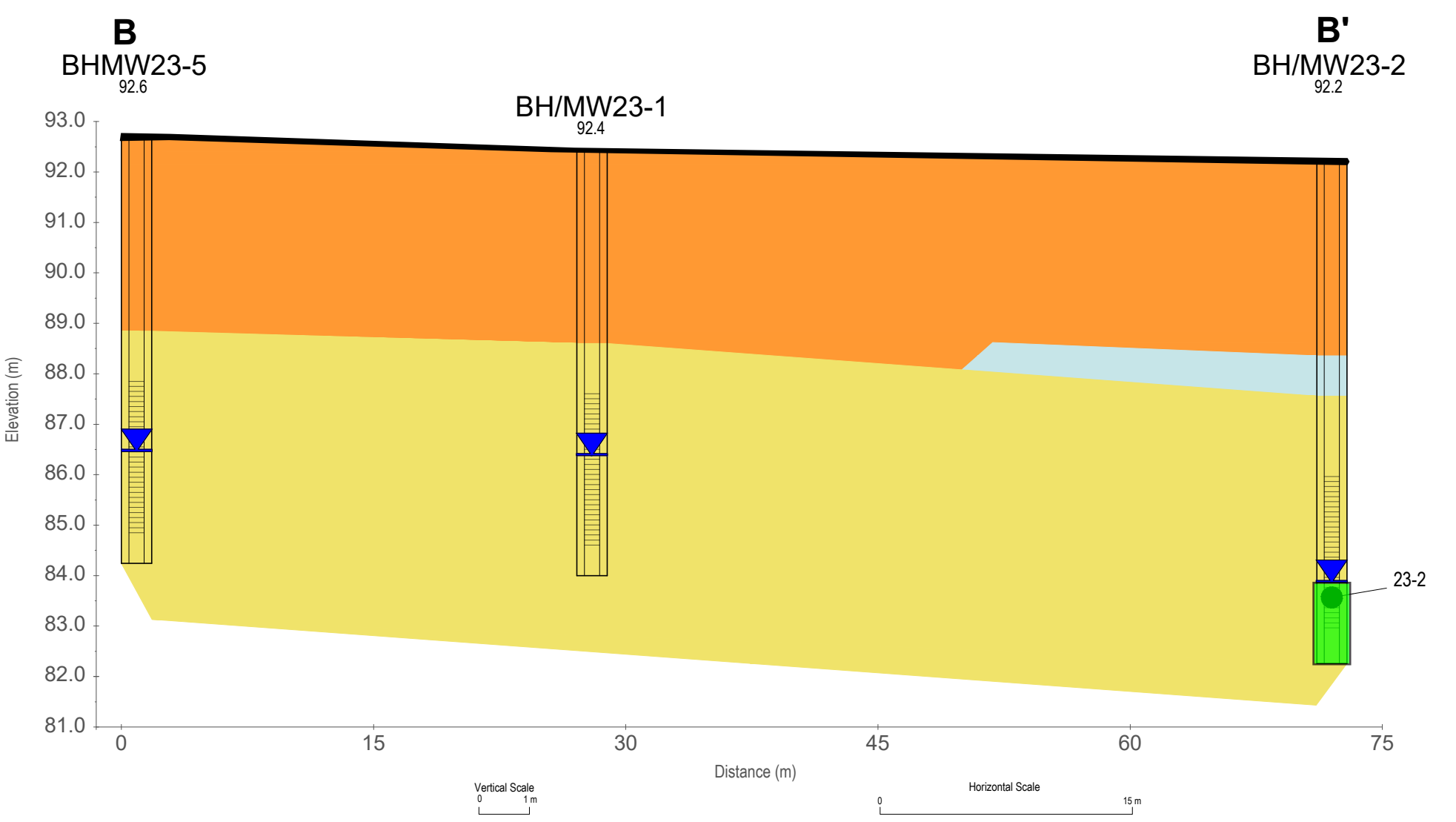
Ground Water Analytical Results: Organochlorine (OC) Pesticides

			OC Pesticides												
			DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			45	20	2.8	8.5	28	0.75	1.5	0.48	2.5	0.048	3.1	4.5	200	1.2	6.5
Sample Location	Sample ID	Sample Date															
MW23-2	23-2	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008



LEGEND:

SOILS

- Fill
- Sandy Silt
- Clayey Silt
- Asphalt

Ground Water met Table 3 SCS

X-X-X Sample Location

Bedrock not encountered.
No contaminants detected
in soil or ground water.

WELL DETAILS

- Well Screen
- Water Level

Soil Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals

Ground Water Contaminants Tested

BH23-1: PHCs, BTEX, VOCs, Metals
BH23-2: PHCs, BTEX, VOCs, Metals, PAHs, OC Pesticides
BH23-5: PHCs, BTEX, VOCs, Metals, PAHs
MW23-6: PHCs, BTEX, VOCs, Metals, PAHs

DATE: 2/5/2024	FIGURE NO. XB	TITLE: Ground Water - OC Pesticides	Cross Section B-B'
CLIENT: Firearms Outlets Canada		PROJECT: 725 Westney Rd S, Ajax	
PRINT SIZE: 8.5" x 11"	SCALE: As shown	PROJECT NO. 1904320	
DRAWN: CV	APPROVED: MH	REVISION: 1	

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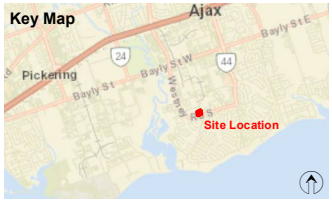
Drawings

LEGEND

Phase Two Property

Phase One Study Area



0 10 20 40 60 80 100

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:3,200
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

CLIENT

Firearms Outlets Canada

PROJECT

725 Westney Rd S, Ajax

TITLE

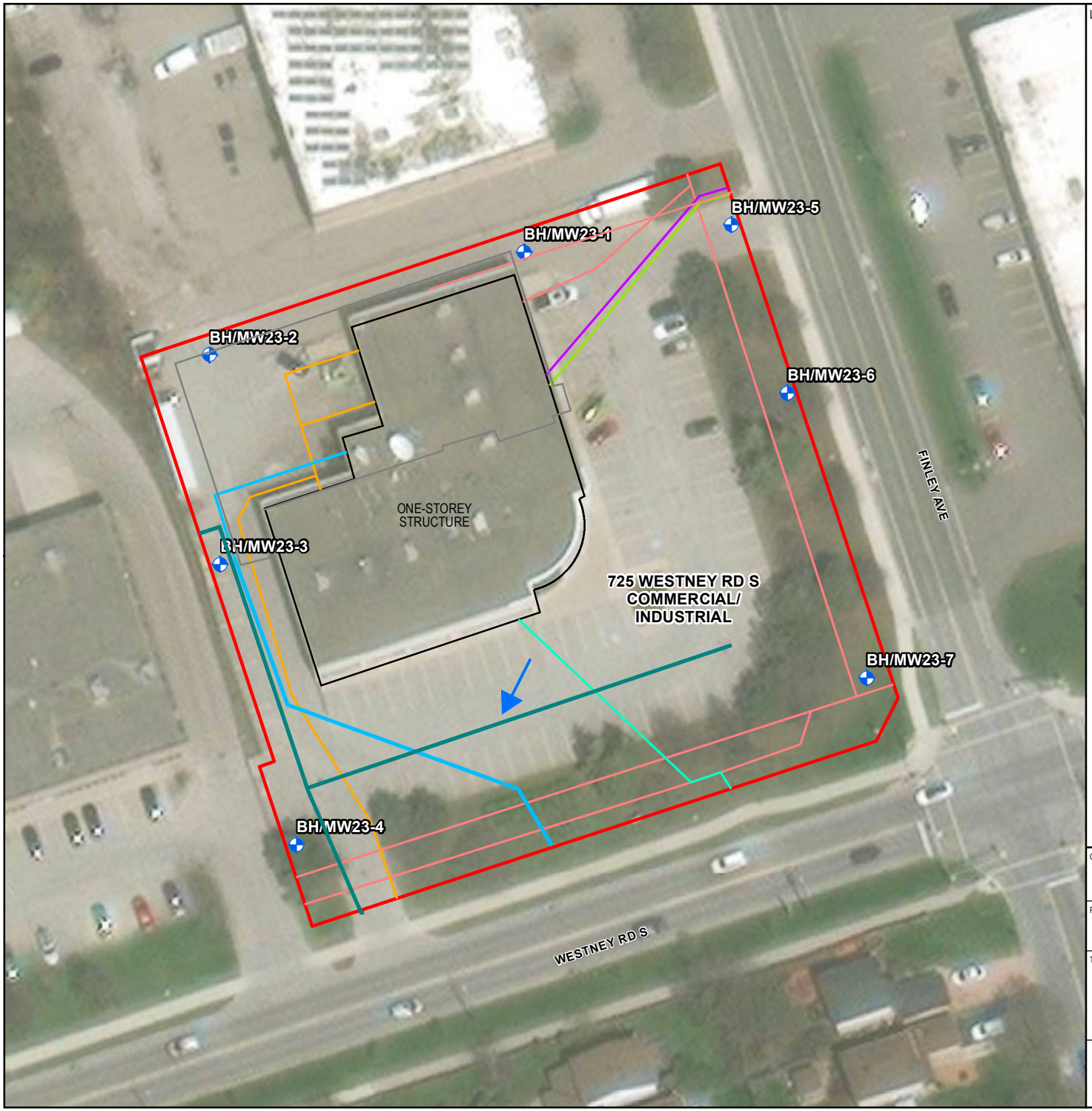
Site Location Map

Palmer PART OF SLR

REF. NO. 1904320-MR-111-1

Drawing 1

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-111-1 (Dr 1 - Site Location Map).mxd



LEGEND

- Borehole/Monitoring Well Location
- Water Main
- Gas Utility
- Hydro Utility
- Bell Utility (Buried)
- Fibre Optic Utility
- Cable/TV Utility
- Inferred Ground Water Flow Direction
- Phase Two Property
- Storm Sewer
- Proposed building addition

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 5, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

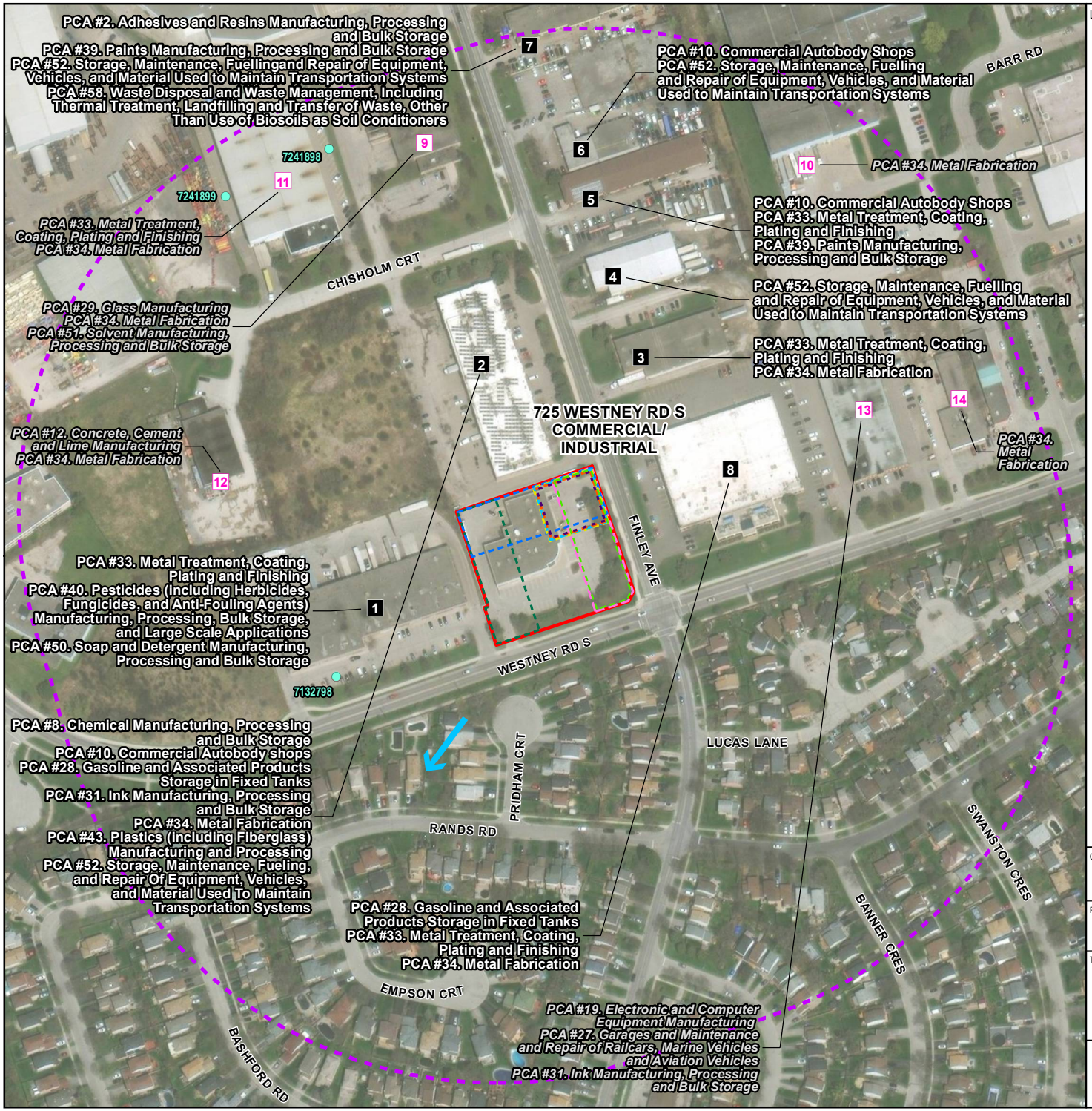
TITLE
Borehole Location Plan

Palmer PART OF SLR

REF. NO. 1904320-MR-112-1

Drawing 2

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-112-1 (Dr 2 - Borehole Location Plan).mxd



LEGEND

- Phase Two Property
- Phase One Study Area
- Regionally Inferred Ground Water Flow Direction
- MECP Well Record
- 8 PCA of Concern (Off-site)
- 14 PCA Not of Concern
- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
- APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
- APEC #3: Existing Metal Coating and Treatment
- APEC #4: Existing Automotive Repair Operations
- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

0 10 20 40 60 80 100
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:3,200
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
On-Site and Off-Site Areas of Potential Environmental Concern

Palmer PART OF SLR

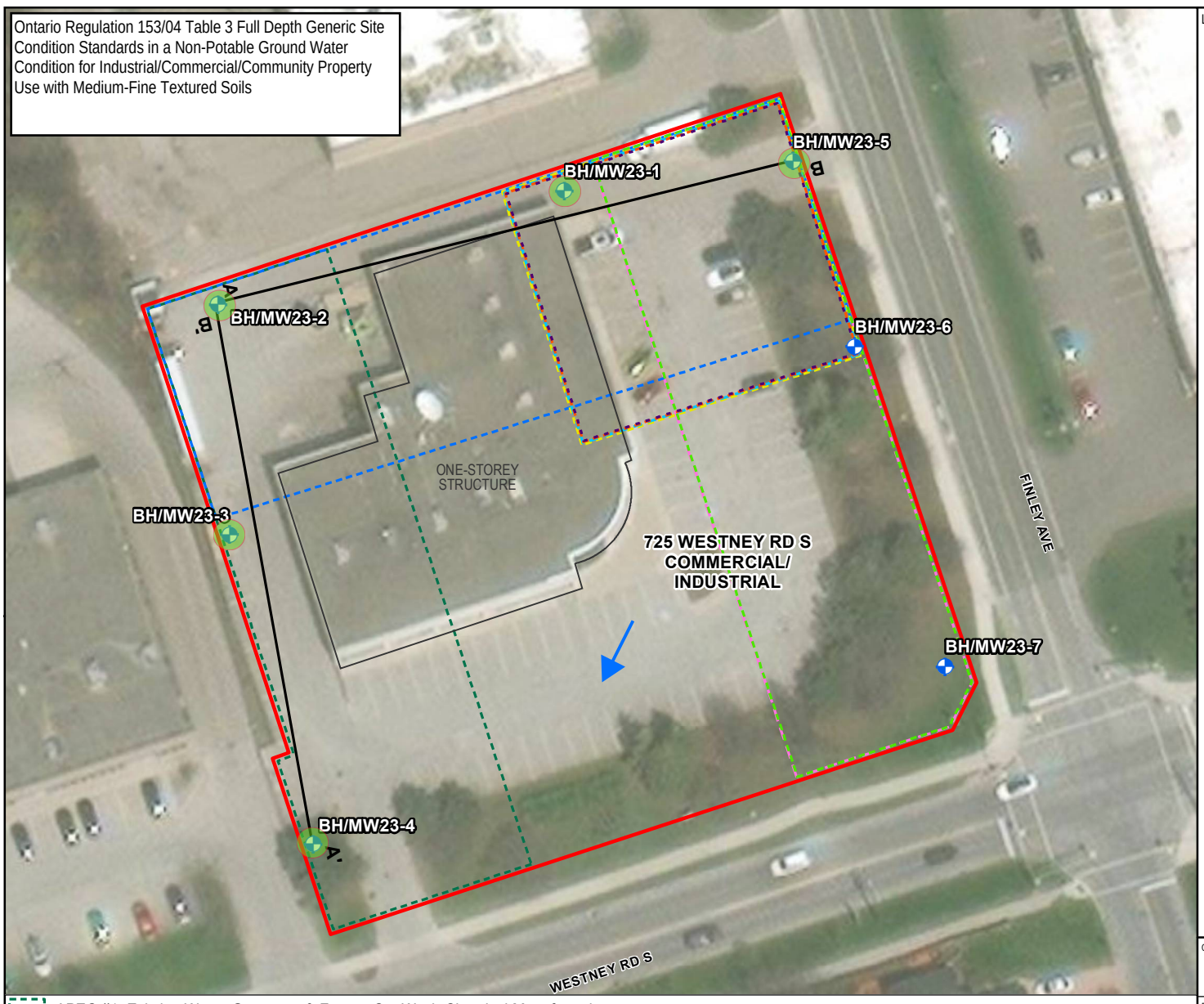
REF. NO. 1904320-MR-113-1

Drawing 3

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-113-1 (Dr 3 - Areas of Potential Environmental Concern).mxd

Soil Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

				PHCs					BTEX			
				F1 (C6-C10)	F1 (C6-C10) - BTEX*	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes, Total (Xylene Mixture)
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				65	65	250	2500	6600	0.4	78	19	30
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date									
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	69	<50	<0.005	<0.05	<0.015	<0.05
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<5.0	<5.0	19	58	<50	<0.005	<0.05	<0.015	<0.05
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<5.0	<5.0	<10	<50	<50	<0.005	<0.05	<0.015	<0.05



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
- APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
- APEC #3: Existing Metal Coating and Treatment
- APEC #4: Existing Automotive Repair Operations
- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT: Firearms Outlets Canada

PROJECT: 725 Westney Rd S, Ajax

TITLE: Soil Sample Locations (PHCs/BTEX)

Palmer PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 4A

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-114-1 (Dr 4 - Sample Locations).mxd

Soil Analytical Results: Volatile Organic Compounds (VOCs)

				VOCs															
				Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroform	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				28	0.4	18	1.7	0.05	1.5	2.7	0.18	13	8.5	12	0.84	25	21	0.05	0.48	37	9.3
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																		
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<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
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.50	<0.005	<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
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<0.50	<0.005	<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
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.50	<0.005	<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
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<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
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<0.50	<0.005	<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

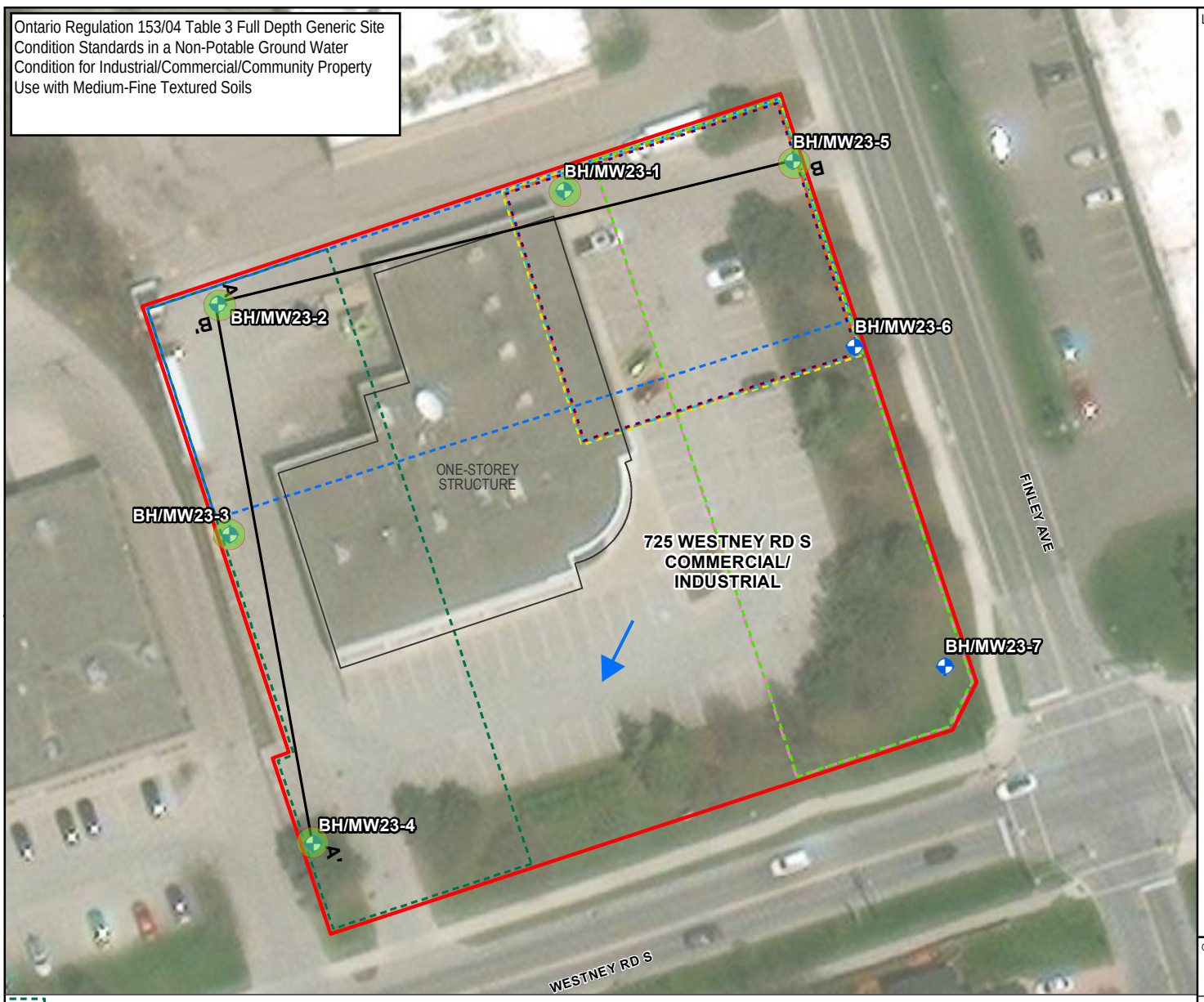
Soil Analytical Results: Volatile Organic Compounds (VOCs)

				1,2-Dichloropropane	1,3-Dichloropropylene (cis) + (trans)	Ethylbenzene	Ethylene Dibromide	Hexane (n)	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Methyl tert-Butyl Ether (MTBE)	Methylene Chloride	Styrene	VOCs										
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl Chloride	Xylenes, Total (Xylene Mixture)	1,4-Dioxane
												µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				0.68	0.21	19	0.05	88	88	210	3.2	2	43	0.11	0.094	21	78	12	0.11	0.61	5.8	0.25	30	1.8
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																					
BH23-1	23-1-6	4.57 - 5.33	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-
BH23-5	23-5-3D	1.52 - 2.29	28-Nov-23	<0.05	<0.05	<0.015	<0.05	<0.05	<0.50	<0.50	<0.04	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05	-

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-114-1 (Dr 4 - Sample Locations).mxd

Soil Analytical Results: Metals

				Metals																		
				Antimony	Arsenic	Barium	Beryllium	Boron (total)	Boron (Hot Water Soluble)*	Cadmium	Chromium Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				50	18	670	10	120	2	1.9	160	100	300	120	40	340	5.5	50	---	3.3	33	86	340
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																				
BH23-1	23-1-4	2.29 - 3.05	28-Nov-23	<0.10	2.38	41.1	0.32	5.4	-	0.069	11.9	5.62	10.5	6.03	0.5	12.5	<0.20	<0.10	-	0.165	0.488	20.4	26.2
BH23-2	23-2-4	2.29 - 3.05	28-Nov-23	<0.10	2.44	44.1	0.29	<5.0	-	0.067	11.7	6.96	12	6.48	0.49	13.7	<0.20	<0.10	-	0.163	0.48	20.1	26.7
BH23-2	23-2-4D	2.29 - 3.05	28-Nov-23	<0.10	2.62	48	0.29	5.1	-	0.071	13.2	7.7	11.9	6.62	0.55	16.2	<0.20	<0.10	-	0.2	0.523	22.3	28
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.10	2.19	61	0.29	6	-	0.085	12.2	5.39	9.76	5.52	0.32	11.5	<0.20	<0.10	-	0.132	0.485	22.5	27.9
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.10	2.63	60.1	0.3	6.6	-	0.078	12	7.07	10	6.63	0.53	16	<0.20	<0.10	-	0.178	0.589	22.1	28.5
BH23-5	23-5-3	1.52 - 2.29	28-Nov-23	<0.10	2.89	76.4	0.33	6.7	-	0.08	14	8.41	11.8	9.09	0.82	19.9	<0.20	<0.10	-	0.265	0.572	22.6	27.7



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
- APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
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- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
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CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Soil Sample Locations (Metals)

Palmer PART OF SLR

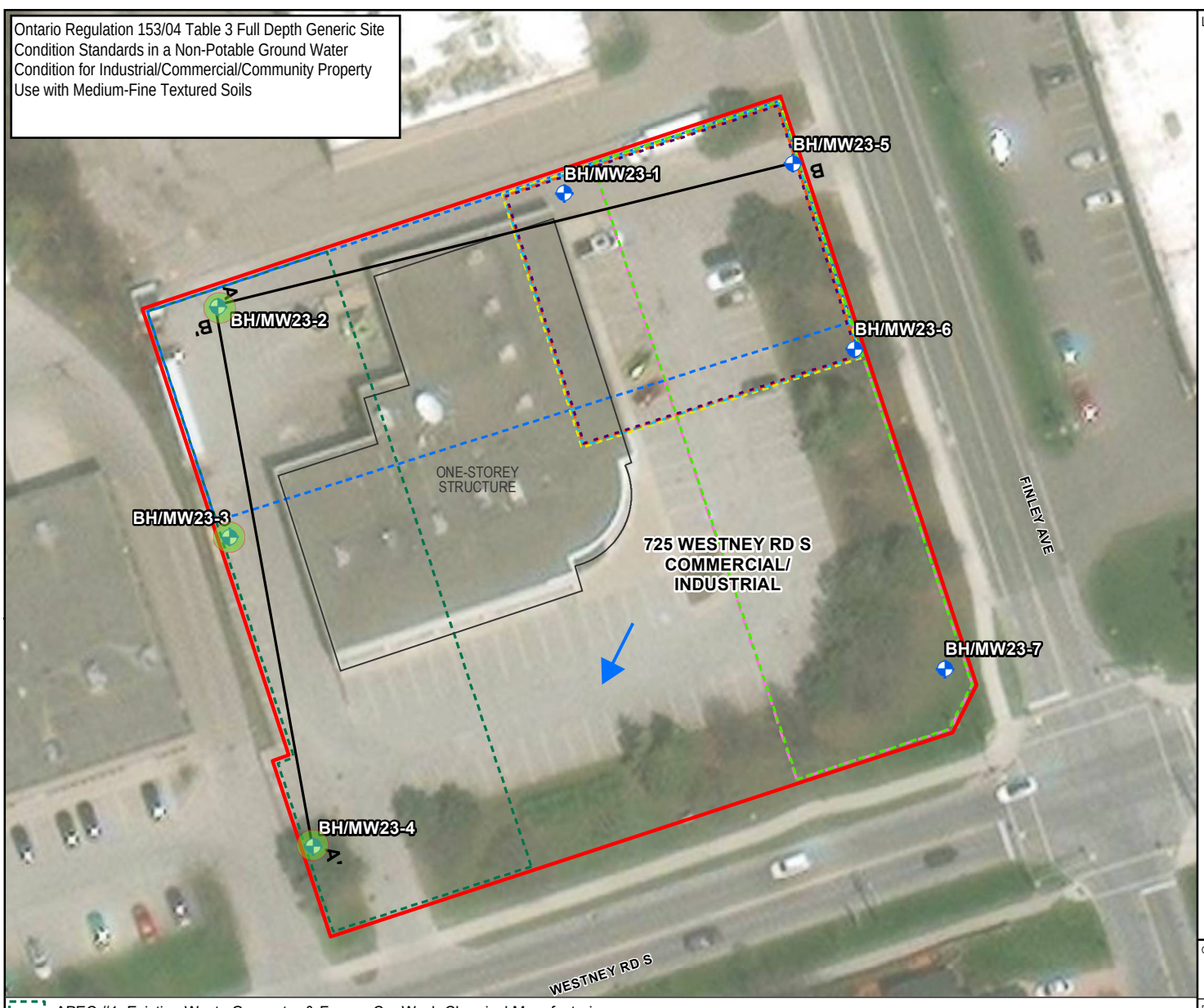
REF. NO. 1904320-MR-114-1

Drawing 4C

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-114-1 (Dr 4 - Sample Locations).mxd

Soil Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

				PAHs															
				Methylnaphthalenes, 2-(1-)***	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				85	96	0.17	0.74	0.96	0.3	0.96	9.6	0.96	9.6	0.1	9.6	69	0.95	28	16	96
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date																	
BH23-2	23-2-1	0.00 - 0.76	28-Nov-23	<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
BH23-3	23-3-7	4.57 - 5.33	28-Nov-23	<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
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<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
BH23-4	23-4-4D	2.29 - 3.05	28-Nov-23	<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



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

NORTH

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

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- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Soil Sample Locations (PAHs)

Palmer | PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 4D

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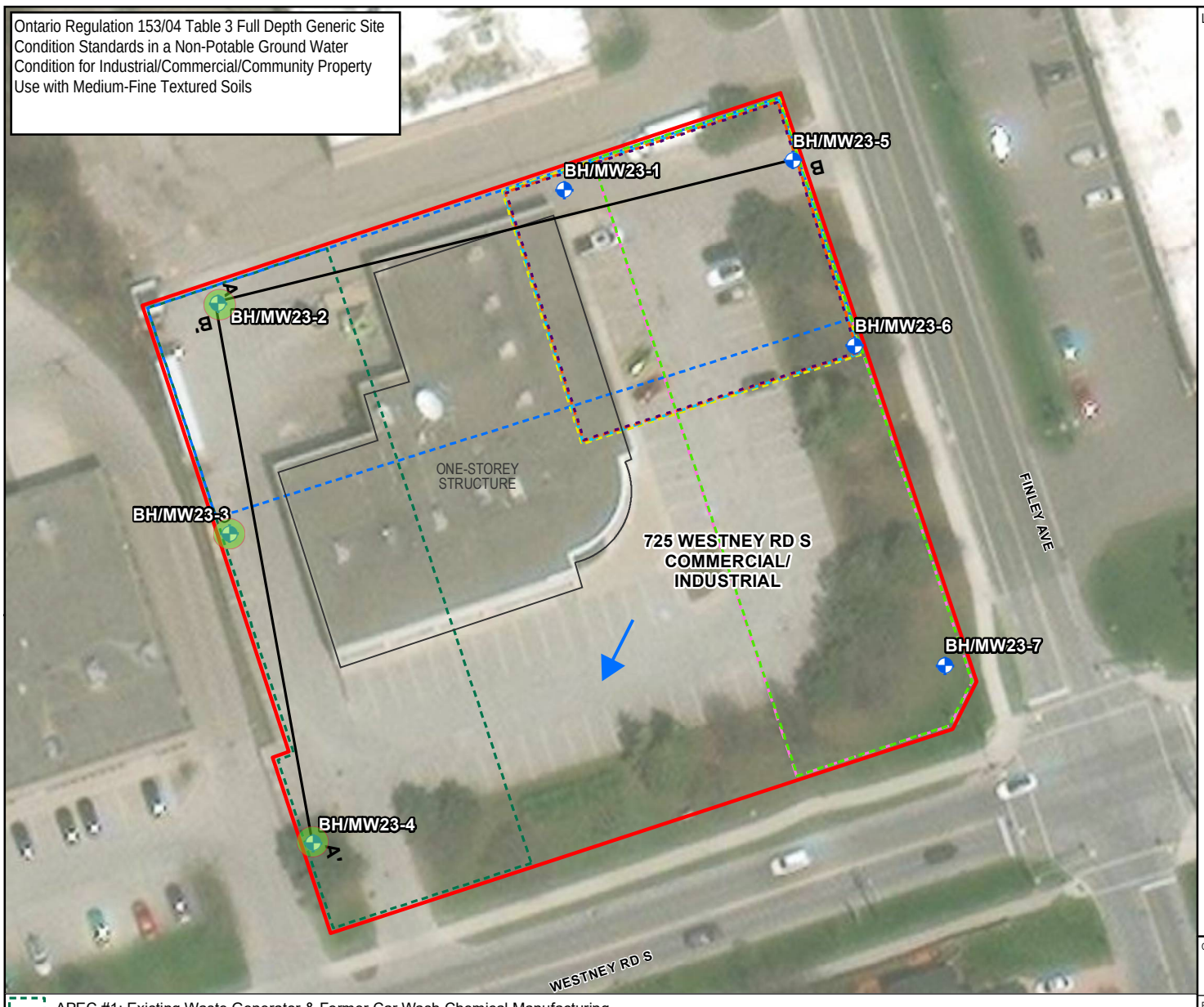
Soil Analytical Results: Organochlorine (OC) Pesticides

				OC Pesticides														
				DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
O.Reg. 153/04 MOECC Guideline (2011), Ind/Com/Commu Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition				4.6	0.65	1.4	0.11	0.05	0.11	0.38	0.04	0.19	0.05	0.66	0.095	0.43	0.063	1.6
Sample Location	Sample ID	Sample Interval (mbgs)	Sample Date															
BH23-2	23-2-2	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-2	23-2-2D	0.76 - 1.52	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-3	23-3-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
BH23-4	23-4-4	2.29 - 3.05	28-Nov-23	<0.03	<0.03	<0.03	<0.02	<0.03	<0.02	<0.03	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

NORTH

- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
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- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT: Firearms Outlets Canada

PROJECT: 725 Westney Rd S, Ajax

TITLE: Soil Sample Locations (OC Pesticides)

Palmer | PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 4E

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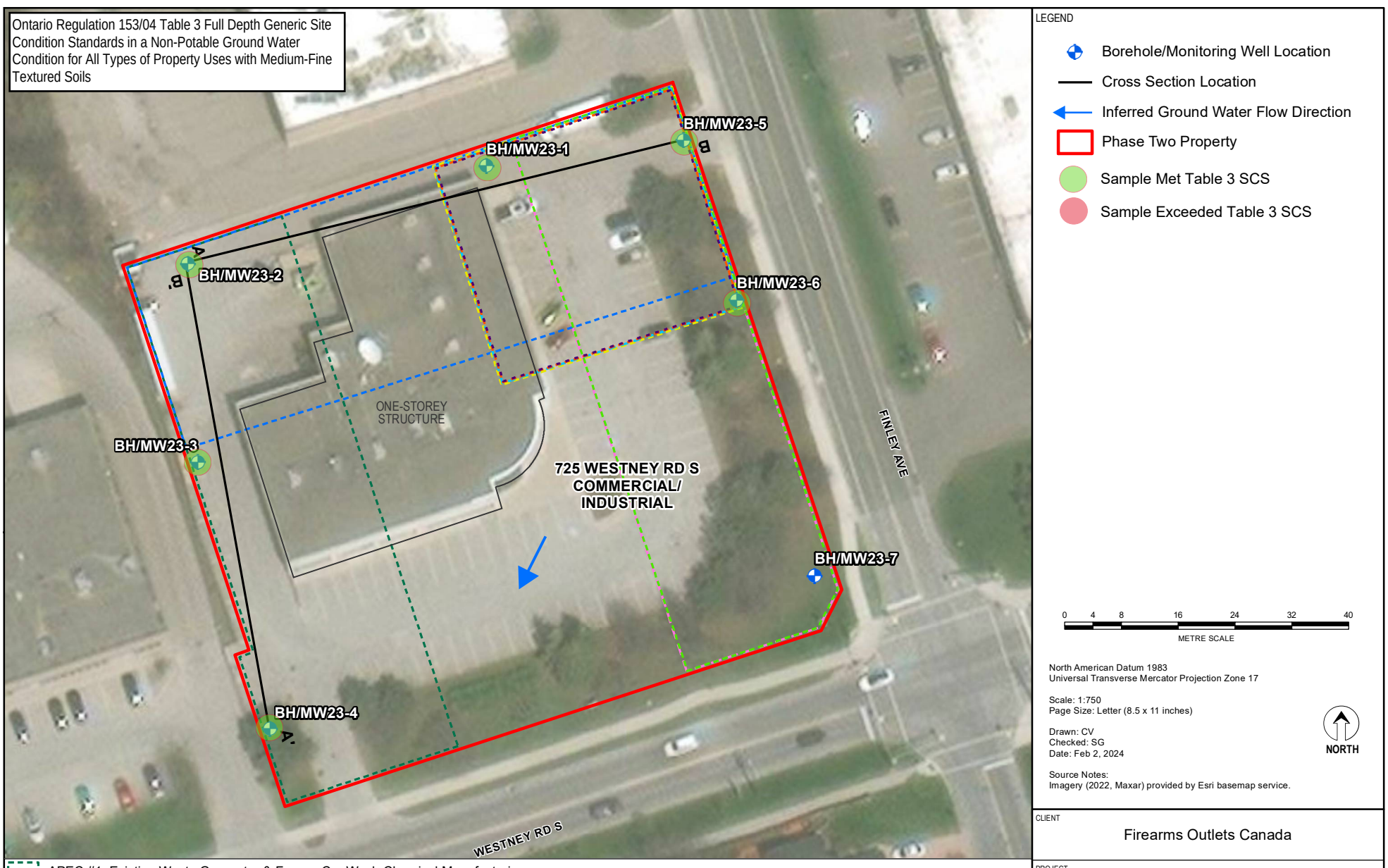
Ground Water Analytical Results: Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

			PHCs					BTEX			
			F1 (C6-C10)	F1-BTEX	F2 (C10-C16)	F3 (C16-C34)	F4 (C34-C50)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			750	750	150	500	500	430	18000	2300	4200
Sample Location	Sample ID	Sample Date									
MW23-1	23-1	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-2	23-2	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-3	23-3	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-4	23-4	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-5	23-5D	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50
MW23-6	23-6	14-Dec-23	<25	<25	<100	<250	<250	<0.50	<0.50	<0.50	<0.50



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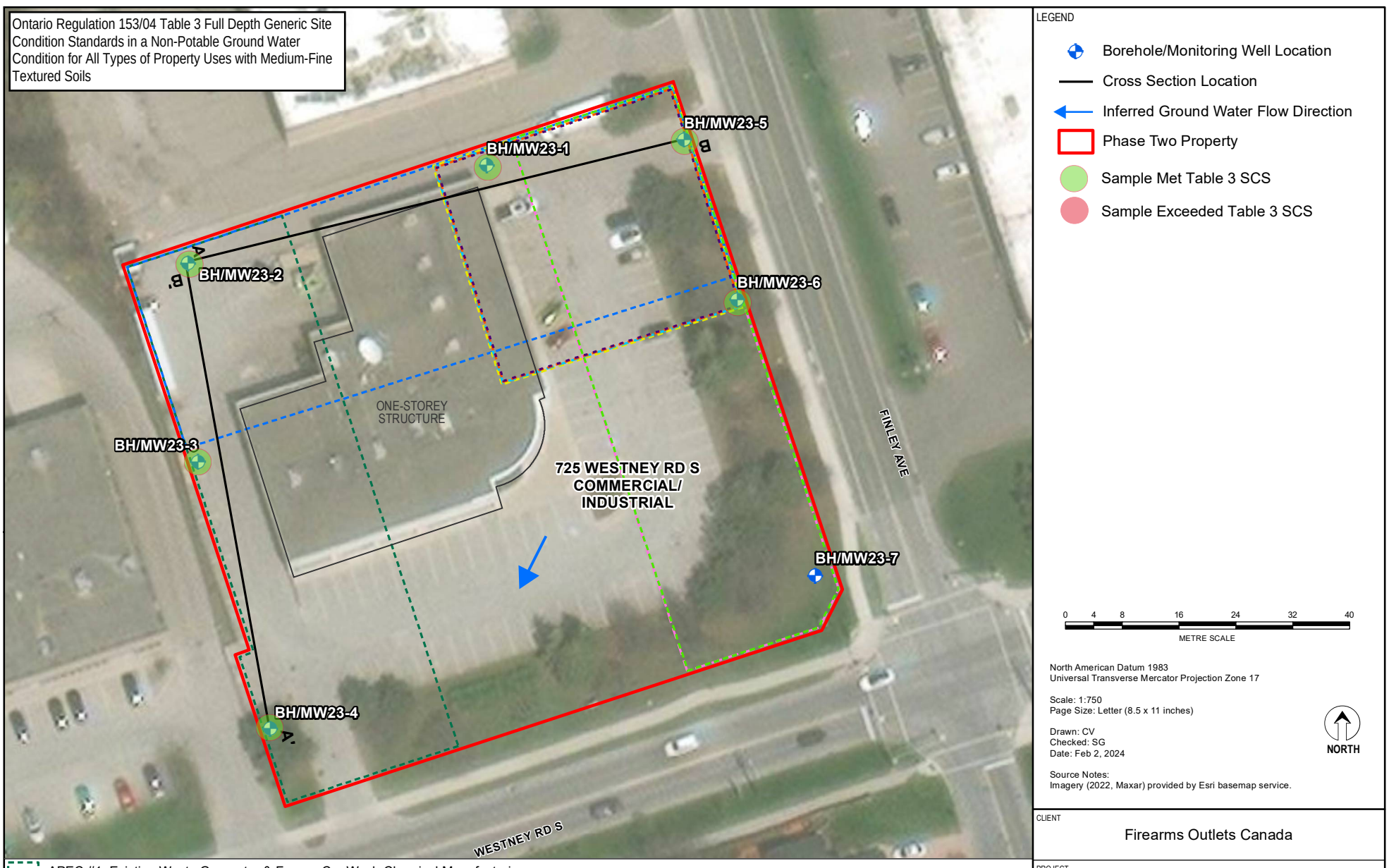
Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																				
			Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Dibromochloromethane	Chloroform	1,2-Dibromoethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Methylene Chloride	1,2-Dichloropropane
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			130000	430	85000	770	56	8.4	630	82000	22	0.83	9600	9600	67	4400	3100	12	17	17	17	5500	140
Sample Location	Sample ID	Sample Date																					
MW23-1	23-1	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-2	23-2	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-3	23-3	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-4	23-4	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-5	23-5	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-5	23-5D	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
MW23-6	23-6	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50
-	TRIPBLANK	14-Dec-23	<20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50

Ground Water Analytical Results: Volatile Organic Compounds (VOCs)

			VOCs																				
			cis-1,3-Dichloropropylene	trans-1,3-Dichloropropylene	1,3-Dichloropropylene (cis & trans)	Ethylbenzene	n-Hexane	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	MTBE	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	Vinyl chloride	o-Xylene	m+p-Xylenes	Xylenes (Total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			-	-	45	2300	520	1500000	580000	1400	9100	28	15	17	18000	6700	30	17	2500	1.7	4200	7300000	
Sample Location	Sample ID	Sample Date																					
MW23-1	23-1	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-2	23-2	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-3	23-3	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-4	23-4	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-5	23-5D	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
MW23-6	23-6	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50
-	TRIPBLANK	14-Dec-23	<0.30	<0.30	<0.50	<0.50	<0.50	<20	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.30	<0.40	<0.50



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APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop

APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT: Firearms Outlets Canada

PROJECT: 725 Westney Rd S, Ajax

TITLE: Ground Water Sample Locations (VOCs)

Palmer PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 5B

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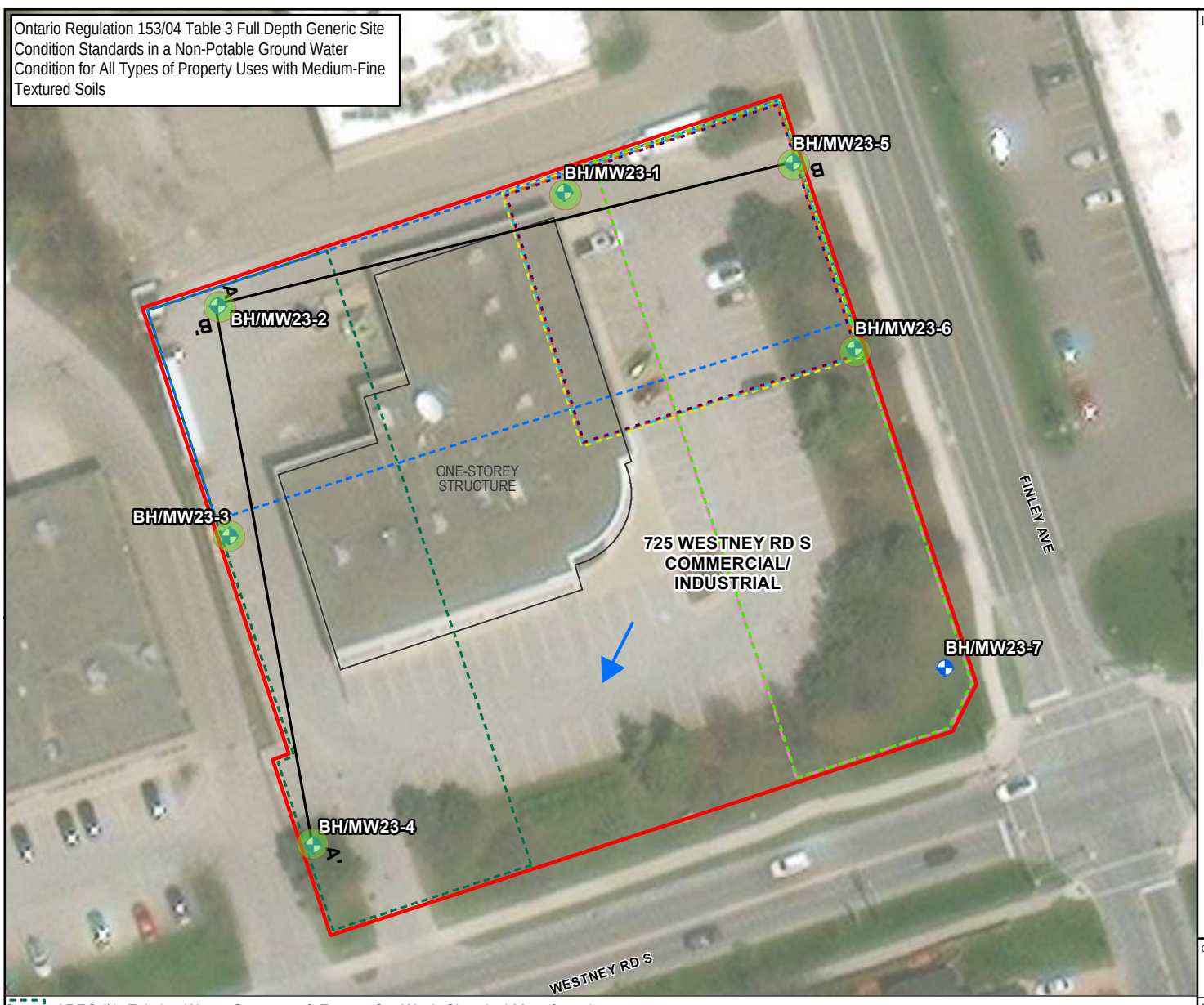
Ground Water Analytical Results: Metals

			Metals																	
			Antimony (Sb)-Dissolved	Arsenic (As)-Dissolved	Barium (Ba)-Dissolved	Beryllium (Be)-Dissolved	Boron (B)-Dissolved	Cadmium (Cd)-Dissolved	Chromium (Cr)-Dissolved	Cobalt (Co)-Dissolved	Copper (Cu)-Dissolved	Lead (Pb)-Dissolved	Molybdenum (Mo)-Dissolved	Nickel (Ni)-Dissolved	Selenium (Se)-Dissolved	Silver (Ag)-Dissolved	Sodium (Na)-Dissolved	Thallium (Tl)-Dissolved	Uranium (U)-Dissolved	Vanadium (V)-Dissolved	Zinc (Zn)-Dissolved
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			20000	1900	29000	67	45000	2.7	810	66	87	25	9200	490	63	1.5	2300000	510	420	250	1100
Sample Location	Sample ID	Sample Date																			
MW23-1	23-1	14-Dec-23	<1.0	<1.0	332	<0.2	109	0.338	<5.0	23.2	2.61	<0.5	12.5	19	2.74	<0.1	316000	0.12	8.18	<5.0	11.2
MW23-2	23-2	14-Dec-23	1.24	0.68	171	<0.02	160	0.122	<0.5	18.5	3.6	0.055	18.8	11.5	2.66	<0.01	119000	0.06	4.25	0.82	20.7
MW23-3	23-3	14-Dec-23	1.14	0.53	205	<0.02	135	0.0477	<0.5	7.04	1.88	<0.05	18.8	6.62	2.3	<0.01	262000	0.05	4.64	0.91	8.1
MW23-4	23-4	14-Dec-23	1.45	1.04	174	<0.02	180	0.0112	<0.5	0.4	3.53	<0.05	15	0.87	0.88	<0.01	23000	0.03	2.37	1.5	13.1
MW23-5	23-5	14-Dec-23	<0.1	0.63	293	<0.02	71	0.0069	<0.5	1.3	0.39	<0.05	0.373	1.14	0.06	<0.01	26000	<0.01	0.47	0.6	2.7
MW23-5	23-5D	14-Dec-23	<0.1	0.67	295	<0.02	76	0.0073	<0.5	1.35	0.4	<0.05	0.362	1.45	0.05	<0.01	25900	<0.01	0.48	0.6	2.8
MW23-6	23-6	14-Dec-23	<1.0	<1.0	228	<0.2	233	0.189	<5.0	21.6	2.5	<0.5	4.51	36.4	0.94	<0.1	344000	0.15	13.8	<5.0	15.4



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

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North American Datum 1983
Universal Transverse Mercator Projection Zone 17

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Page Size: Letter (8.5 x 11 inches)

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NORTH

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CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Ground Water Sample Locations (Metals)

Palmer | PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 5C

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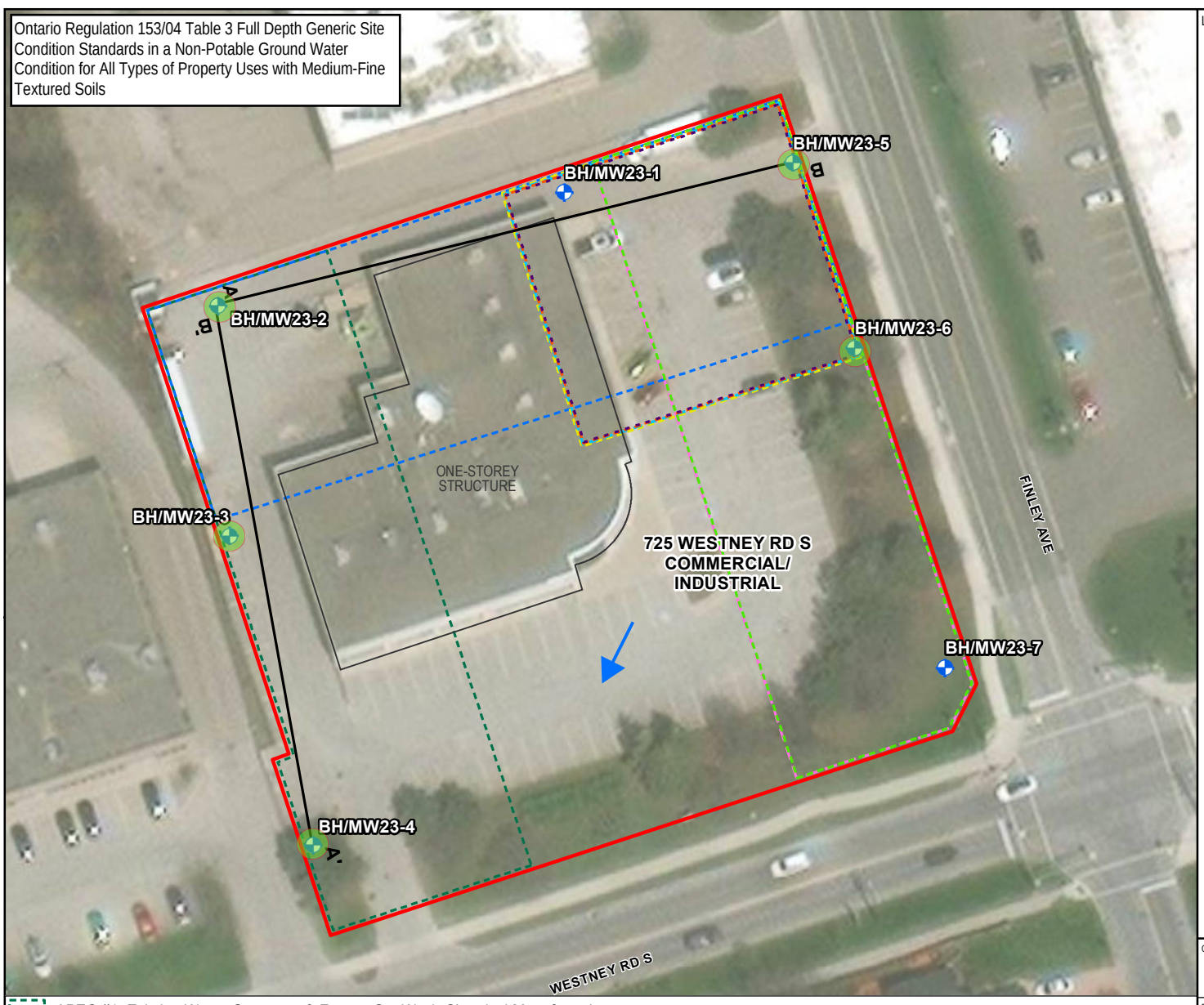
Ground Water Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

			PAHs																	
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1+2-Methylnaphthalenes*	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			1700	1.8	2.4	4.7	0.81	0.75	0.2	0.4	1	0.52	130	400	0.2	1800	1800	1800	6400	580	68
Sample Location	Sample ID	Sample Date																			
MW23-2	23-2	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-3	23-3D	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-4	23-4	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-5	23-5	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01
MW23-6	23-6	14-Dec-23	<0.016	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.015	<0.01	<0.01	<0.05	<0.02	<0.01



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
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- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40
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North American Datum 1983
Universal Transverse Mercator Projection Zone 17

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- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Ground Water Sample Locations (PAHs)

Palmer | PART OF SLR

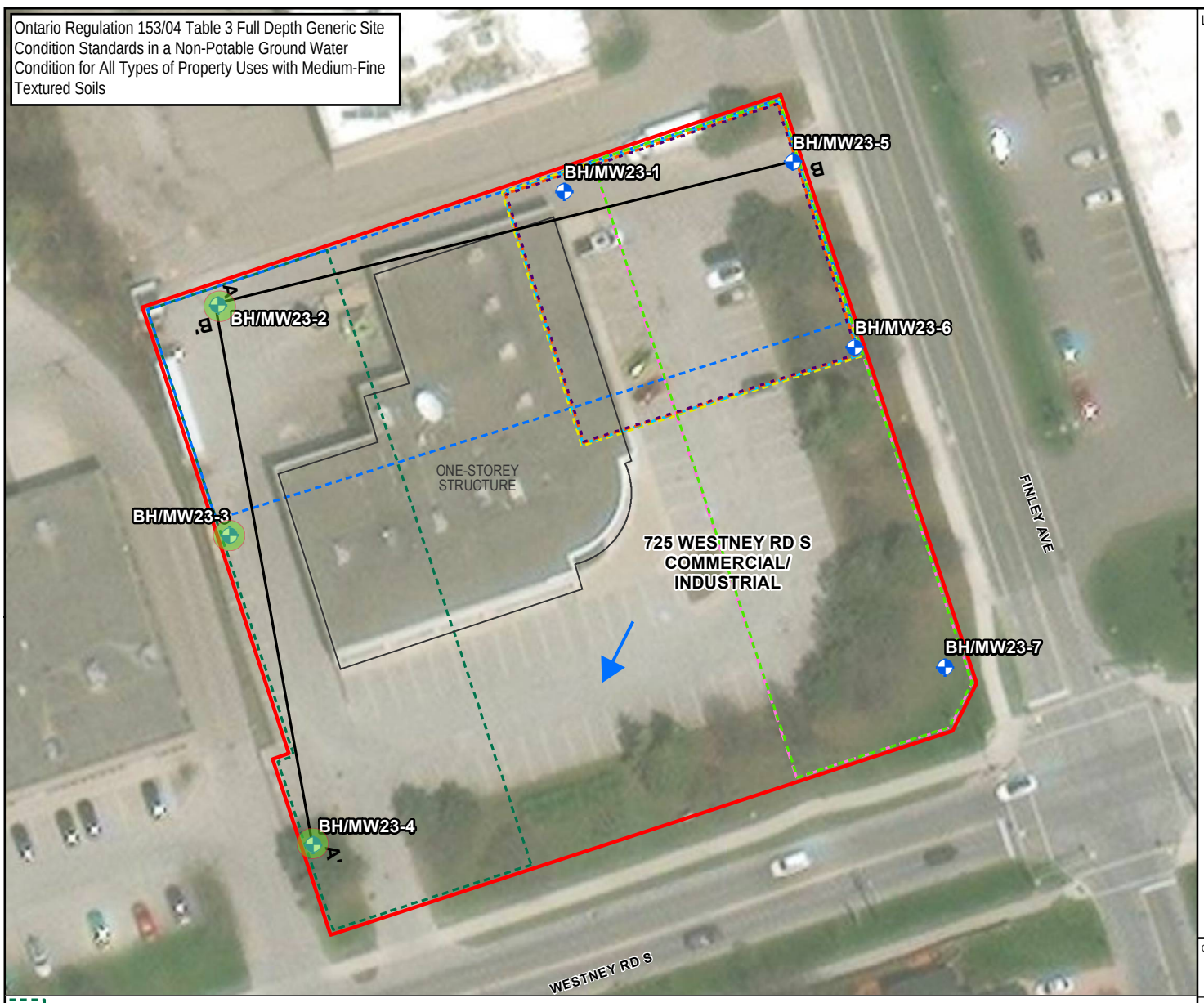
REF. NO. 1904320-MR-114-1

Drawing 5D

Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-114-1 (Dr 4 - Sample Locations).mxd

Ground Water Analytical Results: Organochlorine (OC) Pesticides

			OC Pesticides												
			DDD (Total)	DDE (Total)	DDT (Total)	Aldrin	Chlordane	Dieldrin	Endosulfan (Total)	Endrin	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Hexachlorocyclohexane Gamma (Lindane or Gamma BHC)	Methoxychlor
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
O.Reg. 153/04 MECP Guideline (2011), All Types of Property Use, Medium-Fine Textured Soil, Non-Potable Ground Water Condition			45	20	2.8	8.5	28	0.75	1.5	0.48	2.5	0.048	3.1	4.5	200	1.2	6.5
Sample Location	Sample ID	Sample Date															
MW23-2	23-2	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-3	23-3	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
MW23-4	23-4D	14-Dec-23	<0.006	<0.004	<0.006	<0.008	<0.011	<0.008	<0.01	<0.01	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008



LEGEND

- Borehole/Monitoring Well Location
- Cross Section Location
- Inferred Ground Water Flow Direction
- Phase Two Property
- Sample Met Table 3 SCS
- Sample Exceeded Table 3 SCS

0 4 8 16 24 32 40

METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:750
Page Size: Letter (8.5 x 11 inches)

Drawn: CV
Checked: SG
Date: Feb 2, 2024

NORTH

Source Notes:
Imagery (2022, Maxar) provided by Esri basemap service.

- APEC #1: Existing Waste Generator & Former Car Wash Chemical Manufacturing
- APEC #2: Existing Automotive Repair, Metal Fabrication, & Plastic and Chemical Manufacturing, Machine Shop Operations, and Former Printing, Metal Plating, Machine Shop Operations & Plastic Manufacturing, Former Storage Tank
- APEC #3: Existing Metal Coating and Treatment
- APEC #4: Existing Automotive Repair Operations
- APEC #5: Existing Automotive Repair & Painting Operations and Former Machine Shop Operations
- APEC #6: Former Automotive Repair Operations
- APEC #7: Existing Scrap Metal Facility, Former Forklift Repair Operations, and Former Woodworking Shop
- APEC #8: Former Petroleum Products Suppliers With Storage Tanks, Former and Current Machine Shops and Metal Products Manufacturing

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Ground Water Sample Locations (OC Pesticides)

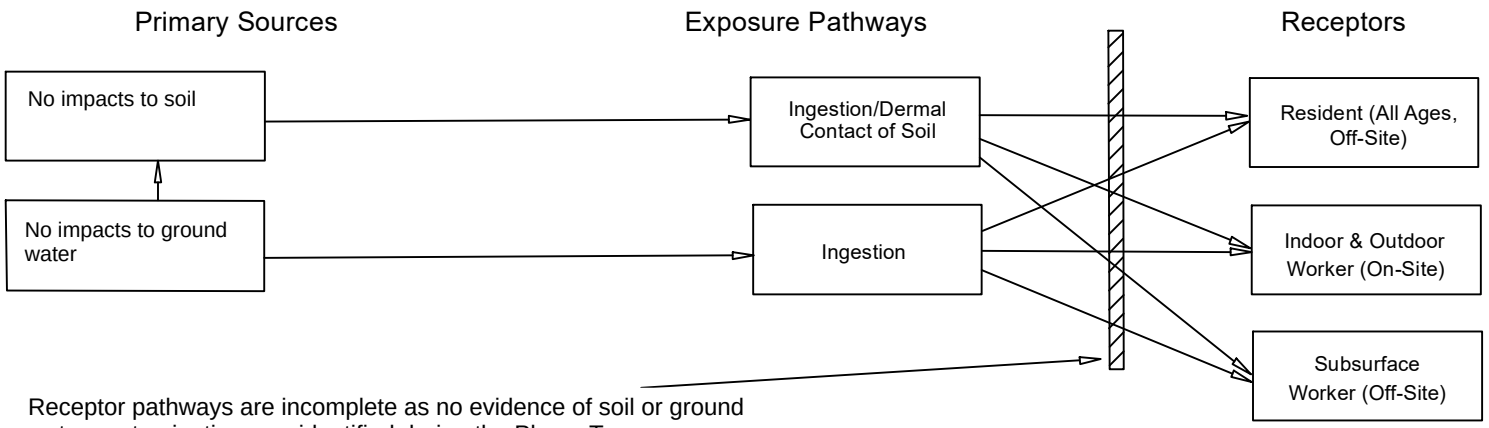
Palmer | PART OF SLR

REF. NO. 1904320-MR-114-1

Drawing 5E

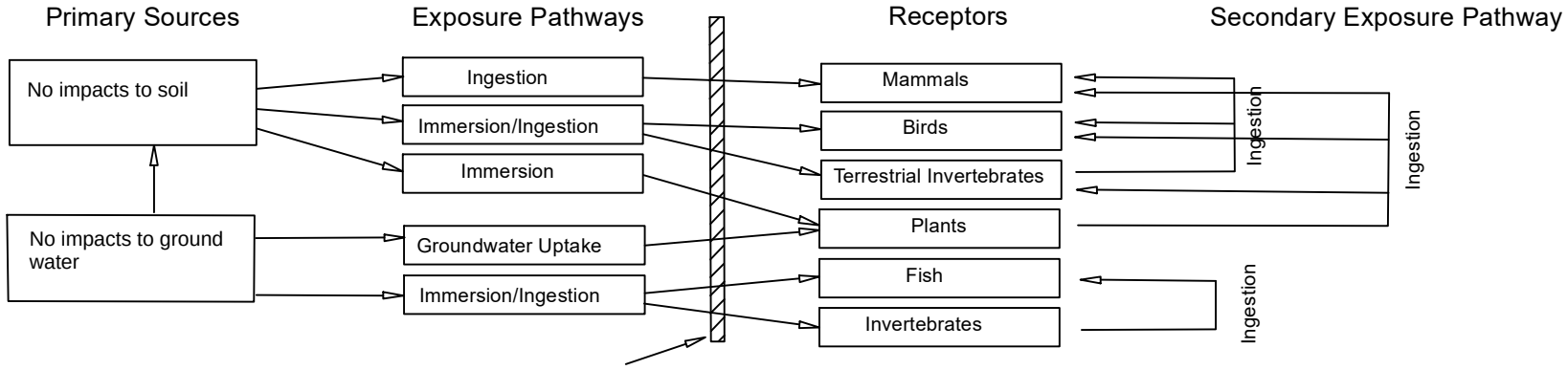
Document Path: G:\Shared drives\Projects 2019\19043 - The Biglieri Group\1904320 - 725 Westney Rd S, Ajax - ESA\GIS\1_Workspace\Task 1 - EC Figures\110-PhTwoDr\1904320-MR-114-1 (Dr 4 - Sample Locations).mxd

Human Receptors and Exposure Pathways



Receptor pathways are incomplete as no evidence of soil or ground water contamination was identified during the Phase Two Environmental Site Assessment.

Ecological Receptors and Exposure Pathways



Receptor pathways are incomplete as no evidence of soil or ground water contamination was identified during the Phase Two Environmental Site Assessment.

CLIENT
Firearms Outlets Canada

PROJECT
725 Westney Rd S, Ajax

TITLE
Conceptual Model for Human and Ecological Receptors

Palmer | PART OF SLR

REF. NO. 1904320-MR-115-1

Drawing 6

Photographs

Photograph Log
Firearms Outlets Canada
725 Westney Road South, Ajax, Ontario
Project No.: 1904320

	
Photograph 1 Photo depicts view of Drill Rig at BH23-4.	**Photograph 2** Photo depicts location of BH23-2.

	
Photograph 3 Photo depicts northwest portion of property.	**Photograph 4** Photo depicts location of MW23-6.

Photograph Log
Firearms Outlets Canada
725 Westney Road South, Ajax, Ontario
Project No.: 1904320

	
Photograph 5 Photo depicts location of MW23-7.	**Photograph 6** Photo depicts location of BH23-3.

Appendix A – General
A1 – Sampling and Analysis Plan

Site: 725 Westney Road South, Ajax Project #:1904320

Location ID	Media	Sample No.	Approximate Depth (m)	Date of Sample Collection	Date of Analysis	Chemical Analyses	Purpose and Justification
BH/MW23-1	Soil	23-1-4	2.29 – 3.05	November 28, 2023	December 5, 2023	Metals, As, Sb, Se	Collected to verify and/or refute APECs 2
		23-1-6	4.57 – 5.33	November 28, 2023	December 1, 2023	PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 2, 4, 5, 6 and 7.
		23-1-7	6.10 – 6.86	November 28, 2023	December 7, 2023	Grain Size	Soil sample which represents the property used to determine the grain size.
	GW	23-1	N/A	December 14, 2023	December 22, 2023	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 1, 2, 4, 5, 6 and 7.
BH/MW23-2	Soil	23-2-1	0.00 – 0.76	November 28, 2023	December 2, 2023	PAHs, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 1 and 2.
		23-2-2	0.76 – 1.52		December 3, 2023	OC Pesticides	Collected to verify and/or refute APEC 1.
		23-2-2D					QA/QC. Duplicate sample of 23-2-2.
		23-2-4	2.29 – 3.05		December 4, 2023	Metals, As, Sb, Se	Collected to verify and/or refute APECs 1 and 2.
		23-2-4D					QA/QC. Duplicate sample of 23-2-4.
	GW	23-2	N/A	December 14, 2023	December 20, 2023	Metals, As, Sb, Se, OC Pesticides, PAHs, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 1 and 2.
BH/MW23-3	Soil	23-3-4	2.29 – 3.05	November 28, 2023	December 3, 2023	Metals, As, Sb, Se, OC Pesticides	Collected to verify and/or refute APEC 1.
		23-3-7	4.57 – 5.33		December 3, 2023	PAHs, PHCs, VOCs	Collected to verify and/or refute APEC 1.
	GW	23-3	N/A	December 14, 2023	December 20, 2023	Metals, As, Sb, Se, OC Pesticides, PAHs, PHCs, VOCs	Collected to verify and/or refute APEC 1.
		23-3D			December 20, 2023	PAHs	QA/QC. Duplicate sample of 23-3.
BH/MW23-4	Soil	23-4-4	2.29 – 3.05	November 28, 2023	December 4, 2023	Metals, As, Sb, Se, OC Pesticides, PAHs, PHCs, VOCs	Collected to verify and/or refute APEC 1.
		23-4-4D			December 3, 2023	PAHs	QA/QC. Duplicate sample of 23-4-4.
	GW	23-4	N/A	December 14, 2023	December 20, 2023	Metals, As, Sb, Se, OC Pesticides, PAHs, PHCs, VOCs	Collected to verify and/or refute APEC 1.
		23-4D			December 20, 2023	OC Pesticides	QA/QC. Duplicate sample of 23-4.

BH/MW23-5	Soil	23-5-3	1.52 – 2.29	November 28, 2023	December 3, 2023	Metals, As, Sb, Se, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 2
		23-5-3D			December 3, 2023	PHCs, BTEX, VOCs	QA/QC. Duplicate sample of 23-5-3.
	GW	23-5	N/A	December 14, 2023	December 18, 2023	Metals, As, Sb, Se, PAHs, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 2, 3, 4, 5, 6, 7 and 8.
		23-5D			December 18, 2023	Metals, As, Sb, Se, PHCs, BTEX, VOCs	QA/QC. Duplicate sample of 23-5.
MW23-6	GW	23-6	N/A	December 14, 2023	December 18, 2023	Metals, As, Sb, Se, PAHs, PHCs, BTEX, VOCs	Collected to verify and/or refute APECs 3, 4, 5, 6, 7 and 8.
Site	GW	Trip Blank	N/A	December 14, 2023	December 18, 2023	VOCs	QA/QC.

Appendix A – General
A2 – Finalized Field Logs

LOG OF BOREHOLE BH23-1

PROJECT: Phase Two ESA 725 Westney Road South
CLIENT: Firearms Outlets Canada Inc.
PROJECT LOCATION: Town of Ajax, ON
DATUM: Geodetic
BH LOCATION: N 4854841.217 E 658696.877

Method: Solid Stem Auger
Diameter: 150 mm
Date: Nov-28-2023

REF. NO.: 1904320
ENCL NO.: 1
ORIGINATED BY SG
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
92.4	Ground Surface								
	FILL: clayey silt, trace gravel and cobbles, brown, moist		1	SS					Concrete
91.6 / 0.8	**FILL:** sandy silt, trace clay, trace gravel and cobbles		2	SS					
			3	SS					Bentonite
	: some odour, black staining		4	SS	Analysis: ICPMS Metals				
			5	SS					
88.6 / 3.8	**SANDY SILT:** trace gravel and cobbles, gray, moist								
	: some odour		6	SS	Analysis: PHCs/BTEX, VOCs				Sand
									W. L. 86.4 m Dec 14, 2023
			7	SS	Analysis: Gravimetic Sieve & Hydrometer				
	: wet		8	SS					
84.0 / 8.4	**END OF BOREHOLE:**								

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 5.94 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +3, ×3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

Palmer

LOG OF BOREHOLE BH23-2

PROJECT: Phase Two ESA 725 Westney Road South
CLIENT: Firearms Outlets Canada Inc.
PROJECT LOCATION: Town of Ajax, ON
DATUM: Geodetic
BH LOCATION: N 4854827.456 E 658654.784

Method: Solid Stem Auger
Diameter: 150 mm
Date: Nov-28-2023

REF. NO.: 1904320
ENCL NO.: 2
ORIGINATED BY SG
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
92.2	Ground Surface								
91.4	**FILL:** sand and gravel, trace silt, moist **:** some odour		1	SS	Analysis: PAHs, PHCs/BTEX, VOCs				Concrete
0.8 / 90.7	**FILL:** clayey silt, trace gravel and cobbles, brown, moist		2	SS	Analysis: OC Pesticides & Dup				
1.5	**FILL:** silty clay, trace organics and cobbles, brown, dry		3	SS					
			4	SS	Analysis: ICPMS Metals & Dup				Bentonite
88.4			5	SS					
3.8 / 87.6	**CLAYEY SILT:** trace gravel and cobbles, gray, moist								
4.6	**SANDY SILT:** trace clay, trace gravel, gray, moist		6	SS					
			7	SS					Sand
			8	SS					Screen
			9	SS					W. L. 83.9 m Dec 14, 2023
82.3									
9.9	**END OF BOREHOLE:** Notes: 1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole. 2. Borehole was open upon completion of drilling. 3. Water Level Readings: Date: December 14, 2023 W. L. Depth: 8.27 mBGS								

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +3, ×3: Numbers refer to Sensitivity; ε=3% Strain at Failure

LOG OF BOREHOLE BH23-3

PROJECT: Phase Two ESA 725 Westney Road South
CLIENT: Firearms Outlets Canada Inc.
PROJECT LOCATION: Town of Ajax, ON
DATUM: Geodetic
BH LOCATION: N 4854799.502 E 658656.195

Method: Solid Stem Auger
Diameter: 150 mm
Date: Nov-28-2023

REF. NO.: 1904320
ENCL NO.: 3
ORIGINATED BY SG
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
91.5	Ground Surface								
	FILL: sand and gravel, some cobbles, gray		1	SS					Concrete
			2	SS					
90.0									
1.5	**FILL:** silty clay, trace gravel, brown		3	SS					
	: moist		4	SS	Analysis: ICPMS Metals, OC Pesticides				Bentonite
			5	SS					
87.7									
3.8	**SANDY SILT:** trace boulders and cobbles, transition to gray, moist		6	SS					
			7	SS	Analysis: PAHs, PHC/BTEX, VOCs				
			8	SS	Analysis: pH				
			9	SS					
									Sand
			10	SS					Screen W. L. 83.8 m Dec 14, 2023
81.6			11	SS					
9.9	**END OF BOREHOLE:**								

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 7.73 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +3, ×3: Numbers refer to Sensitivity; ε=3% Strain at Failure

Palmer

LOG OF BOREHOLE BH23-4

PROJECT: Phase Two ESA 725 Westney Road South
REF. NO.: 1904320
CLIENT: Firearms Outlets Canada Inc.
Method: Solid Stem
ENCL NO.: 4
PROJECT LOCATION: Town of Ajax, ON
Auger Diameter: 150 mm
ORIGINATED BY SG
DATUM: Geodetic
Date: Nov-28-2023
BH LOCATION: N 4854761.968 E 658666.362
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
91.2	Ground Surface								
	FILL: clayey silt, trace gravel and sand, brown, moist		1	SS					Concrete
			2	SS					
			3	SS					Bentonite
88.1			4	SS	Analysis: ICPMS Metals, OC Pesticides, PAHs, PHCs/BTEX, VOCs & PAH Dup				
3.1	**SANDY SILT:** trace gravel, gray, moist		5	SS					
			6	SS					Sand
									Screen
			7	SS					W. L. 85.1 m Dec 14, 2023
			8	SS					
82.8									
8.4	**END OF BOREHOLE:**								

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 6.12 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+3, ×3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

Palmer

LOG OF BOREHOLE BH23-5

PROJECT: Phase Two ESA 725 Westney Road South
REF. NO.: 1904320
CLIENT: Firearms Outlets Canada Inc.
Method: Solid Stem
ENCL NO.: 5
PROJECT LOCATION: Town of Ajax, ON
Auger Diameter: 150 mm
ORIGINATED BY SG
DATUM: Geodetic
Date: Nov-28-2023
BH LOCATION: N 4854844.853 E 658725.42
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
92.6	Ground Surface								
	FILL: clayey silt, trace sand and gravel, brown, dry		1	SS					Concrete
			2	SS	Analysis: pH & Dup				
	: some odour, black staining								
90.6			3	SS	Analysis: ICPMS Metals, PHCs/BTEX, VOCs & PHC/BTEX/VOC Dup				Bentonite
1.9	: some odour, black staining								
			4	SS					
			5	SS					
88.7									
3.8	**SANDY SILT:** trace gravel, grey, moist								
			6	SS					Sand
									Screen
			7	SS					W. L. 86.5 m Dec 14, 2023
			8	SS					
	: wet								
84.2									
8.4	**END OF BOREHOLE:**								

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 6.10 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

Palmer

LOG OF BOREHOLE BH23-6

PROJECT: Phase Two ESA 725 Westney Road South
CLIENT: Firearms Outlets Canada Inc.
PROJECT LOCATION: Town of Ajax, ON
DATUM: Geodetic
BH LOCATION: N 4854822.608 E 658732.323

Method: Solid Stem Auger
Diameter: 150 mm
Date: Nov-28-2023

REF. NO.: 1904320
ENCL NO.: 6
ORIGINATED BY SG
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
92.5	Ground Surface					5 10 15 20 25			
	No sample collected, Straight Auger for Well Installation:								Concrete
									Bentonite
									Sand
									Screen
83.9									W. L. 84.2 m Dec 14, 2023
8.7	**END OF BOREHOLE:**								

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 8.39 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

Palmer

LOG OF BOREHOLE BH23-7

PROJECT: Phase Two ESA 725 Westney Road South
CLIENT: Firearms Outlets Canada Inc.
PROJECT LOCATION: Town of Ajax, ON
DATUM: Geodetic
BH LOCATION: N 4854783.544 E 658743.108

Method: Solid Stem Auger
Diameter: 150 mm
Date: Nov-28-2023

REF. NO.: 1904320
ENCL NO.: 7
ORIGINATED BY SG
CHECKED BY KN

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLE REMARKS	Head Space Combustible Vapor Reading (ppm)	LABORATORY ANALYSIS AND REMARKS	GROUND WATER CONDITIONS	WELL CONSTRUCTION DETAILS
92.4	Ground Surface					5 10 15 20 25			
	No sample collected, Straight Auger for Well Installation:								Concrete
									Bentonite
									Sand
									Screen
83.7									
8.7	**END OF BOREHOLE:**								W. L. 83.8 m Dec 14, 2023

Notes:
1. Upon completion of drilling, one 50mm diameter monitoring well was installed in the borehole.
2. Borehole was open upon completion of drilling.
3. Water Level Readings:
Date: December 14, 2023
W. L. Depth: 8.62 mBGS

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ε=3% Strain at Failure

Appendix A – General

A3 – Certificates of Analysis or Analytical Reports from Laboratories

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2338972**	Page	: 1 of 22
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 29-Nov-2023 13:55
PO	: ----	Date Analysis Commenced	: 30-Nov-2023
C-O-C number	: ----	Issue Date	: 07-Dec-2023 15:53
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
%	percent
mg/kg	milligrams per kilogram
pH units	pH units

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
SUR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Physical Tests											
Moisture	----	E144/WT	%		----	8.49	----	8.98	8.55	8.45	----
Particle Size											
Grain size curve	----	E185/SK	-		----	----	See Attached	----	----	----	----
Percent Passing											
Passing (9.5mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (4.75mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (19mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (25.4mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (38.1mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (50.8mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (76.2mm)	----	E181/SK	%		----	----	100	----	----	----	----
Passing (1.0mm)	----	E182/SK	%		----	----	94.1	----	----	----	----
Passing (0.841mm)	----	E182/SK	%		----	----	93.0	----	----	----	----
Passing (0.50mm)	----	E182/SK	%		----	----	87.8	----	----	----	----
Passing (0.420mm)	----	E182/SK	%		----	----	86.4	----	----	----	----
Passing (0.250mm)	----	E182/SK	%		----	----	78.4	----	----	----	----
Passing (0.149mm)	----	E182/SK	%		----	----	68.3	----	----	----	----
Passing (0.125mm)	----	E182/SK	%		----	----	63.7	----	----	----	----
Passing (0.075mm)	----	E182/SK	%		----	----	54.2	----	----	----	----
Passing (0.063mm)	----	E182/SK	%		----	----	49.6	----	----	----	----
Passing (0.05mm)	----	E182/SK	%		----	----	44.7	----	----	----	----
Passing (0.0312mm)	----	E183/SK	%		----	----	38.6	----	----	----	----
Passing (0.020mm)	----	E183/SK	%		----	----	34.0	----	----	----	----
Passing (0.005mm)	----	E183/SK	%		----	----	22.0	----	----	----	----
Passing (0.004mm)	----	E183/SK	%		----	----	19.9	----	----	----	----
Passing (0.002mm)	----	E183/SK	%		----	----	14.4	----	----	----	----
Passing (2.0mm)	----	E181/SK	%		----	----	100	----	----	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Metals											
Antimony	7440-36-0	E440C/WT	mg/kg		<0.10	----	----	----	----	----	<0.10
Arsenic	7440-38-2	E440C/WT	mg/kg		2.38	----	----	----	----	----	2.44
Barium	7440-39-3	E440C/WT	mg/kg		41.1	----	----	----	----	----	44.1
Beryllium	7440-41-7	E440C/WT	mg/kg		0.32	----	----	----	----	----	0.29
Boron	7440-42-8	E440C/WT	mg/kg		5.4	----	----	----	----	----	<5.0
Cadmium	7440-43-9	E440C/WT	mg/kg		0.069	----	----	----	----	----	0.067
Chromium	7440-47-3	E440C/WT	mg/kg		11.9	----	----	----	----	----	11.7
Cobalt	7440-48-4	E440C/WT	mg/kg		5.62	----	----	----	----	----	6.96
Copper	7440-50-8	E440C/WT	mg/kg		10.5	----	----	----	----	----	12.0
Lead	7439-92-1	E440C/WT	mg/kg		6.03	----	----	----	----	----	6.48
Molybdenum	7439-98-7	E440C/WT	mg/kg		0.50	----	----	----	----	----	0.49
Nickel	7440-02-0	E440C/WT	mg/kg		12.5	----	----	----	----	----	13.7
Selenium	7782-49-2	E440C/WT	mg/kg		<0.20	----	----	----	----	----	<0.20
Silver	7440-22-4	E440C/WT	mg/kg		<0.10	----	----	----	----	----	<0.10
Thallium	7440-28-0	E440C/WT	mg/kg		0.165	----	----	----	----	----	0.163
Uranium	7440-61-1	E440C/WT	mg/kg		0.488	----	----	----	----	----	0.480
Vanadium	7440-62-2	E440C/WT	mg/kg		20.4	----	----	----	----	----	20.1
Zinc	7440-66-6	E440C/WT	mg/kg		26.2	----	----	----	----	----	26.7
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	mg/kg		----	<0.50	----	<0.50	----	----	----
Benzene	71-43-2	E611D/WT	mg/kg		----	<0.0050	----	<0.0050	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Bromoform	75-25-2	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Bromomethane	74-83-9	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Chlorobenzene	108-90-7	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Chloroform	67-66-3	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Volatile Organic Compounds											
Dibromoethane, 1,2-	106-93-4	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloromethane	75-09-2	E611D/WT	mg/kg		----	<0.045	----	<0.045	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	mg/kg		----	<0.030	----	<0.030	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	mg/kg		----	<0.030	----	<0.030	----	----	----
Ethylbenzene	100-41-4	E611D/WT	mg/kg		----	<0.015	----	<0.015	----	----	----
Hexane, n-	110-54-3	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	mg/kg		----	<0.50	----	<0.50	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	mg/kg		----	<0.50	----	<0.50	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	mg/kg		----	<0.040	----	<0.040	----	----	----
Styrene	100-42-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Toluene	108-88-3	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----
Trichloroethylene	79-01-6	E611D/WT	mg/kg		----	<0.010	----	<0.010	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	mg/kg		----	<0.050	----	<0.050	----	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Volatile Organic Compounds											
Vinyl chloride	75-01-4	E611D/WT	mg/kg	----	<0.020	----	<0.020	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	mg/kg	----	<0.030	----	<0.030	----	----	----
Xylene, o-	95-47-6	E611D/WT	mg/kg	----	<0.030	----	<0.030	----	----	----
Xylenes, total	1330-20-7	E611D/WT	mg/kg	----	<0.050	----	<0.050	----	----	----
BTEX, total	----	E611D/WT	mg/kg	----	<0.10	----	<0.10	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1/WT	mg/kg	----	<5.0	----	<5.0	----	----	----
F2 (C10-C16)	----	E601.SG-L/WT	mg/kg	----	19	----	<10	----	----	----
F2-Naphthalene	----	EC600/WT	mg/kg	----	----	----	<25	----	----	----
F3 (C16-C34)	----	E601.SG-L/WT	mg/kg	----	69	----	<50	----	----	----
F3-PAH	n/a	EC600/WT	mg/kg	----	----	----	<50	----	----	----
F4 (C34-C50)	----	E601.SG-L/WT	mg/kg	----	<50	----	<50	----	----	----
F1-BTEX	----	EC580/WT	mg/kg	----	<5.0	----	<5.0	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	mg/kg	----	88	----	<80	----	----	----
Chromatogram to baseline at nC50	n/a	E601.SG-L/WT	-	----	YES	----	YES	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG-L/WT	%	----	85.2	----	84.4	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1/WT	%	----	125	----	139	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%	----	104	----	105	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%	----	100	----	99.5	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----
Acenaphthylene	208-96-8	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----
Anthracene	120-12-7	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	mg/kg	----	----	----	<0.050	----	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Polycyclic Aromatic Hydrocarbons											
Benzo(g,h,i)perylene	191-24-2	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Chrysene	218-01-9	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Fluoranthene	206-44-0	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Fluorene	86-73-7	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	mg/kg		----	----	----	<0.030	----	----	----
Methylnaphthalene, 1+2-	----	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	mg/kg		----	----	----	<0.030	----	----	----
Naphthalene	91-20-3	E641A/WT	mg/kg		----	----	----	<0.010	----	----	----
Phenanthrene	85-01-8	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Pyrene	129-00-0	E641A/WT	mg/kg		----	----	----	<0.050	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Acridine-d9	34749-75-2	E641A/WT	%		----	----	----	84.7	----	----	----
Chrysene-d12	1719-03-5	E641A/WT	%		----	----	----	95.4	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	%		----	----	----	93.0	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	%		----	----	----	90.4	----	----	----
Organochlorine Pesticides											
Aldrin	309-00-2	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Chlordane, cis- (alpha)	5103-71-9	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Chlordane, total	57-74-9	E660F/WT	mg/kg		----	----	----	----	<0.030	<0.030	----
Chlordane, trans- (gamma)	5103-74-2	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDD, 2,4'-	53-19-0	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDD, 4,4'-	72-54-8	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDD, total	----	E660F/WT	mg/kg		----	----	----	----	<0.030	<0.030	----
DDE, 2,4'-	3424-82-6	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDE, 4,4'-	72-55-9	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-1-4	23-1-6	23-1-7	23-2-1	23-2-2	23-2-2D	23-2-4
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-001	WT2338972-002	WT2338972-003	WT2338972-004	WT2338972-005	WT2338972-006	WT2338972-007
Organochlorine Pesticides											
DDE, total	----	E660F/WT	mg/kg		----	----	----	----	<0.030	<0.030	----
DDT, 2,4'-	789-02-6	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDT, 4,4'-	50-29-3	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
DDT, total	----	E660F/WT	mg/kg		----	----	----	----	<0.030	<0.030	----
Dieldrin	60-57-1	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Endosulfan, alpha-	959-98-8	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Endosulfan, beta-	33213-65-9	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Endosulfan, total	----	E660F/WT	mg/kg		----	----	----	----	<0.030	<0.030	----
Endrin	72-20-8	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Heptachlor	76-44-8	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Heptachlor epoxide	1024-57-3	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Hexachlorobenzene	118-74-1	E660F/WT	mg/kg		----	----	----	----	<0.010	<0.010	----
Hexachlorobutadiene	87-68-3	E660F/WT	mg/kg		----	----	----	----	<0.010	<0.010	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F/WT	mg/kg		----	----	----	----	<0.010	<0.010	----
Hexachloroethane	67-72-1	E660F/WT	mg/kg		----	----	----	----	<0.010	<0.010	----
Methoxychlor	72-43-5	E660F/WT	mg/kg		----	----	----	----	<0.020	<0.020	----
Organochlorine Pesticides Surrogates											
Decachlorobiphenyl	2051-24-3	E660F/WT	%		----	----	----	----	134	162 SUR-ND	----
Tetrachloro-m-xylene	877-09-8	E660F/WT	%		----	----	----	----	97.2	102	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-2-4D	23-3-4	23-3-7	23-3-8	23-4-4	23-4-4D	23-5-2
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-008	WT2338972-009	WT2338972-010	WT2338972-011	WT2338972-012	WT2338972-013	WT2338972-014
Physical Tests											
Moisture	----	E144/WT	%		----	8.85	9.38	----	8.68	8.13	----
pH (1:2 soil:CaCl2-aq)	----	E108A/WT	pH units		----	----	----	7.93	----	----	7.95
Metals											
Antimony	7440-36-0	E440C/WT	mg/kg		<0.10	<0.10	----	----	<0.10	----	----
Arsenic	7440-38-2	E440C/WT	mg/kg		2.62	2.19	----	----	2.63	----	----
Barium	7440-39-3	E440C/WT	mg/kg		48.0	61.0	----	----	60.1	----	----
Beryllium	7440-41-7	E440C/WT	mg/kg		0.29	0.29	----	----	0.30	----	----
Boron	7440-42-8	E440C/WT	mg/kg		5.1	6.0	----	----	6.6	----	----
Cadmium	7440-43-9	E440C/WT	mg/kg		0.071	0.085	----	----	0.078	----	----
Chromium	7440-47-3	E440C/WT	mg/kg		13.2	12.2	----	----	12.0	----	----
Cobalt	7440-48-4	E440C/WT	mg/kg		7.70	5.39	----	----	7.07	----	----
Copper	7440-50-8	E440C/WT	mg/kg		11.9	9.76	----	----	10.0	----	----
Lead	7439-92-1	E440C/WT	mg/kg		6.62	5.52	----	----	6.63	----	----
Molybdenum	7439-98-7	E440C/WT	mg/kg		0.55	0.32	----	----	0.53	----	----
Nickel	7440-02-0	E440C/WT	mg/kg		16.2	11.5	----	----	16.0	----	----
Selenium	7782-49-2	E440C/WT	mg/kg		<0.20	<0.20	----	----	<0.20	----	----
Silver	7440-22-4	E440C/WT	mg/kg		<0.10	<0.10	----	----	<0.10	----	----
Thallium	7440-28-0	E440C/WT	mg/kg		0.200	0.132	----	----	0.178	----	----
Uranium	7440-61-1	E440C/WT	mg/kg		0.523	0.485	----	----	0.589	----	----
Vanadium	7440-62-2	E440C/WT	mg/kg		22.3	22.5	----	----	22.1	----	----
Zinc	7440-66-6	E440C/WT	mg/kg		28.0	27.9	----	----	28.5	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	mg/kg		----	----	<0.50	----	<0.50	----	----
Benzene	71-43-2	E611D/WT	mg/kg		----	----	<0.0050	----	<0.0050	----	----
Bromodichloromethane	75-27-4	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Bromoform	75-25-2	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Bromomethane	74-83-9	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Carbon tetrachloride	56-23-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-2-4D	23-3-4	23-3-7	23-3-8	23-4-4	23-4-4D	23-5-2
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-008	WT2338972-009	WT2338972-010	WT2338972-011	WT2338972-012	WT2338972-013	WT2338972-014
Volatile Organic Compounds											
Chlorobenzene	108-90-7	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Chloroform	67-66-3	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dibromochloromethane	124-48-1	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloromethane	75-09-2	E611D/WT	mg/kg		----	----	<0.045	----	<0.045	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	mg/kg		----	----	<0.030	----	<0.030	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	mg/kg		----	----	<0.030	----	<0.030	----	----
Ethylbenzene	100-41-4	E611D/WT	mg/kg		----	----	<0.015	----	<0.015	----	----
Hexane, n-	110-54-3	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	mg/kg		----	----	<0.50	----	<0.50	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	mg/kg		----	----	<0.50	----	<0.50	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	mg/kg		----	----	<0.040	----	<0.040	----	----
Styrene	100-42-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Tetrachloroethylene	127-18-4	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Toluene	108-88-3	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-2-4D	23-3-4	23-3-7	23-3-8	23-4-4	23-4-4D	23-5-2
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-008	WT2338972-009	WT2338972-010	WT2338972-011	WT2338972-012	WT2338972-013	WT2338972-014
Volatile Organic Compounds											
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Trichloroethylene	79-01-6	E611D/WT	mg/kg		----	----	<0.010	----	<0.010	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
Vinyl chloride	75-01-4	E611D/WT	mg/kg		----	----	<0.020	----	<0.020	----	----
Xylene, m+p-	179601-23-1	E611D/WT	mg/kg		----	----	<0.030	----	<0.030	----	----
Xylene, o-	95-47-6	E611D/WT	mg/kg		----	----	<0.030	----	<0.030	----	----
Xylenes, total	1330-20-7	E611D/WT	mg/kg		----	----	<0.050	----	<0.050	----	----
BTEX, total	----	E611D/WT	mg/kg		----	----	<0.10	----	<0.10	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1/WT	mg/kg		----	----	<5.0	----	<5.0	----	----
F2 (C10-C16)	----	E601.SG-L/WT	mg/kg		----	----	19	----	<10	----	----
F2-Naphthalene	----	EC600/WT	mg/kg		----	----	<25	----	<25	----	----
F3 (C16-C34)	----	E601.SG-L/WT	mg/kg		----	----	58	----	<50	----	----
F3-PAH	n/a	EC600/WT	mg/kg		----	----	58	----	<50	----	----
F4 (C34-C50)	----	E601.SG-L/WT	mg/kg		----	----	<50	----	<50	----	----
F1-BTEX	----	EC580/WT	mg/kg		----	----	<5.0	----	<5.0	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	mg/kg		----	----	<80	----	<80	----	----
Chromatogram to baseline at nC50	n/a	E601.SG-L/WT	-		----	----	YES	----	YES	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG-L/WT	%		----	----	84.6	----	88.4	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1/WT	%		----	----	131	----	90.8	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		----	----	101	----	109	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		----	----	97.6	----	106	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Acenaphthylene	208-96-8	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Anthracene	120-12-7	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-2-4D	23-3-4	23-3-7	23-3-8	23-4-4	23-4-4D	23-5-2
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-008	WT2338972-009	WT2338972-010	WT2338972-011	WT2338972-012	WT2338972-013	WT2338972-014
Polycyclic Aromatic Hydrocarbons											
Benz(a)anthracene	56-55-3	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Benzo(a)pyrene	50-32-8	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Chrysene	218-01-9	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Fluoranthene	206-44-0	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Fluorene	86-73-7	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	mg/kg		----	----	<0.030	----	<0.030	<0.030	----
Methylnaphthalene, 1+2-	----	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	mg/kg		----	----	<0.030	----	<0.030	<0.030	----
Naphthalene	91-20-3	E641A/WT	mg/kg		----	----	<0.010	----	<0.010	<0.010	----
Phenanthrene	85-01-8	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Pyrene	129-00-0	E641A/WT	mg/kg		----	----	<0.050	----	<0.050	<0.050	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Acridine-d9	34749-75-2	E641A/WT	%		----	----	85.6	----	81.6	78.8	----
Chrysene-d12	1719-03-5	E641A/WT	%		----	----	97.3	----	92.4	92.9	----
Naphthalene-d8	1146-65-2	E641A/WT	%		----	----	97.3	----	94.1	93.4	----
Phenanthrene-d10	1517-22-2	E641A/WT	%		----	----	92.7	----	89.1	85.6	----
Organochlorine Pesticides											
Aldrin	309-00-2	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Chlordane, cis- (alpha)	5103-71-9	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Chlordane, total	57-74-9	E660F/WT	mg/kg		----	<0.030	----	----	<0.030	----	----
Chlordane, trans- (gamma)	5103-74-2	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDD, 2,4'-	53-19-0	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDD, 4,4'-	72-54-8	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-2-4D	23-3-4	23-3-7	23-3-8	23-4-4	23-4-4D	23-5-2
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00
				Sub-Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
					WT2338972-008	WT2338972-009	WT2338972-010	WT2338972-011	WT2338972-012	WT2338972-013	WT2338972-014
Organochlorine Pesticides											
DDD, total	----	E660F/WT	mg/kg		----	<0.030	----	----	<0.030	----	----
DDE, 2,4'-	3424-82-6	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDE, 4,4'-	72-55-9	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDE, total	----	E660F/WT	mg/kg		----	<0.030	----	----	<0.030	----	----
DDT, 2,4'-	789-02-6	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDT, 4,4'-	50-29-3	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
DDT, total	----	E660F/WT	mg/kg		----	<0.030	----	----	<0.030	----	----
Dieldrin	60-57-1	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Endosulfan, alpha-	959-98-8	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Endosulfan, beta-	33213-65-9	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Endosulfan, total	----	E660F/WT	mg/kg		----	<0.030	----	----	<0.030	----	----
Endrin	72-20-8	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Heptachlor	76-44-8	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Heptachlor epoxide	1024-57-3	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Hexachlorobenzene	118-74-1	E660F/WT	mg/kg		----	<0.010	----	----	<0.010	----	----
Hexachlorobutadiene	87-68-3	E660F/WT	mg/kg		----	<0.010	----	----	<0.010	----	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F/WT	mg/kg		----	<0.010	----	----	<0.010	----	----
Hexachloroethane	67-72-1	E660F/WT	mg/kg		----	<0.010	----	----	<0.010	----	----
Methoxychlor	72-43-5	E660F/WT	mg/kg		----	<0.020	----	----	<0.020	----	----
Organochlorine Pesticides Surrogates											
Decachlorobiphenyl	2051-24-3	E660F/WT	%		----	146	----	----	97.2	----	----
Tetrachloro-m-xylene	877-09-8	E660F/WT	%		----	97.8	----	----	79.1	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-5-2D	23-5-3	23-5-3D	----	----	----	----
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	----	----	----	----
				Sub-Matrix	Soil	Soil	Soil	----	----	----	----
					WT2338972-015	WT2338972-016	WT2338972-017	--------	--------	--------	--------
Physical Tests											
Moisture	----	E144/WT	%		----	7.47	7.50	----	----	----	----
pH (1:2 soil:CaCl2-aq)	----	E108A/WT	pH units		7.97	----	----	----	----	----	----
Metals											
Antimony	7440-36-0	E440C/WT	mg/kg		----	<0.10	----	----	----	----	----
Arsenic	7440-38-2	E440C/WT	mg/kg		----	2.89	----	----	----	----	----
Barium	7440-39-3	E440C/WT	mg/kg		----	76.4	----	----	----	----	----
Beryllium	7440-41-7	E440C/WT	mg/kg		----	0.33	----	----	----	----	----
Boron	7440-42-8	E440C/WT	mg/kg		----	6.7	----	----	----	----	----
Cadmium	7440-43-9	E440C/WT	mg/kg		----	0.080	----	----	----	----	----
Chromium	7440-47-3	E440C/WT	mg/kg		----	14.0	----	----	----	----	----
Cobalt	7440-48-4	E440C/WT	mg/kg		----	8.41	----	----	----	----	----
Copper	7440-50-8	E440C/WT	mg/kg		----	11.8	----	----	----	----	----
Lead	7439-92-1	E440C/WT	mg/kg		----	9.09	----	----	----	----	----
Molybdenum	7439-98-7	E440C/WT	mg/kg		----	0.82	----	----	----	----	----
Nickel	7440-02-0	E440C/WT	mg/kg		----	19.9	----	----	----	----	----
Selenium	7782-49-2	E440C/WT	mg/kg		----	<0.20	----	----	----	----	----
Silver	7440-22-4	E440C/WT	mg/kg		----	<0.10	----	----	----	----	----
Thallium	7440-28-0	E440C/WT	mg/kg		----	0.265	----	----	----	----	----
Uranium	7440-61-1	E440C/WT	mg/kg		----	0.572	----	----	----	----	----
Vanadium	7440-62-2	E440C/WT	mg/kg		----	22.6	----	----	----	----	----
Zinc	7440-66-6	E440C/WT	mg/kg		----	27.7	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	mg/kg		----	<0.50	<0.50	----	----	----	----
Benzene	71-43-2	E611D/WT	mg/kg		----	<0.0050	<0.0050	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	mg/kg		----	<0.050	<0.050	----	----	----	----
Bromoform	75-25-2	E611D/WT	mg/kg		----	<0.050	<0.050	----	----	----	----
Bromomethane	74-83-9	E611D/WT	mg/kg		----	<0.050	<0.050	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	mg/kg		----	<0.050	<0.050	----	----	----	----

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-5-2D	23-5-3	23-5-3D	----	----	----	----
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	----	----	----	----
				Sub-Matrix	Soil	Soil	Soil	----	----	----	----
					WT2338972-015	WT2338972-016	WT2338972-017	--------	--------	--------	--------
Volatile Organic Compounds											
Chlorobenzene	108-90-7	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Chloroform	67-66-3	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dibromochloromethane	124-48-1	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dibromoethane, 1,2-	106-93-4	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichlorodifluoromethane	75-71-8	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloroethane, 1,1-	75-34-3	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloroethane, 1,2-	107-06-2	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloroethylene, 1,1-	75-35-4	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloromethane	75-09-2	E611D/WT	mg/kg	----	<0.045	<0.045	----	----	----	----	
Dichloropropane, 1,2-	78-87-5	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	mg/kg	----	<0.030	<0.030	----	----	----	----	
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	mg/kg	----	<0.030	<0.030	----	----	----	----	
Ethylbenzene	100-41-4	E611D/WT	mg/kg	----	<0.015	<0.015	----	----	----	----	
Hexane, n-	110-54-3	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	mg/kg	----	<0.50	<0.50	----	----	----	----	
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	mg/kg	----	<0.50	<0.50	----	----	----	----	
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	mg/kg	----	<0.040	<0.040	----	----	----	----	
Styrene	100-42-5	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Tetrachloroethylene	127-18-4	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Toluene	108-88-3	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	

Analytical Results Evaluation

Matrix: **Soil**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-5-2D	23-5-3	23-5-3D	----	----	----	----
				Sampling date/time	28-Nov-2023 17:00	28-Nov-2023 17:00	28-Nov-2023 17:00	----	----	----	----
				Sub-Matrix	Soil	Soil	Soil	----	----	----	----
					WT2338972-015	WT2338972-016	WT2338972-017	--------	--------	--------	--------
Volatile Organic Compounds											
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Trichloroethylene	79-01-6	E611D/WT	mg/kg	----	<0.010	<0.010	----	----	----	----	
Trichlorofluoromethane	75-69-4	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
Vinyl chloride	75-01-4	E611D/WT	mg/kg	----	<0.020	<0.020	----	----	----	----	
Xylene, m+p-	179601-23-1	E611D/WT	mg/kg	----	<0.030	<0.030	----	----	----	----	
Xylene, o-	95-47-6	E611D/WT	mg/kg	----	<0.030	<0.030	----	----	----	----	
Xylenes, total	1330-20-7	E611D/WT	mg/kg	----	<0.050	<0.050	----	----	----	----	
BTEX, total	----	E611D/WT	mg/kg	----	<0.10	<0.10	----	----	----	----	
Hydrocarbons											
F1 (C6-C10)	----	E581.F1/WT	mg/kg	----	<5.0	<5.0	----	----	----	----	
F2 (C10-C16)	----	E601.SG-L/WT	mg/kg	----	<10	<10	----	----	----	----	
F3 (C16-C34)	----	E601.SG-L/WT	mg/kg	----	<50	<50	----	----	----	----	
F4 (C34-C50)	----	E601.SG-L/WT	mg/kg	----	<50	<50	----	----	----	----	
F1-BTEX	----	EC580/WT	mg/kg	----	<5.0	<5.0	----	----	----	----	
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	mg/kg	----	<80	<80	----	----	----	----	
Chromatogram to baseline at nC50	n/a	E601.SG-L/WT	-	----	YES	YES	----	----	----	----	
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601.SG-L/WT	%	----	83.1	85.2	----	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.F1/WT	%	----	93.2	96.5	----	----	----	----	
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%	----	108	112	----	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%	----	105	109	----	----	----	----	

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T3-ICC-C	ON153/04 T3-ICC-F					
Physical Tests									
Moisture	----	%	--	--					
pH (1:2 soil:CaCl2-aq)	----	pH units							
Particle Size									
Grain size curve	----	-							
Percent Passing									
Passing (0.002mm)	----	%							
Passing (0.004mm)	----	%							
Passing (0.005mm)	----	%							
Passing (0.020mm)	----	%							
Passing (0.0312mm)	----	%							
Passing (0.05mm)	----	%							
Passing (0.063mm)	----	%							
Passing (0.075mm)	----	%							
Passing (0.125mm)	----	%							
Passing (0.149mm)	----	%							
Passing (0.250mm)	----	%							
Passing (0.420mm)	----	%							
Passing (0.50mm)	----	%							
Passing (0.841mm)	----	%							
Passing (1.0mm)	----	%							
Passing (19mm)	----	%							
Passing (2.0mm)	----	%							
Passing (25.4mm)	----	%							
Passing (38.1mm)	----	%							
Passing (4.75mm)	----	%							
Passing (50.8mm)	----	%							
Passing (76.2mm)	----	%							
Passing (9.5mm)	----	%							
Metals									
Antimony	7440-36-0	mg/kg	**40 mg/kg**	**50 mg/kg**					
Arsenic	7440-38-2	mg/kg	**18 mg/kg**	**18 mg/kg**					
Barium	7440-39-3	mg/kg	**670 mg/kg**	**670 mg/kg**					
Beryllium	7440-41-7	mg/kg	**8 mg/kg**	**10 mg/kg**					
Boron	7440-42-8	mg/kg	**120 mg/kg**	**120 mg/kg**					
Cadmium	7440-43-9	mg/kg	**1.9 mg/kg**	**1.9 mg/kg**					
Chromium	7440-47-3	mg/kg	**160 mg/kg**	**160 mg/kg**					
Cobalt	7440-48-4	mg/kg	**80 mg/kg**	**100 mg/kg**					

Analyte	CAS Number	Unit	ON153/04 T3-ICC-C	ON153/04 T3-ICC-F
Metals - Continued				
Copper	7440-50-8	mg/kg	**230 mg/kg**	**300 mg/kg**
Lead	7439-92-1	mg/kg	**120 mg/kg**	**120 mg/kg**
Molybdenum	7439-98-7	mg/kg	**40 mg/kg**	**40 mg/kg**
Nickel	7440-02-0	mg/kg	**270 mg/kg**	**340 mg/kg**
Selenium	7782-49-2	mg/kg	**5.5 mg/kg**	**5.5 mg/kg**
Silver	7440-22-4	mg/kg	**40 mg/kg**	**50 mg/kg**
Thallium	7440-28-0	mg/kg	**3.3 mg/kg**	**3.3 mg/kg**
Uranium	7440-61-1	mg/kg	**33 mg/kg**	**33 mg/kg**
Vanadium	7440-62-2	mg/kg	**86 mg/kg**	**86 mg/kg**
Zinc	7440-66-6	mg/kg	**340 mg/kg**	**340 mg/kg**
Volatile Organic Compounds				
Acetone	67-64-1	mg/kg	**16 mg/kg**	**28 mg/kg**
Benzene	71-43-2	mg/kg	**0.32 mg/kg**	**0.4 mg/kg**
Bromodichloromethane	75-27-4	mg/kg	**18 mg/kg**	**18 mg/kg**
Bromoform	75-25-2	mg/kg	**0.61 mg/kg**	**1.7 mg/kg**
Bromomethane	74-83-9	mg/kg	**0.05 mg/kg**	**0.05 mg/kg**
BTEX, total	----	mg/kg	--	--
Carbon tetrachloride	56-23-5	mg/kg	**0.21 mg/kg**	**1.5 mg/kg**
Chlorobenzene	108-90-7	mg/kg	**2.4 mg/kg**	**2.7 mg/kg**
Chloroform	67-66-3	mg/kg	**0.47 mg/kg**	**0.18 mg/kg**
Dibromochloromethane	124-48-1	mg/kg	**13 mg/kg**	**13 mg/kg**
Dibromoethane, 1,2-	106-93-4	mg/kg	**0.05 mg/kg**	**0.05 mg/kg**
Dichlorobenzene, 1,2-	95-50-1	mg/kg	**6.8 mg/kg**	**8.5 mg/kg**
Dichlorobenzene, 1,3-	541-73-1	mg/kg	**9.6 mg/kg**	**12 mg/kg**
Dichlorobenzene, 1,4-	106-46-7	mg/kg	**0.2 mg/kg**	**0.84 mg/kg**
Dichlorodifluoromethane	75-71-8	mg/kg	**16 mg/kg**	**25 mg/kg**
Dichloroethane, 1,1-	75-34-3	mg/kg	**17 mg/kg**	**21 mg/kg**
Dichloroethane, 1,2-	107-06-2	mg/kg	**0.05 mg/kg**	**0.05 mg/kg**
Dichloroethylene, 1,1-	75-35-4	mg/kg	**0.064 mg/kg**	**0.48 mg/kg**
Dichloroethylene, cis-1,2-	156-59-2	mg/kg	**55 mg/kg**	**37 mg/kg**
Dichloroethylene, trans-1,2-	156-60-5	mg/kg	**1.3 mg/kg**	**9.3 mg/kg**
Dichloromethane	75-09-2	mg/kg	**1.6 mg/kg**	**2 mg/kg**
Dichloropropane, 1,2-	78-87-5	mg/kg	**0.16 mg/kg**	**0.68 mg/kg**
Dichloropropylene, cis+trans-1,3-	542-75-6	mg/kg	**0.18 mg/kg**	**0.21 mg/kg**
Dichloropropylene, cis-1,3-	10061-01-5	mg/kg	--	--
Dichloropropylene, trans-1,3-	10061-02-6	mg/kg	--	--
Ethylbenzene	100-41-4	mg/kg	**9.5 mg/kg**	**19 mg/kg**
Hexane, n-	110-54-3	mg/kg	**46 mg/kg**	**88 mg/kg**
Methyl ethyl ketone [MEK]	78-93-3	mg/kg	**70 mg/kg**	**88 mg/kg**

Analyte	CAS Number	Unit	ON153/04 T3-ICC-C	ON153/04 T3-ICC-F					
Volatile Organic Compounds - Continued									
Methyl isobutyl ketone [MIBK]	108-10-1	mg/kg	**31 mg/kg**	**210 mg/kg**					
Methyl-tert-butyl ether [MTBE]	1634-04-4	mg/kg	**11 mg/kg**	**3.2 mg/kg**					
Styrene	100-42-5	mg/kg	**34 mg/kg**	**43 mg/kg**					
Tetrachloroethane, 1,1,1,2-	630-20-6	mg/kg	**0.087 mg/kg**	**0.11 mg/kg**					
Tetrachloroethane, 1,1,2,2-	79-34-5	mg/kg	**0.05 mg/kg**	**0.094 mg/kg**					
Tetrachloroethylene	127-18-4	mg/kg	**4.5 mg/kg**	**21 mg/kg**					
Toluene	108-88-3	mg/kg	**68 mg/kg**	**78 mg/kg**					
Trichloroethane, 1,1,1-	71-55-6	mg/kg	**6.1 mg/kg**	**12 mg/kg**					
Trichloroethane, 1,1,2-	79-00-5	mg/kg	**0.05 mg/kg**	**0.11 mg/kg**					
Trichloroethylene	79-01-6	mg/kg	**0.91 mg/kg**	**0.61 mg/kg**					
Trichlorofluoromethane	75-69-4	mg/kg	**4 mg/kg**	**5.8 mg/kg**					
Vinyl chloride	75-01-4	mg/kg	**0.032 mg/kg**	**0.25 mg/kg**					
Xylene, m+p-	179601-23-1	mg/kg	--	--					
Xylene, o-	95-47-6	mg/kg	--	--					
Xylenes, total	1330-20-7	mg/kg	**26 mg/kg**	**30 mg/kg**					
Hydrocarbons									
Chromatogram to baseline at nC50	n/a	-	--	--					
F1 (C6-C10)	----	mg/kg	**55 mg/kg**	**65 mg/kg**					
F1-BTEX	----	mg/kg	**55 mg/kg**	**65 mg/kg**					
F2 (C10-C16)	----	mg/kg	**230 mg/kg**	**250 mg/kg**					
F2-Naphthalene	----	mg/kg	--	--					
F3 (C16-C34)	----	mg/kg	**1700 mg/kg**	**2500 mg/kg**					
F3-PAH	n/a	mg/kg	--	--					
F4 (C34-C50)	----	mg/kg	**3300 mg/kg**	**6600 mg/kg**					
Hydrocarbons, total (C6-C50)	n/a	mg/kg	--	--					
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%							
Dichlorotoluene, 3,4-	95-75-0	%							
Bromofluorobenzene, 4-	460-00-4	%							
Difluorobenzene, 1,4-	540-36-3	%							
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	mg/kg	**96 mg/kg**	**96 mg/kg**					
Acenaphthylene	208-96-8	mg/kg	**0.15 mg/kg**	**0.17 mg/kg**					
Anthracene	120-12-7	mg/kg	**0.67 mg/kg**	**0.74 mg/kg**					
Benz(a)anthracene	56-55-3	mg/kg	**0.96 mg/kg**	**0.96 mg/kg**					
Benzo(a)pyrene	50-32-8	mg/kg	**0.3 mg/kg**	**0.3 mg/kg**					
Benzo(b+j)fluoranthene	n/a	mg/kg	**0.96 mg/kg**	**0.96 mg/kg**					
Benzo(g,h,i)perylene	191-24-2	mg/kg	**9.6 mg/kg**	**9.6 mg/kg**					
Benzo(k)fluoranthene	207-08-9	mg/kg	**0.96 mg/kg**	**0.96 mg/kg**					
Chrysene	218-01-9	mg/kg	**9.6 mg/kg**	**9.6 mg/kg**					

Analyte	CAS Number	Unit	ON153/04 T3-ICC-C	ON153/04 T3-ICC-F
Polycyclic Aromatic Hydrocarbons - Continued				
Dibenz(a,h)anthracene	53-70-3	mg/kg	**0.1 mg/kg**	**0.1 mg/kg**
Fluoranthene	206-44-0	mg/kg	**9.6 mg/kg**	**9.6 mg/kg**
Fluorene	86-73-7	mg/kg	**62 mg/kg**	**69 mg/kg**
Indeno(1,2,3-c,d)pyrene	193-39-5	mg/kg	**0.76 mg/kg**	**0.95 mg/kg**
Methylnaphthalene, 1+2-	----	mg/kg	**76 mg/kg**	**85 mg/kg**
Methylnaphthalene, 1-	90-12-0	mg/kg	**76 mg/kg**	**85 mg/kg**
Methylnaphthalene, 2-	91-57-6	mg/kg	**76 mg/kg**	**85 mg/kg**
Naphthalene	91-20-3	mg/kg	**9.6 mg/kg**	**28 mg/kg**
Phenanthrene	85-01-8	mg/kg	**12 mg/kg**	**16 mg/kg**
Pyrene	129-00-0	mg/kg	**96 mg/kg**	**96 mg/kg**
Acridine-d9	34749-75-2	%		
Chrysene-d12	1719-03-5	%		
Naphthalene-d8	1146-65-2	%		
Phenanthrene-d10	1517-22-2	%		
Organochlorine Pesticides				
Aldrin	309-00-2	mg/kg	**0.088 mg/kg**	**0.11 mg/kg**
Chlordane, cis- (alpha)	5103-71-9	mg/kg	--	--
Chlordane, total	57-74-9	mg/kg	**0.05 mg/kg**	**0.05 mg/kg**
Chlordane, trans- (gamma)	5103-74-2	mg/kg	--	--
DDD, 2,4'-	53-19-0	mg/kg	--	--
DDD, 4,4'-	72-54-8	mg/kg	--	--
DDD, total	----	mg/kg	**4.6 mg/kg**	**4.6 mg/kg**
DDE, 2,4'-	3424-82-6	mg/kg	--	--
DDE, 4,4'-	72-55-9	mg/kg	--	--
DDE, total	----	mg/kg	**0.52 mg/kg**	**0.65 mg/kg**
DDT, 2,4'-	789-02-6	mg/kg	--	--
DDT, 4,4'-	50-29-3	mg/kg	--	--
DDT, total	----	mg/kg	**1.4 mg/kg**	**1.4 mg/kg**
Dieldrin	60-57-1	mg/kg	**0.088 mg/kg**	**0.11 mg/kg**
Endosulfan, alpha-	959-98-8	mg/kg	--	--
Endosulfan, beta-	33213-65-9	mg/kg	--	--
Endosulfan, total	----	mg/kg	**0.3 mg/kg**	**0.38 mg/kg**
Endrin	72-20-8	mg/kg	**0.04 mg/kg**	**0.04 mg/kg**
Heptachlor epoxide	1024-57-3	mg/kg	**0.05 mg/kg**	**0.05 mg/kg**
Heptachlor	76-44-8	mg/kg	**0.19 mg/kg**	**0.19 mg/kg**
Hexachlorobenzene	118-74-1	mg/kg	**0.66 mg/kg**	**0.66 mg/kg**
Hexachlorobutadiene	87-68-3	mg/kg	**0.031 mg/kg**	**0.095 mg/kg**
Hexachlorocyclohexane, gamma-	58-89-9	mg/kg	**0.056 mg/kg**	**0.063 mg/kg**
Hexachloroethane	67-72-1	mg/kg	**0.21 mg/kg**	**0.43 mg/kg**

Analyte	CAS Number	Unit	ON153/04 T3-ICC-C	ON153/04 T3-ICC-F					
Organochlorine Pesticides - Continued									
Methoxychlor	72-43-5	mg/kg	**1.6 mg/kg**	**1.6 mg/kg**					
Decachlorobiphenyl	2051-24-3	%							
Tetrachloro-m-xylene	877-09-8	%							

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

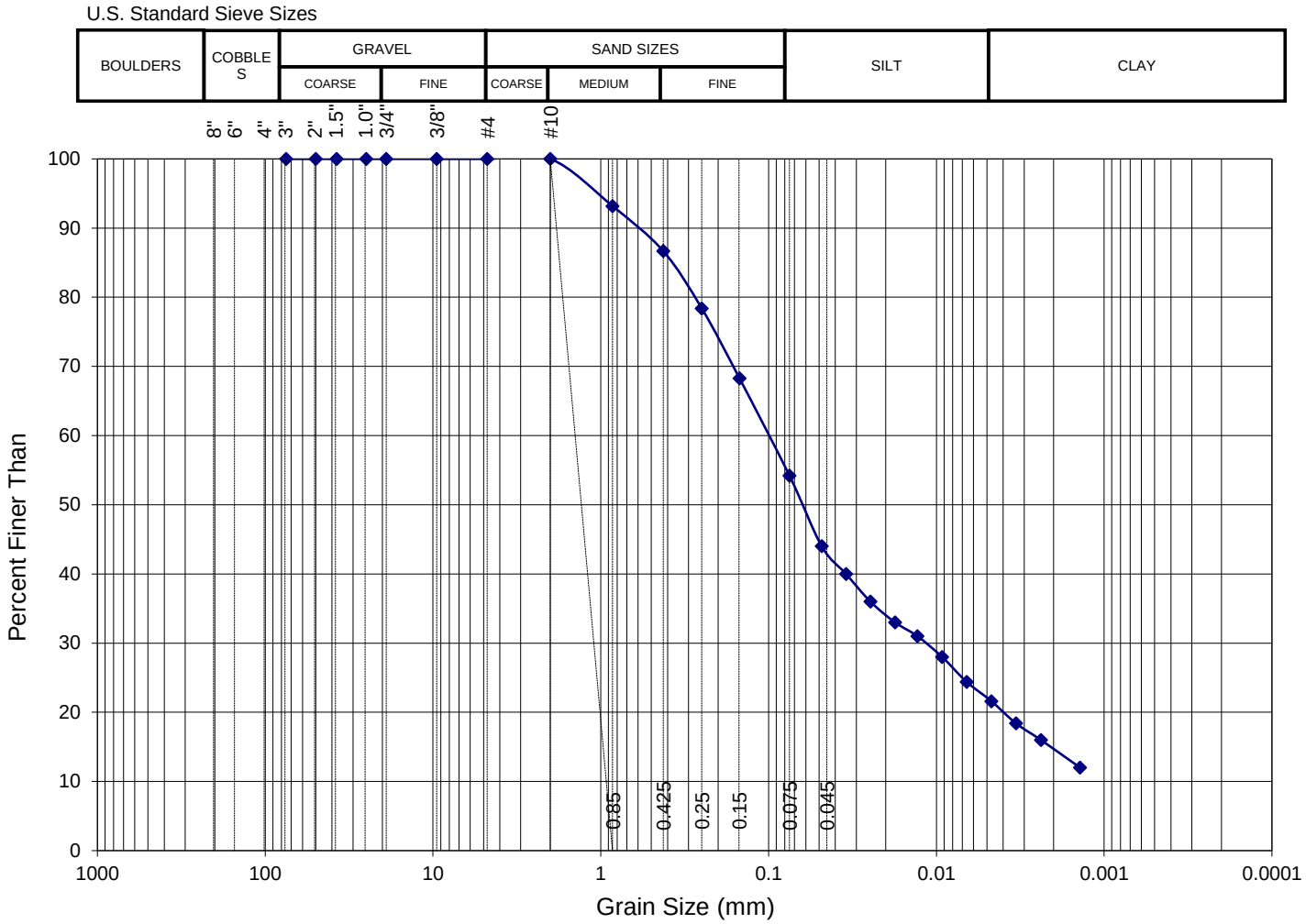
ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-ICC-C	153 T3-Soil-Ind/Com/Commu. Property Use (Coarse)
T3-ICC-F	153 T3-Soil-Ind/Com/Commu. Property Use (Fine)

ALS Laboratory Group

819-58th Street, Saskatoon,SK

PARTICLE SIZE DISTRIBUTION CURVE

Client Name:	WT2338972003
Project Number:	
Client Sample ID	23-1-7
Lab Sample ID	WT2338972003
Date Sample Received:	00-Jan-00
Test Completion Date:	05-Dec-23
Analyst:	SHCH



METHOD DESCRIPTION

Method Reference: ASTM D6913 & D7928

Dispersion method: Mechanical

Dispersion period: 1 minute cm/s

DESCRIPTION OF SAND AND GRAVEL PARTICLES

Shape: Angular

Hardness: Hard

SUMMARY OF RESULTS

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	< 1	> 4.75
% COARSE SAND :	< 1	2.0 - 4.75
% MEDIUM SAND :	13.31	0.425 - 2.0
% FINE SAND :	32.51	0.075 - 0.425
% SILT :	32.08	0.075 - 0.005
% CLAY :	22.10	< 0.005

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2338972**	Page	: 1 of 14
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
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Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 29-Nov-2023 13:55
PO	: ----	Issue Date	: 07-Dec-2023 15:58
C-O-C number	: ----		
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- Test sample Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Organochlorine Pesticides	Anonymous	Anonymous	DDT, 2,4'-	789-02-6	E660F	44.9 % K	50.0-150%	Recovery less than lower data quality objective
Organochlorine Pesticides	Anonymous	Anonymous	DDT, 4,4'-	50-29-3	E660F	43.9 % K	50.0-150%	Recovery less than lower data quality objective
Organochlorine Pesticides	Anonymous	Anonymous	Endrin	72-20-8	E660F	46.2 % K	50.0-150%	Recovery less than lower data quality objective
Organochlorine Pesticides	Anonymous	Anonymous	Methoxychlor	72-43-5	E660F	36.5 % K	50.0-150%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	*Description*
K	*Matrix Spike recovery outside ALS DQO due to sample matrix effects.*

Regular Sample Surrogates

Sub-Matrix: **Soil**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Result	Limits	Comment
Samples Submitted							
Organochlorine Pesticides Surrogates	WT2338972-006	23-2-2D	Decachlorobiphenyl	2051-24-3	162 %	50.0-150 %	Recovery greater than upper data quality objective

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-1-6	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-2-1	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-3-7	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-4-4	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-5-3	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID										
Glass soil methanol vial [ON MECP] 23-5-3D	E581.F1	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP] 23-1-6	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-2-1	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-3-7	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-4-4	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-3	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-3D	E601.SG-L	28-Nov-2023	03-Dec-2023	14 days	5 days	✓	06-Dec-2023	40 days	2 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-1-4	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-2-4	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-2-4D	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP]										
23-3-4	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] 23-4-4	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS (<355 µm)										
Glass soil jar/Teflon lined cap [ON MECP] 23-5-3	E440C	28-Nov-2023	04-Dec-2023	180 days	6 days	✓	05-Dec-2023	180 days	7 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] 23-2-2	E660F	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] 23-2-2D	E660F	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] 23-3-4	E660F	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP] 23-4-4	E660F	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method										
Paper Bag (Brown) 23-1-7	E185	28-Nov-2023	----	----	----		07-Dec-2023	----	----	
Percent Passing : Particle Size Analysis - Hydrometer										
Paper Bag (Brown) 23-1-7	E183	28-Nov-2023	05-Dec-2023	365 days	7 days	✓	05-Dec-2023	365 days	7 days	✓
Percent Passing : Particle Size Analysis - Sieve <2mm										
Paper Bag (Brown) 23-1-7	E182	28-Nov-2023	05-Dec-2023	365 days	7 days	✓	05-Dec-2023	365 days	7 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Percent Passing : Particle Size Analysis - Sieve >2mm										
Paper Bag (Brown) 23-1-7	E181	28-Nov-2023	05-Dec-2023	365 days	7 days	✓	05-Dec-2023	365 days	7 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-1-6	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-2-1	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-2-2	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-2-2D	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-3-4	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-3-7	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-4-4	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] 23-4-4D	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-3	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-3D	E144	28-Nov-2023	----	----	----		03-Dec-2023	----	5 days	
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP]										
23-3-8	E108A	28-Nov-2023	01-Dec-2023	30 days	2 days	✓	04-Dec-2023	30 days	6 days	✓
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-2	E108A	28-Nov-2023	04-Dec-2023	30 days	6 days	✓	05-Dec-2023	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received										
Glass soil jar/Teflon lined cap [ON MECP]										
23-5-2D	E108A	28-Nov-2023	04-Dec-2023	30 days	6 days	✓	05-Dec-2023	30 days	7 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
23-2-1	E641A	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
23-3-7	E641A	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
23-4-4	E641A	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
23-4-4D	E641A	28-Nov-2023	03-Dec-2023	60 days	5 days	✓	04-Dec-2023	40 days	1 days	✓

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-1-6	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-2-1	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-3-7	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-4-4	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-5-3	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass soil methanol vial [ON MECP] 23-5-3D	E611D	28-Nov-2023	01-Dec-2023	14 days	3 days	✓	02-Dec-2023	40 days	1 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1260696	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1260861	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1260170	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1262447	1	20	5.0	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1260731	1	10	10.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	1260862	1	17	5.8	5.0	✓
Particle Size Analysis - Hydrometer	E183	1264004	1	8	12.5	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1264003	1	8	12.5	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	1259956	2	40	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1260695	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1260696	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1260861	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1260170	2	20	10.0	10.0	✓
Moisture Content by Gravimetry	E144	1262447	1	20	5.0	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1260731	1	10	10.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	1260862	1	17	5.8	5.0	✓
Particle Size Analysis - Hydrometer	E183	1264004	1	8	12.5	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	1264003	1	8	12.5	5.0	✓
Particle Size Analysis - Sieve >2mm	E181	1264002	1	8	12.5	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	1259956	2	40	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1260695	1	20	5.0	5.0	✓
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1260696	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1260861	1	19	5.2	5.0	✓
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C	1260170	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	1262447	1	20	5.0	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1260731	1	10	10.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	1260862	1	17	5.8	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1260695	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID	E581.F1	1260696	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	1260861	1	19	5.2	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1260731	1	10	10.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	1260862	1	17	5.8	5.0	✓

Matrix: **Soil/Solid**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1260695	1	20	5.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A ALS Environmental - Waterloo	Soil/Solid	MECP E3530	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C) and is carried out in accordance with procedures described in the Analytical Protocol (prescriptive method). A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling, or decanting and then analyzed using a pH meter and electrode. This method is equivalent to ASTM D4972 and is acceptable for topsoil analysis.
Moisture Content by Gravimetry	E144 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Particle Size Analysis - Sieve >2mm	E181 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Hydrometer	E183 ALS Environmental - Saskatoon	Soil/Solid	ASTM D7928-21 (mod)	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular hydrometer readings are taken at specific time intervals. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Grain Size Report (Attachment) Hydrometer/Sieve Method	E185 ALS Environmental - Saskatoon	Soil/Solid	ASTM D6913/D7928	A grain size curve is a graphical representation of the particle sizing of a sample representing the percent passing against the effective particle size.
Metals in Soil/Solid by CRC ICPMS (<355 µm)	E440C ALS Environmental - Waterloo	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 355 µm sieve, and digested with HNO3 and HCl. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID	E581.F1 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Test results are expressed on a dry weight basis. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hex:Ace GC-MS	E641A ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
OCPs by GC-MS-MS or GC-MS	E660F ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	OCPs are analyzed by GC-MS-MS or GC-MS
F1-BTEX	EC580 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil : 0.01CaCl2 - As Received for pH	EP108A ALS Environmental - Waterloo	Soil/Solid	MOEE E3137A	A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury (355 µm Sieve)	EP440C ALS Environmental - Waterloo	Soil/Solid	EPA 200.2 (mod)	Samples are sieved through a 355 µm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
VOCs Methanol Extraction for Headspace Analysis	EP581 ALS Environmental - Waterloo	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.
Dry and Grind in Soil/Solid <60°C	EPP442 ALS Environmental - Waterloo	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

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QUALITY CONTROL REPORT

Work Order	: **WT2338972**	Page	: 1 of 19
Client	: Palmer Environmental Consulting Group Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 29-Nov-2023 13:55
PO	: ----	Date Analysis Commenced	: 30-Nov-2023
C-O-C number	: ----	Issue Date	: 07-Dec-2023 15:52
Sampler	: SB ----		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Saskatoon Sask Soils, Saskatoon, Saskatchewan
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Josphin Masihi	Analyst	Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1262447)											
WT2338793-001	Anonymous	Moisture	----	E144	0.25	%	12.2	12.8	4.47%	20%	----
Physical Tests (QC Lot: 1262661)											
TY2312499-001	Anonymous	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	6.47	6.47	0.00%	5%	----
Percent Passing (QC Lot: 1264003)											
WT2338972-003	23-1-7	Passing (0.05mm)	----	E182	1.0	%	44.7	45.7	2.22%	15%	----
		Passing (0.063mm)	----	E182	1.0	%	49.6	50.3	1.31%	15%	----
		Passing (0.075mm)	----	E182	1.0	%	54.2	54.5	0.608%	15%	----
		Passing (0.125mm)	----	E182	1.0	%	63.7	63.9	0.308%	15%	----
		Passing (0.149mm)	----	E182	1.0	%	68.3	68.4	0.193%	15%	----
		Passing (0.250mm)	----	E182	1.0	%	78.4	78.7	0.360%	15%	----
		Passing (0.420mm)	----	E182	1.0	%	86.4	86.9	0.540%	15%	----
		Passing (0.50mm)	----	E182	1.0	%	87.8	88.4	0.592%	15%	----
		Passing (0.841mm)	----	E182	1.0	%	93.0	93.8	0.792%	15%	----
		Passing (1.0mm)	----	E182	1.0	%	94.1	94.7	0.687%	15%	----
Percent Passing (QC Lot: 1264004)											
WT2338972-003	23-1-7	Passing (0.002mm)	----	E183	1.0	%	14.4	14.4	0.0157%	15%	----
		Passing (0.004mm)	----	E183	1.0	%	19.9	20.1	0.977%	15%	----
		Passing (0.005mm)	----	E183	1.0	%	22.0	22.3	1.23%	15%	----
		Passing (0.020mm)	----	E183	1.0	%	34.0	35.0	2.96%	15%	----
		Passing (0.0312mm)	----	E183	1.0	%	38.6	39.7	2.64%	15%	----
Metals (QC Lot: 1260170)											
WT2338943-001	Anonymous	Antimony	7440-36-0	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E440C	0.10	mg/kg	2.48	2.58	3.90%	30%	----
		Barium	7440-39-3	E440C	0.50	mg/kg	36.8	39.0	5.80%	40%	----
		Beryllium	7440-41-7	E440C	0.10	mg/kg	0.41	0.39	0.02	Diff <2x LOR	----
		Boron	7440-42-8	E440C	5.0	mg/kg	5.9	5.8	0.09	Diff <2x LOR	----
		Cadmium	7440-43-9	E440C	0.020	mg/kg	0.050	0.058	0.008	Diff <2x LOR	----
		Chromium	7440-47-3	E440C	0.50	mg/kg	14.3	14.7	2.84%	30%	----
		Cobalt	7440-48-4	E440C	0.10	mg/kg	6.30	6.44	2.30%	30%	----
		Copper	7440-50-8	E440C	0.50	mg/kg	11.7	12.2	4.54%	30%	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Metals (QC Lot: 1260170) - continued											
WT2338943-001	Anonymous	Lead	7439-92-1	E440C	0.50	mg/kg	5.90	5.72	3.15%	40%	----
		Molybdenum	7439-98-7	E440C	0.10	mg/kg	0.21	0.20	0.008	Diff <2x LOR	----
		Nickel	7440-02-0	E440C	0.50	mg/kg	13.6	14.1	3.93%	30%	----
		Selenium	7782-49-2	E440C	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440C	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440C	0.050	mg/kg	0.096	0.095	0.001	Diff <2x LOR	----
		Uranium	7440-61-1	E440C	0.050	mg/kg	0.406	0.390	4.04%	30%	----
		Vanadium	7440-62-2	E440C	0.20	mg/kg	24.1	24.6	2.13%	30%	----
		Zinc	7440-66-6	E440C	2.0	mg/kg	27.8	28.7	3.26%	30%	----
Volatile Organic Compounds (QC Lot: 1260695)											
WT2338943-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 1260695) - continued											
WT2338943-002	Anonymous	Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1260696)											
WT2338943-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1260861)											
WT2339181-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	5760	5250	9.26%	40%	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	3320	3240	2.42%	40%	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	52	2	Diff <2x LOR	----
Polycyclic Aromatic Hydrocarbons (QC Lot: 1260862)											
WT2339181-001	Anonymous	Acenaphthene	83-32-9	E641A	0.828	mg/kg	<0.828	<0.828	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	0.270	0.264	2.21%	50%	----
		Anthracene	120-12-7	E641A	0.391	mg/kg	<0.391	<0.391	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	0.216	0.312	36.2%	50%	----
		Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	0.212	0.291	31.7%	50%	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.337	0.439	26.2%	50%	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.160	0.212	0.052	Diff <2x LOR	J
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	0.128	0.175	0.046	Diff <2x LOR	J
		Chrysene	218-01-9	E641A	0.050	mg/kg	0.250	0.334	28.9%	50%	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	0.054	0.004	Diff <2x LOR	J
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	0.390	0.615	44.8%	50%	----

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Polycyclic Aromatic Hydrocarbons (QC Lot: 1260862) - continued											
WT2339181-001	Anonymous	Fluorene	86-73-7	E641A	0.050	mg/kg	1.08	1.06	1.28%	50%	----
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	0.169	0.219	0.050	Diff <2x LOR	J
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	6.37	7.00	9.39%	50%	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	10.6	11.8	11.4%	50%	----
		Naphthalene	91-20-3	E641A	3.48	mg/kg	<3.48	<3.48	0	Diff <2x LOR	----
		Phenanthrene	85-01-8	E641A	0.050	mg/kg	1.85	1.91	3.27%	50%	----
		Pyrene	129-00-0	E641A	0.050	mg/kg	0.825	0.991	18.3%	50%	----
Organochlorine Pesticides (QC Lot: 1260731)											
WT2338792-001	Anonymous	Aldrin	309-00-2	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Chlordane, cis- (alpha)	5103-71-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Chlordane, trans- (gamma)	5103-74-2	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDD, 2,4'-	53-19-0	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDD, 4,4'-	72-54-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDE, 2,4'-	3424-82-6	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDE, 4,4'-	72-55-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDT, 2,4'-	789-02-6	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDT, 4,4'-	50-29-3	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Dieldrin	60-57-1	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endosulfan, alpha-	959-98-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endosulfan, beta-	33213-65-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endrin	72-20-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Heptachlor	76-44-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Heptachlor epoxide	1024-57-3	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Hexachlorobenzene	118-74-1	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachlorobutadiene	87-68-3	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachloroethane	67-72-1	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Methoxychlor	72-43-5	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----

Qualifiers

Qualifier	*Description*
J	*Duplicate results and limits are expressed in terms of absolute difference.*

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1262447)						
Moisture	----	E144	0.25	%	<0.25	----
Metals (QCLot: 1260170)						
Antimony	7440-36-0	E440C	0.1	mg/kg	<0.10	----
Arsenic	7440-38-2	E440C	0.1	mg/kg	<0.10	----
Barium	7440-39-3	E440C	0.5	mg/kg	<0.50	----
Beryllium	7440-41-7	E440C	0.1	mg/kg	<0.10	----
Boron	7440-42-8	E440C	5	mg/kg	<5.0	----
Cadmium	7440-43-9	E440C	0.02	mg/kg	<0.020	----
Chromium	7440-47-3	E440C	0.5	mg/kg	<0.50	----
Cobalt	7440-48-4	E440C	0.1	mg/kg	<0.10	----
Copper	7440-50-8	E440C	0.5	mg/kg	<0.50	----
Lead	7439-92-1	E440C	0.5	mg/kg	<0.50	----
Molybdenum	7439-98-7	E440C	0.1	mg/kg	<0.10	----
Nickel	7440-02-0	E440C	0.5	mg/kg	<0.50	----
Selenium	7782-49-2	E440C	0.2	mg/kg	<0.20	----
Silver	7440-22-4	E440C	0.1	mg/kg	<0.10	----
Thallium	7440-28-0	E440C	0.05	mg/kg	<0.050	----
Uranium	7440-61-1	E440C	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440C	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440C	2	mg/kg	<2.0	----
Volatile Organic Compounds (QCLot: 1260695)						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1260695) - continued						
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
Hydrocarbons (QCLot: 1260696)						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
Hydrocarbons (QCLot: 1260861)						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1260862)						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
Organochlorine Pesticides (QCLot: 1260731)						
Aldrin	309-00-2	E660F	0.02	mg/kg	<0.020	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.02	mg/kg	<0.020	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.02	mg/kg	<0.020	----
DDD, 2,4'-	53-19-0	E660F	0.02	mg/kg	<0.020	----
DDD, 4,4'-	72-54-8	E660F	0.02	mg/kg	<0.020	----
DDE, 2,4'-	3424-82-6	E660F	0.02	mg/kg	<0.020	----
DDE, 4,4'-	72-55-9	E660F	0.02	mg/kg	<0.020	----
DDT, 2,4'-	789-02-6	E660F	0.02	mg/kg	<0.020	----
DDT, 4,4'-	50-29-3	E660F	0.02	mg/kg	<0.020	----
Dieldrin	60-57-1	E660F	0.02	mg/kg	<0.020	----
Endosulfan, alpha-	959-98-8	E660F	0.02	mg/kg	<0.020	----
Endosulfan, beta-	33213-65-9	E660F	0.02	mg/kg	<0.020	----
Endrin	72-20-8	E660F	0.02	mg/kg	<0.020	----
Heptachlor	76-44-8	E660F	0.02	mg/kg	<0.020	----
Heptachlor epoxide	1024-57-3	E660F	0.02	mg/kg	<0.020	----
Hexachlorobenzene	118-74-1	E660F	0.01	mg/kg	<0.010	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Organochlorine Pesticides (QCLot: 1260731) - continued						
Hexachlorobutadiene	87-68-3	E660F	0.01	mg/kg	<0.010	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.01	mg/kg	<0.010	----
Hexachloroethane	67-72-1	E660F	0.01	mg/kg	<0.010	----
Methoxychlor	72-43-5	E660F	0.02	mg/kg	<0.020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1259956)									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1262447)									
Moisture	----	E144	0.25	%	50 %	98.9	90.0	110	----
Physical Tests (QCLot: 1262661)									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	100	98.0	102	----
Metals (QCLot: 1260170)									
Antimony	7440-36-0	E440C	0.1	mg/kg	100 mg/kg	104	80.0	120	----
Arsenic	7440-38-2	E440C	0.1	mg/kg	100 mg/kg	108	80.0	120	----
Barium	7440-39-3	E440C	0.5	mg/kg	25 mg/kg	103	80.0	120	----
Beryllium	7440-41-7	E440C	0.1	mg/kg	10 mg/kg	96.0	80.0	120	----
Boron	7440-42-8	E440C	5	mg/kg	100 mg/kg	97.4	80.0	120	----
Cadmium	7440-43-9	E440C	0.02	mg/kg	10 mg/kg	94.5	80.0	120	----
Chromium	7440-47-3	E440C	0.5	mg/kg	25 mg/kg	99.7	80.0	120	----
Cobalt	7440-48-4	E440C	0.1	mg/kg	25 mg/kg	99.2	80.0	120	----
Copper	7440-50-8	E440C	0.5	mg/kg	25 mg/kg	99.1	80.0	120	----
Lead	7439-92-1	E440C	0.5	mg/kg	50 mg/kg	98.5	80.0	120	----
Molybdenum	7439-98-7	E440C	0.1	mg/kg	25 mg/kg	98.4	80.0	120	----
Nickel	7440-02-0	E440C	0.5	mg/kg	50 mg/kg	99.0	80.0	120	----
Selenium	7782-49-2	E440C	0.2	mg/kg	100 mg/kg	103	80.0	120	----
Silver	7440-22-4	E440C	0.1	mg/kg	10 mg/kg	86.7	80.0	120	----
Thallium	7440-28-0	E440C	0.05	mg/kg	100 mg/kg	93.4	80.0	120	----
Uranium	7440-61-1	E440C	0.05	mg/kg	0.5 mg/kg	93.6	80.0	120	----
Vanadium	7440-62-2	E440C	0.2	mg/kg	50 mg/kg	102	80.0	120	----
Zinc	7440-66-6	E440C	2	mg/kg	50 mg/kg	96.7	80.0	120	----
Volatile Organic Compounds (QCLot: 1260695)									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	93.6	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	91.5	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	101	50.0	140	----
Bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	83.6	70.0	130	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	102	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	114	70.0	130	----

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1260695) - continued									
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	96.8	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	106	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	96.7	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	95.8	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	95.7	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	95.1	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	94.3	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	65.9	50.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	95.7	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	95.5	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	95.4	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	105	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	92.5	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	102	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	88.4	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	86.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	80.6	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	89.9	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	90.3	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	83.7	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	77.4	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	102	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	90.1	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	105	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	83.4	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	88.8	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	112	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	95.2	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	113	60.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	110	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	83.7	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	90.4	70.0	130	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	90.4	70.0	130	----
Hydrocarbons (QCLot: 1260696)									

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Hydrocarbons (QCLot: 1260696) - continued									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	103	80.0	120	----
Hydrocarbons (QCLot: 1260861)									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	656.4125 mg/kg	95.7	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1332.613 mg/kg	91.0	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	761.4625 mg/kg	73.3	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1260862)									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	83.7	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	85.3	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	84.8	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	90.2	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	84.2	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	89.5	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	88.5	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	92.1	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	80.8	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	74.3	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	87.6	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	87.6	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	87.5	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	82.0	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	90.2	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	86.7	60.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	85.7	60.0	130	----
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	85.2	60.0	130	----
Organochlorine Pesticides (QCLot: 1260731)									
Aldrin	309-00-2	E660F	0.02	mg/kg	0.01 mg/kg	67.0	50.0	150	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.02	mg/kg	0.01 mg/kg	89.7	50.0	150	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.02	mg/kg	0.01 mg/kg	97.8	50.0	150	----
DDD, 2,4'-	53-19-0	E660F	0.02	mg/kg	0.01 mg/kg	98.4	50.0	150	----
DDD, 4,4'-	72-54-8	E660F	0.02	mg/kg	0.01 mg/kg	87.8	50.0	150	----
DDE, 2,4'-	3424-82-6	E660F	0.02	mg/kg	0.01 mg/kg	75.8	50.0	150	----
DDE, 4,4'-	72-55-9	E660F	0.02	mg/kg	0.01 mg/kg	89.5	50.0	150	----
DDT, 2,4'-	789-02-6	E660F	0.02	mg/kg	0.01 mg/kg	84.2	50.0	150	----
DDT, 4,4'-	50-29-3	E660F	0.02	mg/kg	0.01 mg/kg	77.5	50.0	150	----

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Organochlorine Pesticides (QCLot: 1260731) - continued									
Dieldrin	60-57-1	E660F	0.02	mg/kg	0.01 mg/kg	95.9	50.0	150	----
Endosulfan, alpha-	959-98-8	E660F	0.02	mg/kg	0.01 mg/kg	82.8	50.0	150	----
Endosulfan, beta-	33213-65-9	E660F	0.02	mg/kg	0.01 mg/kg	71.0	50.0	150	----
Endrin	72-20-8	E660F	0.02	mg/kg	0.01 mg/kg	80.9	50.0	150	----
Heptachlor	76-44-8	E660F	0.02	mg/kg	0.01 mg/kg	79.0	50.0	150	----
Heptachlor epoxide	1024-57-3	E660F	0.02	mg/kg	0.01 mg/kg	105	50.0	150	----
Hexachlorobenzene	118-74-1	E660F	0.01	mg/kg	0.01 mg/kg	88.9	50.0	150	----
Hexachlorobutadiene	87-68-3	E660F	0.01	mg/kg	0.01 mg/kg	97.3	50.0	150	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.01	mg/kg	0.01 mg/kg	89.5	50.0	150	----
Hexachloroethane	67-72-1	E660F	0.01	mg/kg	0.01 mg/kg	69.0	50.0	150	----
Methoxychlor	72-43-5	E660F	0.02	mg/kg	0.01 mg/kg	79.0	50.0	150	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1260695)										
WT2338943-002	Anonymous	Acetone	67-64-1	E611D	2.13 mg/kg	3.125 mg/kg	107	50.0	140	----
		Benzene	71-43-2	E611D	1.98 mg/kg	3.125 mg/kg	99.8	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	2.20 mg/kg	3.125 mg/kg	110	50.0	140	----
		Bromoform	75-25-2	E611D	1.77 mg/kg	3.125 mg/kg	89.0	50.0	140	----
		Bromomethane	74-83-9	E611D	2.24 mg/kg	3.125 mg/kg	113	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	2.48 mg/kg	3.125 mg/kg	125	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.06 mg/kg	3.125 mg/kg	103	50.0	140	----
		Chloroform	67-66-3	E611D	2.30 mg/kg	3.125 mg/kg	116	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.05 mg/kg	3.125 mg/kg	103	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.03 mg/kg	3.125 mg/kg	102	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.02 mg/kg	3.125 mg/kg	101	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.00 mg/kg	3.125 mg/kg	100	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	1.98 mg/kg	3.125 mg/kg	99.4	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	1.83 mg/kg	3.125 mg/kg	92.1	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	2.07 mg/kg	3.125 mg/kg	104	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	2.09 mg/kg	3.125 mg/kg	105	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.10 mg/kg	3.125 mg/kg	105	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	2.28 mg/kg	3.125 mg/kg	115	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.00 mg/kg	3.125 mg/kg	100	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.21 mg/kg	3.125 mg/kg	111	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	1.93 mg/kg	3.125 mg/kg	97.1	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	1.88 mg/kg	3.125 mg/kg	94.3	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	1.70 mg/kg	3.125 mg/kg	85.7	50.0	140	----
		Ethylbenzene	100-41-4	E611D	1.91 mg/kg	3.125 mg/kg	96.0	50.0	140	----
		Hexane, n-	110-54-3	E611D	1.94 mg/kg	3.125 mg/kg	97.7	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	1.90 mg/kg	3.125 mg/kg	95.4	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	1.72 mg/kg	3.125 mg/kg	86.6	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.06 mg/kg	3.125 mg/kg	103	50.0	140	----
		Styrene	100-42-5	E611D	1.90 mg/kg	3.125 mg/kg	95.5	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.24 mg/kg	3.125 mg/kg	112	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	1.78 mg/kg	3.125 mg/kg	89.7	50.0	140	----

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1260695) - continued										
WT2338943-002	Anonymous	Tetrachloroethylene	127-18-4	E611D	2.25 mg/kg	3.125 mg/kg	113	50.0	140	----
		Toluene	108-88-3	E611D	1.89 mg/kg	3.125 mg/kg	95.0	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.44 mg/kg	3.125 mg/kg	123	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.03 mg/kg	3.125 mg/kg	102	50.0	140	----
		Trichloroethylene	79-01-6	E611D	2.43 mg/kg	3.125 mg/kg	122	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.47 mg/kg	3.125 mg/kg	124	50.0	140	----
		Vinyl chloride	75-01-4	E611D	1.90 mg/kg	3.125 mg/kg	95.7	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	3.85 mg/kg	6.25 mg/kg	96.8	50.0	140	----
		Xylene, o-	95-47-6	E611D	1.92 mg/kg	3.125 mg/kg	96.5	50.0	140	----
Hydrocarbons (QCLot: 1260696)										
WT2338943-002	Anonymous	F1 (C6-C10)	----	E581.F1	41.3 mg/kg	62.5 mg/kg	104	60.0	140	----
Hydrocarbons (QCLot: 1260861)										
WT2339181-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	ND mg/kg	656.4125 mg/kg	ND	60.0	140	MS-B
		F3 (C16-C34)	----	E601.SG-L	ND mg/kg	1332.613 mg/kg	ND	60.0	140	MS-B
		F4 (C34-C50)	----	E601.SG-L	466 mg/kg	761.4625 mg/kg	77.1	60.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1260862)										
WT2339181-001	Anonymous	Acenaphthene	83-32-9	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Acenaphthylene	208-96-8	E641A	0.385 mg/kg	0.5 mg/kg	97.0	50.0	140	----
		Anthracene	120-12-7	E641A	0.388 mg/kg	0.5 mg/kg	97.8	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A	0.441 mg/kg	0.5 mg/kg	111	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A	0.395 mg/kg	0.5 mg/kg	99.4	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.414 mg/kg	0.5 mg/kg	104	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.371 mg/kg	0.5 mg/kg	93.4	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.420 mg/kg	0.5 mg/kg	106	50.0	140	----
		Chrysene	218-01-9	E641A	0.399 mg/kg	0.5 mg/kg	100	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.294 mg/kg	0.5 mg/kg	74.0	50.0	140	----
		Fluoranthene	206-44-0	E641A	0.447 mg/kg	0.5 mg/kg	113	50.0	140	----
		Fluorene	86-73-7	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.378 mg/kg	0.5 mg/kg	95.3	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Methylnaphthalene, 2-	91-57-6	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Naphthalene	91-20-3	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Phenanthrene	85-01-8	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		Pyrene	129-00-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Organochlorine Pesticides (QCLot: 1260731)										
WT2338792-001	Anonymous	Aldrin	309-00-2	E660F	0.006 mg/kg	0.01 mg/kg	58.8	50.0	150	----
		Chlordane, cis- (alpha)	5103-71-9	E660F	0.014 mg/kg	0.01 mg/kg	138	50.0	150	----
		Chlordane, trans- (gamma)	5103-74-2	E660F	0.006 mg/kg	0.01 mg/kg	59.6	50.0	150	----
		DDD, 2,4'-	53-19-0	E660F	0.012 mg/kg	0.01 mg/kg	120	50.0	150	----
		DDD, 4,4'-	72-54-8	E660F	0.009 mg/kg	0.01 mg/kg	86.7	50.0	150	----
		DDE, 2,4'-	3424-82-6	E660F	0.006 mg/kg	0.01 mg/kg	59.9	50.0	150	----
		DDE, 4,4'-	72-55-9	E660F	0.010 mg/kg	0.01 mg/kg	104	50.0	150	----
		DDT, 2,4'-	789-02-6	E660F	0.004 mg/kg	0.01 mg/kg	44.9	50.0	150	K
		DDT, 4,4'-	50-29-3	E660F	0.004 mg/kg	0.01 mg/kg	43.9	50.0	150	K
		Dieldrin	60-57-1	E660F	0.010 mg/kg	0.01 mg/kg	101	50.0	150	----
		Endosulfan, alpha-	959-98-8	E660F	0.011 mg/kg	0.01 mg/kg	107	50.0	150	----
		Endosulfan, beta-	33213-65-9	E660F	0.008 mg/kg	0.01 mg/kg	76.0	50.0	150	----
		Endrin	72-20-8	E660F	0.004 mg/kg	0.01 mg/kg	46.2	50.0	150	K
		Heptachlor	76-44-8	E660F	0.006 mg/kg	0.01 mg/kg	65.1	50.0	150	----
		Heptachlor epoxide	1024-57-3	E660F	0.006 mg/kg	0.01 mg/kg	63.2	50.0	150	----
		Hexachlorobenzene	118-74-1	E660F	0.009 mg/kg	0.01 mg/kg	90.8	50.0	150	----
		Hexachlorobutadiene	87-68-3	E660F	0.009 mg/kg	0.01 mg/kg	94.5	50.0	150	----
		Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.007 mg/kg	0.01 mg/kg	68.6	50.0	150	----
		Hexachloroethane	67-72-1	E660F	0.007 mg/kg	0.01 mg/kg	70.4	50.0	150	----
		Methoxychlor	72-43-5	E660F	0.004 mg/kg	0.01 mg/kg	36.5	50.0	150	K

Qualifiers

Qualifier	Description
K	*Matrix Spike recovery outside ALS DQO due to sample matrix effects.*
MS-B	*Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.*

Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Percent Passing (QCLot: 1264002)									
	RM	Passing (19mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (2.0mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (25.4mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (38.1mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (4.75mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (50.8mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (76.2mm)	----	E181	100 %	100	90.0	110	----
	RM	Passing (9.5mm)	----	E181	100 %	100	90.0	110	----
Percent Passing (QCLot: 1264003)									
	RM	Passing (0.05mm)	----	E182	54.08 %	103	90.0	110	----
	RM	Passing (0.063mm)	----	E182	57.14 %	103	90.8	109	----
	RM	Passing (0.075mm)	----	E182	60.15 %	102	91.4	109	----
	RM	Passing (0.125mm)	----	E182	68.19 %	102	92.7	107	----
	RM	Passing (0.149mm)	----	E182	72.05 %	102	93.1	107	----
	RM	Passing (0.250mm)	----	E182	82.27 %	99.9	94.1	106	----
	RM	Passing (0.420mm)	----	E182	89.94 %	99.4	94.6	105	----
	RM	Passing (0.50mm)	----	E182	91.15 %	99.4	94.7	105	----
	RM	Passing (0.841mm)	----	E182	95.64 %	99.6	94.9	105	----
	RM	Passing (1.0mm)	----	E182	96.31 %	99.6	94.9	105	----
Percent Passing (QCLot: 1264004)									
	RM	Passing (0.002mm)	----	E183	24.64 %	93.0	76.0	124	----
	RM	Passing (0.004mm)	----	E183	29.3 %	100	80.0	120	----
	RM	Passing (0.005mm)	----	E183	31.16 %	98.9	82.0	118	----
	RM	Passing (0.020mm)	----	E183	43.27 %	101	87.0	113	----
	RM	Passing (0.0312mm)	----	E183	48.23 %	102	88.0	112	----
Metals (QCLot: 1260170)									
	RM	Antimony	7440-36-0	E440C	3.99 mg/kg	124	70.0	130	----
	RM	Arsenic	7440-38-2	E440C	3.73 mg/kg	106	70.0	130	----

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report: RM Target Concentration	Recovery (%): RM	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Metals (QCLot: 1260170) - continued									
	RM	Barium	7440-39-3	E440C	105 mg/kg	112	70.0	130	----
	RM	Beryllium	7440-41-7	E440C	0.349 mg/kg	95.5	70.0	130	----
	RM	Boron	7440-42-8	E440C	8.5 mg/kg	103	70.0	130	----
	RM	Cadmium	7440-43-9	E440C	0.91 mg/kg	95.5	70.0	130	----
	RM	Chromium	7440-47-3	E440C	101 mg/kg	98.2	70.0	130	----
	RM	Cobalt	7440-48-4	E440C	6.9 mg/kg	101	70.0	130	----
	RM	Copper	7440-50-8	E440C	123 mg/kg	102	70.0	130	----
	RM	Lead	7439-92-1	E440C	267 mg/kg	105	70.0	130	----
	RM	Molybdenum	7439-98-7	E440C	1.03 mg/kg	101	70.0	130	----
	RM	Nickel	7440-02-0	E440C	26.7 mg/kg	101	70.0	130	----
	RM	Silver	7440-22-4	E440C	4.06 mg/kg	87.6	70.0	130	----
	RM	Thallium	7440-28-0	E440C	0.0786 mg/kg	93.7	70.0	130	----
	RM	Uranium	7440-61-1	E440C	0.52 mg/kg	94.9	70.0	130	----
	RM	Vanadium	7440-62-2	E440C	32.7 mg/kg	98.4	70.0	130	----
	RM	Zinc	7440-66-6	E440C	297 mg/kg	100	70.0	130	----

Chain of Custody (COC) / Analytical Request Form

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Environmental Division Waterloo

Work Order Reference WT2338972

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Contact:	Sylvia Babiarz
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City/Province:	Oakville, ON
Postal Code:	
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Accounting

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: sylvia.babiarz@pecg.ca

Email 2: kalina.naydenova@pecg.ca

Email 3: sarah.vlantis@pecg.ca

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: accounting@pecg.ca

Email 2: sarah.vlantis@pecg.ca

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additic fees may apply to rush requests on weekends, statutory holidays and noi routine tests

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #:	ALS - WT23-PALM100-8
Job #:	1904320
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only):

ALS Contact: A. Martin

Sampler: SB

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC/VOC	PAH	ICP Metals	OC Pesticides	pH	Grain Size Hydrometer Sieve	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes
	✓ 23-1-4	28-Nov-23	5:00pm	soil	1			✓	✓					
	✓ 23-1-6				3	✓								
	✓ 23-1-7				1						✓			
	✓ 23-2-21				4	✓	✓							
	✓ 23-2-2				1				✓					
	✓ 23-2-2D				1				✓					
	✓ 23-2-4				1			✓						
	✓ 23-2-4D				1			✓						
	✓ 23-3-4				2			✓	✓					
	✓ 23-3-7				4	✓	✓							
	✓ 23-3-8				1					✓				
	✓ 23-4-4				5	✓	✓	✓	✓					

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Compare to O. Reg 153/04 Table 3 ICC
-also include sasha.grabovsky@pecg.ca

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.4				4.5			

SHIPMENT RELEASE (client use)

Released by: SB	Date: Nov 29/23	Time: 1:55pm

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: AM	Date: 11/29/2023	Time: 13:55

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: CM	Date: NOV 29/23	Time: 18:10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

SOL-954
SOL-953

VS-188

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page 2 of 2

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Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Sylvia Babiarz
Phone:	647 882 7310
	Company address below will appear on the final report
Street:	871 Equestrian Court Unit 1
City/Province:	Oakville, ON
Postal Code:	
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Accounting

Project Information

ALS Account # / Quote #:	ALS - WT23-PALM100-8
Job #:	1904320
PO / AFE:	
LSD:	

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☑ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax	sylvia.babiarz@pecg.ca
Email 2	kalina.naydenova@pecg.ca
Email 3	sarah.vlantis@pecg.ca

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax	accounting@pecg.ca
Email 2	sarah.vlantis@pecg.ca

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

ALS Lab Work Order # (ALS use only):

ALS Contact: A. Martin **Sampler:** SB

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC/VOC	PAH	ICP Metals	OC Pesticides	pH	Grain Size Hydrometer Sieve	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	✓ 23-4-4D	28-Nov-23	5:00pm	soil	1		✓			✓				
	23-5-2	↓	↓	↓	1					✓				
	23-5-2D				1					✓				
	23-5-3				4	✓		✓						
	23-5-3D				3	✓		✓						
					3	AA								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☒ NO

Are samples for human consumption/ use? ☐ YES ☒ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Compare to O.Reg 153/04 Table 3 ICC

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
8.4				4.5			

SHIPMENT RELEASE (client use)

Released by: SB	Date: Nov 28/23	Time: 7:55pm

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: AM	Date: 11/29/2023	Time: 13:55

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: CM	Date: NOV 29/23	Time: 18:10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

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CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2340897**	Page	: 1 of 4
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Date Analysis Commenced	: 19-Dec-2023
C-O-C number	: ----	Issue Date	: 21-Dec-2023 10:28
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario

No Breaches Found

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
µg/L	micrograms per litre

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Analytical Results Evaluation

Matrix: **Groundwater**

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	23-5	----	----	----	----	----	----
				Sampling date/time	14-Dec-2023 17:00	----	----	----	----	----	----
				Sub-Matrix	Groundwater	----	----	----	----	----	----
				WT2340897-001	--------	--------	--------	--------	--------	--------	
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Acenaphthylene	208-96-8	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Anthracene	120-12-7	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Benz(a)anthracene	56-55-3	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Benzo(a)pyrene	50-32-8	E641A/WT	µg/L	<0.0050	----	----	----	----	----	----	
Benzo(b+j)fluoranthene	n/a	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Benzo(k)fluoranthene	207-08-9	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Chrysene	218-01-9	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A/WT	µg/L	<0.0050	----	----	----	----	----	----	
Fluoranthene	206-44-0	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Fluorene	86-73-7	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Methylnaphthalene, 1-	90-12-0	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Methylnaphthalene, 1+2-	----	E641A/WT	µg/L	<0.015	----	----	----	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Naphthalene	91-20-3	E641A/WT	µg/L	<0.050	----	----	----	----	----	----	
Phenanthrene	85-01-8	E641A/WT	µg/L	<0.020	----	----	----	----	----	----	
Pyrene	129-00-0	E641A/WT	µg/L	<0.010	----	----	----	----	----	----	
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A/WT	%	117	----	----	----	----	----	----	
Naphthalene-d8	1146-65-2	E641A/WT	%	99.3	----	----	----	----	----	----	
Phenanthrene-d10	1517-22-2	E641A/WT	%	117	----	----	----	----	----	----	

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Limits

Analyte	CAS Number	Unit	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All					
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	**600 µg/L**	**1700 µg/L**					
Acenaphthylene	208-96-8	µg/L	**1.8 µg/L**	**1.8 µg/L**					
Anthracene	120-12-7	µg/L	**2.4 µg/L**	**2.4 µg/L**					
Benz(a)anthracene	56-55-3	µg/L	**4.7 µg/L**	**4.7 µg/L**					
Benzo(a)pyrene	50-32-8	µg/L	**0.81 µg/L**	**0.81 µg/L**					
Benzo(b+j)fluoranthene	n/a	µg/L	**0.75 µg/L**	**0.75 µg/L**					
Benzo(g,h,i)perylene	191-24-2	µg/L	**0.2 µg/L**	**0.2 µg/L**					
Benzo(k)fluoranthene	207-08-9	µg/L	**0.4 µg/L**	**0.4 µg/L**					
Chrysene	218-01-9	µg/L	**1 µg/L**	**1 µg/L**					
Dibenz(a,h)anthracene	53-70-3	µg/L	**0.52 µg/L**	**0.52 µg/L**					
Fluoranthene	206-44-0	µg/L	**130 µg/L**	**130 µg/L**					
Fluorene	86-73-7	µg/L	**400 µg/L**	**400 µg/L**					
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	**0.2 µg/L**	**0.2 µg/L**					
Methylnaphthalene, 1+2-	----	µg/L	**1800 µg/L**	**1800 µg/L**					
Methylnaphthalene, 1-	90-12-0	µg/L	**1800 µg/L**	**1800 µg/L**					
Methylnaphthalene, 2-	91-57-6	µg/L	**1800 µg/L**	**1800 µg/L**					
Naphthalene	91-20-3	µg/L	**1400 µg/L**	**6400 µg/L**					
Phenanthrene	85-01-8	µg/L	**580 µg/L**	**580 µg/L**					
Pyrene	129-00-0	µg/L	**68 µg/L**	**68 µg/L**					
Chrysene-d12	1719-03-5	%							
Naphthalene-d8	1146-65-2	%							
Phenanthrene-d10	1517-22-2	%							

Please refer to the General Comments section for an explanation of any qualifiers detected.

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2340897**	Page	: 1 of 5
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Issue Date	: 21-Dec-2023 10:28
C-O-C number	: ----		
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-5	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	1 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS)							
PAHs by Hexane LVI GC-MS	E641A	1283237	1	3	33.3	5.0	✓
Method Blanks (MB)							
PAHs by Hexane LVI GC-MS	E641A	1283237	1	3	33.3	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PAHs by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: **WT2340897**	Page	: 1 of 4
Client	: Palmer Environmental Consulting Group Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Date Analysis Commenced	: 19-Dec-2023
C-O-C number	: ----	Issue Date	: 21-Dec-2023 10:28
Sampler	: SB ----		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1283237)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1283237)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	105	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	102	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	112	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	119	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	118	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	94.8	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	102	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	103	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	119	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	97.1	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	106	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	116	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	114	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	98.4	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	101	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	98.7	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	107	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	110	50.0	140	----

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Canada Toll Free: 1 800 668 9878

Page | of |

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Report To	Contact and company name below will appear on the final report
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Sylvia Babiarz
Phone:	6478827310
	Company address below will appear on the final report
Street:	871 Equestrian Court Unit 1
City/Province:	Oakville, ON
Postal Code:	
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Accounting

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A
☑ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: sylvia.babiarz@pecg.ca
Email 2: Kalina.naydenova@pecg.ca
Email 3: sarah.vlantis@pecg.ca

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: accounting@pecg.ca
Email 2: sarah.vlantis@pecg.ca

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimu
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minim
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minim
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minim
Same day [E2] if received by 10am M-S - 200% rush surcharge.
☐ fees may apply to rush requests on weekends, statutory holidays routine tests

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please

Analysis Re

Indicate Filtered (F), Preserved (P) or Filtered a

Environmental Division
Waterloo
Work Order Reference
WT2340897

Telephone : +1 519 886 6910

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	WT23-PALM100-8	AFE/Cost Center:	PO#:
Job #:	1904320	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (ALS use only): WT2340897 FA
ALS Contact: A. Martin **Sampler:** SB

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINER	PAH	SAMPLES ON HOLD	EXTENDED STORAGE RE	SUSPECTED HAZARD (se
	23-5	14-12-23	5:00pm	GW	2	✓			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☑ NO

Are samples for human consumption/ use?
☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Compare to O.Reg 153/04 Table 3 ICC

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☑ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
7.0°C	10.3

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by: Sylvia Babiarz	Date: DEC 14/23	Time:	Received by:	Date: 15-Dec-2023	Time: 11:00	Received by: EC	Date: 15/12/23	Time: 18:15

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

OR-604 MT

ALS Canada Ltd.

right solutions.
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CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2340901**	Page	: 1 of 35
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Date Analysis Commenced	: 18-Dec-2023
C-O-C number	: ----	Issue Date	: 22-Dec-2023 15:11
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	VOC, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
µg/L	micrograms per litre

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Qualifiers

Qualifier	*Description*
DLHC	*Detection Limit Raised: Dilution required due to high concentration of test analyte(s).*
DLM	*Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).*
SUR-ND	*Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.*

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-1						
	Sampling date/time	14-Dec-2023 12:00						
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-001	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	**--**	**--**	**--**	**--**
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	<1.00 DLHC	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	<1.00 DLHC	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	332 DLHC	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.200 DLHC	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	109 DLHC	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.338 DLHC	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<5.00 DLHC	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	23.2 DLHC	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	2.61 DLHC	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.500 DLHC	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	12.5 DLHC	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	19.0 DLHC	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	2.74 DLHC	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.100 DLHC	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	316000 DLHC	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	0.115 DLHC	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	8.18 DLHC	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	<5.00 DLHC	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	11.2 DLHC	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-001 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-001 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	85.6	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	84.1	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	103	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	96.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-2							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-002	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	--	--	--	--
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	1.24	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	0.68	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	171	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.020	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	160	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.122	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<0.50	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	18.5	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	3.60	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	0.055	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	18.8	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	11.5	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	2.66	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	119000	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	0.063	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	4.25	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	0.82	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	20.7	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-002 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-002 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-Naphthalene	EC600SG/WT	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG/WT	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	92.8	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	63.6	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	103	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.0	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	E641A/WT	0.010	µg/L	<0.016 DLM	600 µg/L	1700 µg/L	--	--	--	--
Acenaphthylene	E641A/WT	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
Anthracene	E641A/WT	0.010	µg/L	<0.010	2.4 µg/L	2.4 µg/L	--	--	--	--
Benz(a)anthracene	E641A/WT	0.010	µg/L	<0.010	4.7 µg/L	4.7 µg/L	--	--	--	--
Benzo(a)pyrene	E641A/WT	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
Benzo(b+j)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
Benzo(g,h,i)perylene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Benzo(k)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
Chrysene	E641A/WT	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
Dibenz(a,h)anthracene	E641A/WT	0.0050	µg/L	<0.0050	0.52 µg/L	0.52 µg/L	--	--	--	--
Fluoranthene	E641A/WT	0.010	µg/L	<0.010	130 µg/L	130 µg/L	--	--	--	--
Fluorene	E641A/WT	0.010	µg/L	<0.010	400 µg/L	400 µg/L	--	--	--	--
Indeno(1,2,3-c,d)pyrene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Methylnaphthalene, 1+2-	E641A/WT	0.015	µg/L	<0.015	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 1-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 2-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Naphthalene	E641A/WT	0.050	µg/L	<0.050	1400 µg/L	6400 µg/L	--	--	--	--
Phenanthrene	E641A/WT	0.020	µg/L	<0.020	580 µg/L	580 µg/L	--	--	--	--
Pyrene	E641A/WT	0.010	µg/L	<0.010	68 µg/L	68 µg/L	--	--	--	--
Chrysene-d12	E641A/WT	0.1	%	118	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-002 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Polycyclic Aromatic Hydrocarbons Surrogates - Continued										
Naphthalene-d8	E641A/WT	0.1	%	100	--	--	--	--	--	--
Phenanthrene-d10	E641A/WT	0.1	%	115	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	8.5 µg/L	8.5 µg/L	--	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	28 µg/L	28 µg/L	--	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	45 µg/L	45 µg/L	--	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	20 µg/L	20 µg/L	--	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	2.8 µg/L	2.8 µg/L	--	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	0.75 µg/L	0.75 µg/L	--	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	0.48 µg/L	0.48 µg/L	--	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	0.048 µg/L	0.048 µg/L	--	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	2.5 µg/L	2.5 µg/L	--	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	3.1 µg/L	3.1 µg/L	--	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	0.44 µg/L	4.5 µg/L	--	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	1.2 µg/L	1.2 µg/L	--	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	94 µg/L	200 µg/L	--	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	6.5 µg/L	6.5 µg/L	--	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	99.2	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	69.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-NPGW-C-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
T3-NPGW-F-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-3							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-003	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	--	--	--	--
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	1.14	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	0.53	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	205	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.020	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	135	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.0477	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<0.50	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	7.04	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	1.88	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.050	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	18.8	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	6.62	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	2.30	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	262000	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	0.052	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	4.64	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	0.91	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	8.1	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-003 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-003 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-Naphthalene	EC600SG/WT	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG/WT	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	92.4	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	78.8	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	102	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	96.9	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	E641A/WT	0.010	µg/L	<0.010	600 µg/L	1700 µg/L	--	--	--	--
Acenaphthylene	E641A/WT	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
Anthracene	E641A/WT	0.010	µg/L	<0.010	2.4 µg/L	2.4 µg/L	--	--	--	--
Benz(a)anthracene	E641A/WT	0.010	µg/L	<0.010	4.7 µg/L	4.7 µg/L	--	--	--	--
Benzo(a)pyrene	E641A/WT	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
Benzo(b+j)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
Benzo(g,h,i)perylene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Benzo(k)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
Chrysene	E641A/WT	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
Dibenz(a,h)anthracene	E641A/WT	0.0050	µg/L	<0.0050	0.52 µg/L	0.52 µg/L	--	--	--	--
Fluoranthene	E641A/WT	0.010	µg/L	<0.010	130 µg/L	130 µg/L	--	--	--	--
Fluorene	E641A/WT	0.010	µg/L	<0.010	400 µg/L	400 µg/L	--	--	--	--
Indeno(1,2,3-c,d)pyrene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Methylnaphthalene, 1+2-	E641A/WT	0.015	µg/L	<0.015	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 1-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 2-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Naphthalene	E641A/WT	0.050	µg/L	<0.050	1400 µg/L	6400 µg/L	--	--	--	--
Phenanthrene	E641A/WT	0.020	µg/L	<0.020	580 µg/L	580 µg/L	--	--	--	--
Pyrene	E641A/WT	0.010	µg/L	<0.010	68 µg/L	68 µg/L	--	--	--	--
Chrysene-d12	E641A/WT	0.1	%	112	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-003 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Polycyclic Aromatic Hydrocarbons Surrogates - Continued										
Naphthalene-d8	E641A/WT	0.1	%	98.2	--	--	--	--	--	--
Phenanthrene-d10	E641A/WT	0.1	%	116	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	8.5 µg/L	8.5 µg/L	--	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	28 µg/L	28 µg/L	--	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	45 µg/L	45 µg/L	--	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	20 µg/L	20 µg/L	--	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	2.8 µg/L	2.8 µg/L	--	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	0.75 µg/L	0.75 µg/L	--	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	0.48 µg/L	0.48 µg/L	--	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	0.048 µg/L	0.048 µg/L	--	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	2.5 µg/L	2.5 µg/L	--	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	3.1 µg/L	3.1 µg/L	--	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	0.44 µg/L	4.5 µg/L	--	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	1.2 µg/L	1.2 µg/L	--	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	94 µg/L	200 µg/L	--	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	6.5 µg/L	6.5 µg/L	--	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	124	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	76.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-NPGW-C-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
T3-NPGW-F-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-3D								
	Sampling date/time	14-Dec-2023 12:00								
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-004	**ON153/04 T3-NPGW-C-All**	**ON153/04 T3-NPGW-F-All**	**--**	**--**	**--**	**--**
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	E641A/WT	0.010	µg/L	<0.010	600 µg/L	1700 µg/L	--	--	--	--
Acenaphthylene	E641A/WT	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
Anthracene	E641A/WT	0.010	µg/L	<0.010	2.4 µg/L	2.4 µg/L	--	--	--	--
Benz(a)anthracene	E641A/WT	0.010	µg/L	<0.010	4.7 µg/L	4.7 µg/L	--	--	--	--
Benzo(a)pyrene	E641A/WT	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
Benzo(b+j)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
Benzo(g,h,i)perylene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Benzo(k)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
Chrysene	E641A/WT	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
Dibenz(a,h)anthracene	E641A/WT	0.0050	µg/L	<0.0050	0.52 µg/L	0.52 µg/L	--	--	--	--
Fluoranthene	E641A/WT	0.010	µg/L	<0.010	130 µg/L	130 µg/L	--	--	--	--
Fluorene	E641A/WT	0.010	µg/L	<0.010	400 µg/L	400 µg/L	--	--	--	--
Indeno(1,2,3-c,d)pyrene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Methylnaphthalene, 1+2-	E641A/WT	0.015	µg/L	<0.015	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 1-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 2-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Naphthalene	E641A/WT	0.050	µg/L	<0.050	1400 µg/L	6400 µg/L	--	--	--	--
Phenanthrene	E641A/WT	0.020	µg/L	<0.020	580 µg/L	580 µg/L	--	--	--	--
Pyrene	E641A/WT	0.010	µg/L	<0.010	68 µg/L	68 µg/L	--	--	--	--
Chrysene-d12	E641A/WT	0.1	%	112	--	--	--	--	--	--
Naphthalene-d8	E641A/WT	0.1	%	95.6	--	--	--	--	--	--
Phenanthrene-d10	E641A/WT	0.1	%	112	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-NPGW-C-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
T3-NPGW-F-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-4							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-005	**ON153/04 T3-NPGW-C-All**	**ON153/04 T3-NPGW-F-All**	**--**	**--**	**--**	**--**
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	1.45	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	1.04	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	174	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.020	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	180	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.0112	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<0.50	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	0.40	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	3.53	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.050	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	15.0	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	0.87	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	0.878	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	23000	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	0.030	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	2.37	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	1.50	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	13.1	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-005 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-005 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-Naphthalene	EC600SG/WT	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG/WT	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	91.6	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	78.7	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	102	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	96.9	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	E641A/WT	0.010	µg/L	<0.010	600 µg/L	1700 µg/L	--	--	--	--
Acenaphthylene	E641A/WT	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
Anthracene	E641A/WT	0.010	µg/L	<0.010	2.4 µg/L	2.4 µg/L	--	--	--	--
Benz(a)anthracene	E641A/WT	0.010	µg/L	<0.010	4.7 µg/L	4.7 µg/L	--	--	--	--
Benzo(a)pyrene	E641A/WT	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
Benzo(b+j)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
Benzo(g,h,i)perylene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Benzo(k)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
Chrysene	E641A/WT	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
Dibenz(a,h)anthracene	E641A/WT	0.0050	µg/L	<0.0050	0.52 µg/L	0.52 µg/L	--	--	--	--
Fluoranthene	E641A/WT	0.010	µg/L	<0.010	130 µg/L	130 µg/L	--	--	--	--
Fluorene	E641A/WT	0.010	µg/L	<0.010	400 µg/L	400 µg/L	--	--	--	--
Indeno(1,2,3-c,d)pyrene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Methylnaphthalene, 1+2-	E641A/WT	0.015	µg/L	<0.015	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 1-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 2-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Naphthalene	E641A/WT	0.050	µg/L	<0.050	1400 µg/L	6400 µg/L	--	--	--	--
Phenanthrene	E641A/WT	0.020	µg/L	<0.020	580 µg/L	580 µg/L	--	--	--	--
Pyrene	E641A/WT	0.010	µg/L	<0.010	68 µg/L	68 µg/L	--	--	--	--
Chrysene-d12	E641A/WT	0.1	%	124	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-005 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Polycyclic Aromatic Hydrocarbons Surrogates - Continued										
Naphthalene-d8	E641A/WT	0.1	%	105	--	--	--	--	--	--
Phenanthrene-d10	E641A/WT	0.1	%	122	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	8.5 µg/L	8.5 µg/L	--	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	28 µg/L	28 µg/L	--	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	45 µg/L	45 µg/L	--	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	20 µg/L	20 µg/L	--	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	2.8 µg/L	2.8 µg/L	--	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	0.75 µg/L	0.75 µg/L	--	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	0.48 µg/L	0.48 µg/L	--	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	0.048 µg/L	0.048 µg/L	--	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	2.5 µg/L	2.5 µg/L	--	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	3.1 µg/L	3.1 µg/L	--	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	0.44 µg/L	4.5 µg/L	--	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	1.2 µg/L	1.2 µg/L	--	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	94 µg/L	200 µg/L	--	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	6.5 µg/L	6.5 µg/L	--	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	120	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	66.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-NPGW-C-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
T3-NPGW-F-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-4D								
	Sampling date/time	14-Dec-2023 12:00								
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-006	**ON153/04 T3-NPGW-C-All**	**ON153/04 T3-NPGW-F-All**	**--**	**--**	**--**	**--**
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	8.5 µg/L	8.5 µg/L	--	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	28 µg/L	28 µg/L	--	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	45 µg/L	45 µg/L	--	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	20 µg/L	20 µg/L	--	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	2.8 µg/L	2.8 µg/L	--	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	0.75 µg/L	0.75 µg/L	--	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	0.48 µg/L	0.48 µg/L	--	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	0.048 µg/L	0.048 µg/L	--	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	2.5 µg/L	2.5 µg/L	--	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	3.1 µg/L	3.1 µg/L	--	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	0.44 µg/L	4.5 µg/L	--	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	1.2 µg/L	1.2 µg/L	--	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	94 µg/L	200 µg/L	--	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	6.5 µg/L	6.5 µg/L	--	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	138 SUR-ND	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	75.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T3-NPGW-C-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
T3-NPGW-F-All	153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-5							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-007	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	--	--	--	--
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	<0.10	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	0.63	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	293	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.020	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	71	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.0069	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<0.50	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	1.30	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	0.39	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.050	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	0.373	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	1.14	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	0.055	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	26000	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	<0.010	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	0.471	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	0.60	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	2.7	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-007 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-007 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	86.2	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	77.4	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	102	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-5D							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-008	**ON153/04 T3-NPGW-C-All**	**ON153/04 T3-NPGW-F-All**	**--**	**--**	**--**	**--**
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	<0.10	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	0.67	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	295	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.020	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	76	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.0073	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<0.50	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	1.35	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	0.40	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.050	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	0.362	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	1.45	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	0.054	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.010	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	25900	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	<0.010	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	0.477	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	0.60	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	2.8	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-008 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-008 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	96.8	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	73.0	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	102	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

	Client sample ID	23-6							
	Sampling date/time	14-Dec-2023 12:00							
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-009	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	**--**	**--**	**--**	**--**
Dissolved Metals										
Antimony, dissolved	E421/WT	0.10	µg/L	<1.00 DLHC	20000 µg/L	20000 µg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.10	µg/L	<1.00 DLHC	1900 µg/L	1900 µg/L	--	--	--	--
Barium, dissolved	E421/WT	0.10	µg/L	228 DLHC	29000 µg/L	29000 µg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.020	µg/L	<0.200 DLHC	67 µg/L	67 µg/L	--	--	--	--
Boron, dissolved	E421/WT	10	µg/L	233 DLHC	45000 µg/L	45000 µg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0050	µg/L	0.189 DLHC	2.7 µg/L	2.7 µg/L	--	--	--	--
Chromium, dissolved	E421/WT	0.50	µg/L	<5.00 DLHC	810 µg/L	810 µg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.10	µg/L	21.6 DLHC	66 µg/L	66 µg/L	--	--	--	--
Copper, dissolved	E421/WT	0.20	µg/L	2.50 DLHC	87 µg/L	87 µg/L	--	--	--	--
Lead, dissolved	E421/WT	0.050	µg/L	<0.500 DLHC	25 µg/L	25 µg/L	--	--	--	--
Molybdenum, dissolved	E421/WT	0.050	µg/L	4.51 DLHC	9200 µg/L	9200 µg/L	--	--	--	--
Nickel, dissolved	E421/WT	0.50	µg/L	36.4 DLHC	490 µg/L	490 µg/L	--	--	--	--
Selenium, dissolved	E421/WT	0.050	µg/L	0.937 DLHC	63 µg/L	63 µg/L	--	--	--	--
Silver, dissolved	E421/WT	0.010	µg/L	<0.100 DLHC	1.5 µg/L	1.5 µg/L	--	--	--	--
Sodium, dissolved	E421/WT	50	µg/L	344000 DLHC	2300000 µg/L	2300000 µg/L	--	--	--	--
Thallium, dissolved	E421/WT	0.010	µg/L	0.152 DLHC	510 µg/L	510 µg/L	--	--	--	--
Uranium, dissolved	E421/WT	0.010	µg/L	13.8 DLHC	420 µg/L	420 µg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.50	µg/L	<5.00 DLHC	250 µg/L	250 µg/L	--	--	--	--
Zinc, dissolved	E421/WT	1.0	µg/L	15.4 DLHC	1100 µg/L	1100 µg/L	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-009 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-009 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Hydrocarbons										
F1 (C6-C10)	E581.F1-L/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG/WT	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-Naphthalene	EC600SG/WT	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG/WT	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG/WT	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580/WT	25	µg/L	<25	750 µg/L	750 µg/L	--	--	--	--
Hydrocarbons, total (C6-C50)	EC581SG/WT	240	µg/L	<370	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG/WT		-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG/WT	1.0	%	88.1	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1-L/WT	1.0	%	79.9	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D/WT	1.0	%	103	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.0	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	E641A/WT	0.010	µg/L	<0.010	600 µg/L	1700 µg/L	--	--	--	--
Acenaphthylene	E641A/WT	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
Anthracene	E641A/WT	0.010	µg/L	<0.010	2.4 µg/L	2.4 µg/L	--	--	--	--
Benz(a)anthracene	E641A/WT	0.010	µg/L	<0.010	4.7 µg/L	4.7 µg/L	--	--	--	--
Benzo(a)pyrene	E641A/WT	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
Benzo(b+j)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
Benzo(g,h,i)perylene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Benzo(k)fluoranthene	E641A/WT	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
Chrysene	E641A/WT	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
Dibenz(a,h)anthracene	E641A/WT	0.0050	µg/L	<0.0050	0.52 µg/L	0.52 µg/L	--	--	--	--
Fluoranthene	E641A/WT	0.010	µg/L	<0.010	130 µg/L	130 µg/L	--	--	--	--
Fluorene	E641A/WT	0.010	µg/L	<0.010	400 µg/L	400 µg/L	--	--	--	--
Indeno(1,2,3-c,d)pyrene	E641A/WT	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
Methylnaphthalene, 1+2-	E641A/WT	0.015	µg/L	<0.015	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 1-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Methylnaphthalene, 2-	E641A/WT	0.010	µg/L	<0.010	1800 µg/L	1800 µg/L	--	--	--	--
Naphthalene	E641A/WT	0.050	µg/L	<0.050	1400 µg/L	6400 µg/L	--	--	--	--
Phenanthrene	E641A/WT	0.020	µg/L	<0.020	580 µg/L	580 µg/L	--	--	--	--
Pyrene	E641A/WT	0.010	µg/L	<0.010	68 µg/L	68 µg/L	--	--	--	--
Chrysene-d12	E641A/WT	0.1	%	113	--	--	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-009 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Polycyclic Aromatic Hydrocarbons Surrogates - Continued										
Naphthalene-d8	E641A/WT	0.1	%	99.9	--	--	--	--	--	--
Phenanthrene-d10	E641A/WT	0.1	%	118	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

Analytical Results

Sub-Matrix: **Groundwater**
(Matrix: **Water**)

				Client sample ID	TRIP BLANK					
				Sampling date/time	14-Dec-2023 12:00					
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2340901-010	**ON153/04 T3-NPGW-C-AII**	**ON153/04 T3-NPGW-F-AII**	**--**	**--**	**--**	**--**
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	130000 µg/L	130000 µg/L	--	--	--	--
Benzene	E611D/WT	0.50	µg/L	<0.50	44 µg/L	430 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	85000 µg/L	85000 µg/L	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	380 µg/L	770 µg/L	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	5.6 µg/L	56 µg/L	--	--	--	--
Carbon tetrachloride	E611D/WT	0.20	µg/L	<0.20	0.79 µg/L	8.4 µg/L	--	--	--	--
Chlorobenzene	E611D/WT	0.50	µg/L	<0.50	630 µg/L	630 µg/L	--	--	--	--
Chloroform	E611D/WT	0.50	µg/L	<0.50	2.4 µg/L	22 µg/L	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	82000 µg/L	82000 µg/L	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	0.25 µg/L	0.83 µg/L	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT	0.50	µg/L	<0.50	4600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	9600 µg/L	9600 µg/L	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT	0.50	µg/L	<0.50	8 µg/L	67 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	4400 µg/L	4400 µg/L	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	320 µg/L	3100 µg/L	--	--	--	--
Dichloroethane, 1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	12 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Dichloromethane	E611D/WT	1.0	µg/L	<1.0	610 µg/L	5500 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	16 µg/L	140 µg/L	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	5.2 µg/L	45 µg/L	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT	0.50	µg/L	<0.50	2300 µg/L	2300 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	51 µg/L	520 µg/L	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	470000 µg/L	1500000 µg/L	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	140000 µg/L	580000 µg/L	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT	0.50	µg/L	<0.50	190 µg/L	1400 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	1300 µg/L	9100 µg/L	--	--	--	--

Analyte	Method/Lab	LOR	Unit	WT2340901-010 (Continued)	ON153/04 T3-NPGW-C-All	ON153/04 T3-NPGW-F-All	--	--	--	--
Volatile Organic Compounds - Continued										
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	3.3 µg/L	28 µg/L	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	3.2 µg/L	15 µg/L	--	--	--	--
Tetrachloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Toluene	E611D/WT	0.50	µg/L	<0.50	18000 µg/L	18000 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	640 µg/L	6700 µg/L	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	4.7 µg/L	30 µg/L	--	--	--	--
Trichloroethylene	E611D/WT	0.50	µg/L	<0.50	1.6 µg/L	17 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	2500 µg/L	2500 µg/L	--	--	--	--
Vinyl chloride	E611D/WT	0.50	µg/L	<0.50	0.5 µg/L	1.7 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	4200 µg/L	4200 µg/L	--	--	--	--
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	102	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)

T3-NPGW-C-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

T3-NPGW-F-All 153 T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

ALS Canada Ltd.

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right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2340901**	Page	: 1 of 11
Client	: **Palmer Environmental Consulting Group Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Issue Date	: 22-Dec-2023 15:10
C-O-C number	: ----		
Sampler	: SB		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- Test sample Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Silver, dissolved	7440-22-4	E421	69.8 % MES	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Regular Sample Surrogates

Sub-Matrix: **Groundwater**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Result	Limits	Comment
Samples Submitted							
Organochlorine Pesticides Surrogates	WT2340901-006	23-4D	Decachlorobiphenyl	2051-24-3	138 %	50.0-130 %	Recovery greater than upper data quality objective

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-1	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-2	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-3	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-4	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-5	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-5D	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) 23-6	E421	14-Dec-2023	18-Dec-2023	180 days	4 days	✓	18-Dec-2023	180 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-1	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-2	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-3	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-4	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-5	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-5D	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) 23-6	E581.F1-L	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-2	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-3	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-4	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-5	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-5D	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-6	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	21-Dec-2023	40 days	2 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP]										
23-1	E601.SG	14-Dec-2023	19-Dec-2023	40 days	5 days	✓	22-Dec-2023	40 days	3 days	✓
Organochlorine Pesticides : OCP Analysis by GC-MS-MS or GC-MS										
Amber glass/Teflon lined cap [ON MECP]										
23-4	E660F	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	1 days	✓
Organochlorine Pesticides : OCP Analysis by GC-MS-MS or GC-MS										
Amber glass/Teflon lined cap [ON MECP]										
23-4D	E660F	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	1 days	✓
Organochlorine Pesticides : OCP Analysis by GC-MS-MS or GC-MS										
Amber glass/Teflon lined cap [ON MECP]										
23-2	E660F	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	2 days	✓
Organochlorine Pesticides : OCP Analysis by GC-MS-MS or GC-MS										
Amber glass/Teflon lined cap [ON MECP]										
23-3	E660F	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	2 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-2	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-3	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-3D	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-4	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) [ON MECP] 23-6	E641A	14-Dec-2023	19-Dec-2023	14 days	5 days	✓	20-Dec-2023	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-1	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-2	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-3	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-4	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-5	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-5D	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) 23-6	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) TRIP BLANK	E611D	14-Dec-2023	18-Dec-2023	14 days	4 days	✓	18-Dec-2023	14 days	4 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: ✗ = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1280681	0	8	0.0	5.0	✗
Dissolved Metals in Water by CRC ICPMS	E421	1280870	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1280680	1	18	5.5	5.0	✓
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1280681	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1280870	1	20	5.0	5.0	✓
OCP Analysis by GC-MS-MS or GC-MS	E660F	1282559	2	20	10.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	1283245	1	11	9.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	1283246	2	26	7.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1280680	1	18	5.5	5.0	✓
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1280681	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1280870	1	20	5.0	5.0	✓
OCP Analysis by GC-MS-MS or GC-MS	E660F	1282559	2	20	10.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	1283245	1	11	9.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	1283246	2	26	7.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1280680	1	18	5.5	5.0	✓
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	1280681	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1280870	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1280680	1	18	5.5	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
OCP Analysis by GC-MS-MS or GC-MS	E660F ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Pesticides are analyzed by GC-MS-MS or GC-MS
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
F2-F4 (sg) minus PAH	EC600SG ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: **WT2340901**	Page	: 1 of 15
Client	: Palmer Environmental Consulting Group Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Sylvia Babiarz	Account Manager	: Andrew Martin
Address	: 74 Berkeley Street Toronto ON Canada M5V 1E3	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 1904320	Date Samples Received	: 15-Dec-2023 11:00
PO	: ----	Date Analysis Commenced	: 18-Dec-2023
C-O-C number	: ----	Issue Date	: 22-Dec-2023 15:10
Sampler	: SB ----		
Site	: Ajax, ON		
Quote number	: WT23-PALM100-8 - Ajax GW & Soil		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1280870)											
WT2340821-002	Anonymous	Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.15 µg/L	0.00015	0.000002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.34 µg/L	0.00035	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	128 µg/L	0.131	1.78%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.020 µg/L	<0.000020	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	123 µg/L	0.118	4.24%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0060 µg/L	0.0000078	0.0000018	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.10 µg/L	0.00010	0.0000003	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	5.00 µg/L	0.00499	0.218%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.064 µg/L	0.000065	0.0000003	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	3.24 µg/L	0.00325	0.447%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	1.60 µg/L	0.00165	0.00005	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.298 µg/L	0.000322	0.000024	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.010 µg/L	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	55500 µg/L	54.9	1.03%	20%	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.011 µg/L	0.000011	0.0000001	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	3.88 µg/L	0.00386	0.294%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	2.2 µg/L	0.0021	0.00002	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1280680)											
WT2340901-001	23-1	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 1280680) - continued											
WT2340901-001	23-1	Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1280870)						
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1280680)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1280680) - continued						
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1280681)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 1283236)						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
Hydrocarbons (QCLot: 1283246)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Hydrocarbons (QCLot: 1283246) - continued						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1283245)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Organochlorine Pesticides (QCLot: 1281802)						
Aldrin	309-00-2	E660F	0.008	µg/L	<0.0080	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.008	µg/L	<0.0080	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.008	µg/L	<0.0080	----
DDD, 2,4'-	53-19-0	E660F	0.004	µg/L	<0.0040	----
DDD, 4,4'-	72-54-8	E660F	0.004	µg/L	<0.0040	----
DDE, 2,4'-	3424-82-6	E660F	0.004	µg/L	<0.0040	----
DDE, 4,4'-	72-55-9	E660F	0.004	µg/L	<0.0040	----
DDT, 2,4'-	789-02-6	E660F	0.004	µg/L	<0.0040	----
DDT, 4,4'-	50-29-3	E660F	0.004	µg/L	<0.0040	----
Dieldrin	60-57-1	E660F	0.008	µg/L	<0.0080	----
Endosulfan, alpha-	959-98-8	E660F	0.007	µg/L	<0.0070	----
Endosulfan, beta-	33213-65-9	E660F	0.007	µg/L	<0.0070	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Organochlorine Pesticides (QCLot: 1281802) - continued						
Endrin	72-20-8	E660F	0.01	µg/L	<0.010	----
Heptachlor	76-44-8	E660F	0.008	µg/L	<0.0080	----
Heptachlor epoxide	1024-57-3	E660F	0.008	µg/L	<0.0080	----
Hexachlorobenzene	118-74-1	E660F	0.008	µg/L	<0.0080	----
Hexachlorobutadiene	87-68-3	E660F	0.008	µg/L	<0.0080	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.008	µg/L	<0.0080	----
Hexachloroethane	67-72-1	E660F	0.008	µg/L	<0.0080	----
Methoxychlor	72-43-5	E660F	0.008	µg/L	<0.0080	----
Organochlorine Pesticides (QCLot: 1282559)						
Aldrin	309-00-2	E660F	0.008	µg/L	<0.0080	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.008	µg/L	<0.0080	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.008	µg/L	<0.0080	----
DDD, 2,4'-	53-19-0	E660F	0.004	µg/L	<0.0040	----
DDD, 4,4'-	72-54-8	E660F	0.004	µg/L	<0.0040	----
DDE, 2,4'-	3424-82-6	E660F	0.004	µg/L	<0.0040	----
DDE, 4,4'-	72-55-9	E660F	0.004	µg/L	<0.0040	----
DDT, 2,4'-	789-02-6	E660F	0.004	µg/L	<0.0040	----
DDT, 4,4'-	50-29-3	E660F	0.004	µg/L	<0.0040	----
Dieldrin	60-57-1	E660F	0.008	µg/L	<0.0080	----
Endosulfan, alpha-	959-98-8	E660F	0.007	µg/L	<0.0070	----
Endosulfan, beta-	33213-65-9	E660F	0.007	µg/L	<0.0070	----
Endrin	72-20-8	E660F	0.01	µg/L	<0.010	----
Heptachlor	76-44-8	E660F	0.008	µg/L	<0.0080	----
Heptachlor epoxide	1024-57-3	E660F	0.008	µg/L	<0.0080	----
Hexachlorobenzene	118-74-1	E660F	0.008	µg/L	<0.0080	----
Hexachlorobutadiene	87-68-3	E660F	0.008	µg/L	<0.0080	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.008	µg/L	<0.0080	----
Hexachloroethane	67-72-1	E660F	0.008	µg/L	<0.0080	----
Methoxychlor	72-43-5	E660F	0.008	µg/L	<0.0080	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1280870)									
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	100	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	96.4	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	101	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	104	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	103	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	103	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	109	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	105	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	107	80.0	120	----
Volatile Organic Compounds (QCLot: 1280680)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	123	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	99.4	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	99.6	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	90.5	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.9	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	86.0	70.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1280680) - continued									
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	87.0	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	82.4	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	100.0	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	90.7	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	104	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	83.6	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	80.9	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	85.2	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	109	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	98.1	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	90.9	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	90.5	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	94.2	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	92.2	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	86.1	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	87.1	70.0	130	----
Hydrocarbons (QCLot: 1280681)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	108	80.0	120	----
Hydrocarbons (QCLot: 1283236)									
F2 (C10-C16)	----	E601.SG	100	µg/L	3685.12 µg/L	117	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7481.33 µg/L	115	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4274.88 µg/L	114	70.0	130	----
Hydrocarbons (QCLot: 1283246)									

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Hydrocarbons (QCLot: 1283246) - continued									
F2 (C10-C16)	----	E601.SG	100	µg/L	3685.12 µg/L	109	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7481.33 µg/L	112	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4274.88 µg/L	112	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1283245)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	105	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	103	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	113	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	120	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	120	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	96.8	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	106	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	116	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	108	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	106	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	115	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	122	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	98.0	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	100	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	96.7	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	107	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	109	50.0	140	----
Organochlorine Pesticides (QCLot: 1281802)									
Aldrin	309-00-2	E660F	0.008	µg/L	0.2 µg/L	71.9	50.0	150	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.008	µg/L	0.2 µg/L	89.5	50.0	150	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.008	µg/L	0.2 µg/L	98.2	50.0	150	----
DDD, 2,4'-	53-19-0	E660F	0.004	µg/L	0.2 µg/L	99.6	50.0	150	----
DDD, 4,4'-	72-54-8	E660F	0.004	µg/L	0.2 µg/L	104	50.0	150	----
DDE, 2,4'-	3424-82-6	E660F	0.004	µg/L	0.2 µg/L	88.7	50.0	150	----
DDE, 4,4'-	72-55-9	E660F	0.004	µg/L	0.2 µg/L	90.4	50.0	150	----
DDT, 2,4'-	789-02-6	E660F	0.004	µg/L	0.2 µg/L	93.5	50.0	150	----
DDT, 4,4'-	50-29-3	E660F	0.004	µg/L	0.2 µg/L	84.5	50.0	150	----
Dieldrin	60-57-1	E660F	0.008	µg/L	0.2 µg/L	88.8	50.0	150	----
Endosulfan, alpha-	959-98-8	E660F	0.007	µg/L	0.2 µg/L	91.5	50.0	150	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	Qualifier
Organochlorine Pesticides (QCLot: 1281802) - continued									
Endosulfan, beta-	33213-65-9	E660F	0.007	µg/L	0.2 µg/L	90.6	50.0	150	----
Endrin	72-20-8	E660F	0.01	µg/L	0.2 µg/L	90.2	50.0	150	----
Heptachlor	76-44-8	E660F	0.008	µg/L	0.2 µg/L	77.3	50.0	150	----
Heptachlor epoxide	1024-57-3	E660F	0.008	µg/L	0.2 µg/L	91.6	50.0	150	----
Hexachlorobenzene	118-74-1	E660F	0.008	µg/L	0.2 µg/L	83.6	50.0	150	----
Hexachlorobutadiene	87-68-3	E660F	0.008	µg/L	0.2 µg/L	84.8	50.0	150	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.008	µg/L	0.2 µg/L	77.9	50.0	150	----
Hexachloroethane	67-72-1	E660F	0.008	µg/L	0.2 µg/L	80.7	50.0	150	----
Methoxychlor	72-43-5	E660F	0.008	µg/L	0.2 µg/L	89.1	50.0	150	----
Organochlorine Pesticides (QCLot: 1282559)									
Aldrin	309-00-2	E660F	0.008	µg/L	0.2 µg/L	102	50.0	150	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.008	µg/L	0.2 µg/L	100	50.0	150	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.008	µg/L	0.2 µg/L	90.7	50.0	150	----
DDD, 2,4'-	53-19-0	E660F	0.004	µg/L	0.2 µg/L	112	50.0	150	----
DDD, 4,4'-	72-54-8	E660F	0.004	µg/L	0.2 µg/L	103	50.0	150	----
DDE, 2,4'-	3424-82-6	E660F	0.004	µg/L	0.2 µg/L	100	50.0	150	----
DDE, 4,4'-	72-55-9	E660F	0.004	µg/L	0.2 µg/L	99.7	50.0	150	----
DDT, 2,4'-	789-02-6	E660F	0.004	µg/L	0.2 µg/L	110	50.0	150	----
DDT, 4,4'-	50-29-3	E660F	0.004	µg/L	0.2 µg/L	112	50.0	150	----
Dieldrin	60-57-1	E660F	0.008	µg/L	0.2 µg/L	104	50.0	150	----
Endosulfan, alpha-	959-98-8	E660F	0.007	µg/L	0.2 µg/L	124	50.0	150	----
Endosulfan, beta-	33213-65-9	E660F	0.007	µg/L	0.2 µg/L	115	50.0	150	----
Endrin	72-20-8	E660F	0.01	µg/L	0.2 µg/L	94.8	50.0	150	----
Heptachlor	76-44-8	E660F	0.008	µg/L	0.2 µg/L	104	50.0	150	----
Heptachlor epoxide	1024-57-3	E660F	0.008	µg/L	0.2 µg/L	101	50.0	150	----
Hexachlorobenzene	118-74-1	E660F	0.008	µg/L	0.2 µg/L	97.1	50.0	150	----
Hexachlorobutadiene	87-68-3	E660F	0.008	µg/L	0.2 µg/L	93.4	50.0	150	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.008	µg/L	0.2 µg/L	110	50.0	150	----
Hexachloroethane	67-72-1	E660F	0.008	µg/L	0.2 µg/L	93.5	50.0	150	----
Methoxychlor	72-43-5	E660F	0.008	µg/L	0.2 µg/L	114	50.0	150	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1280870)										
WT2340821-003	Anonymous	Antimony, dissolved	7440-36-0	E421	0.0521 mg/L	0.05 mg/L	104	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0559 mg/L	0.05 mg/L	112	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00500 mg/L	0.005 mg/L	100	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.047 mg/L	0.05 mg/L	93.9	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00512 mg/L	0.005 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0130 mg/L	0.0125 mg/L	104	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0125 mg/L	0.0125 mg/L	99.9	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0119 mg/L	0.0125 mg/L	95.5	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0242 mg/L	0.025 mg/L	96.6	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0130 mg/L	0.0125 mg/L	104	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0242 mg/L	0.025 mg/L	96.7	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0571 mg/L	0.05 mg/L	114	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00349 mg/L	0.005 mg/L	69.8	70.0	130	MES
		Sodium, dissolved	7440-23-5	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0488 mg/L	0.05 mg/L	97.6	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	0.00025 mg/L	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0271 mg/L	0.025 mg/L	108	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
Volatile Organic Compounds (QCLot: 1280680)										
WT2340901-001	23-1	Acetone	67-64-1	E611D	126 µg/L	100 µg/L	126	60.0	140	----
		Benzene	71-43-2	E611D	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Bromoform	75-25-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Bromomethane	74-83-9	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Chlorobenzene	108-90-7	E611D	92.0 µg/L	100 µg/L	92.0	60.0	140	----
		Chloroform	67-66-3	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1280680) - continued										
WT2340901-001	23-1	Dichlorobenzene, 1,3-	541-73-1	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	68.0 µg/L	100 µg/L	68.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	89.7 µg/L	100 µg/L	89.7	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	98.1 µg/L	100 µg/L	98.1	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Dichloromethane	75-09-2	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	84.7 µg/L	100 µg/L	84.7	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	79.7 µg/L	100 µg/L	79.7	60.0	140	----
		Ethylbenzene	100-41-4	E611D	85.4 µg/L	100 µg/L	85.4	60.0	140	----
		Hexane, n-	110-54-3	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	90 µg/L	100 µg/L	90.3	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Styrene	100-42-5	E611D	90.4 µg/L	100 µg/L	90.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Toluene	108-88-3	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Trichloroethylene	79-01-6	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	90.2 µg/L	100 µg/L	90.2	60.0	140	----
		Vinyl chloride	75-01-4	E611D	83.7 µg/L	100 µg/L	83.7	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	175 µg/L	200 µg/L	87.5	60.0	140	----
		Xylene, o-	95-47-6	E611D	88.0 µg/L	100 µg/L	88.0	60.0	140	----
Hydrocarbons (QCLot: 1280681)										
WT2340901-001	23-1	F1 (C6-C10)	----	E581.F1-L	1820 µg/L	2000 µg/L	90.8	60.0	140	----

Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Chain of Custody (COC) / Analytical Request Form

ALS www.alsglobal.com

Canada Toll Free: 1 800 668 9878

COC Number: 20 -

Page 1 of 1

Environmental Division
Waterloo
Work Order Reference
WT2340901

Telephone : +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Sylvia Babiarz
Phone:	647 882 7310
	Company address below will appear on the final report
Street:	871 Equestrian Court Unit 1
City/Province:	Oakville, ON
Postal Code:	

Reports / Recipients	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
☑ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	sylvia.babiarz@pecg.ca
Email 2	kalina.raydenova@pecg.ca
Email 3	sarah.sipak@pecg.ca

Turnaround Time (TAT) Requested

- ☑ Routine [R] if received by 3pm M-F - no surcharges apply
- ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
- ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
- ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
- ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
- Same day [E2] if received by 10am M-S - 200% rush surcharge. Addi... fees may apply to rush requests on weekends, statutory holidays and r... routine tests

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please conta...

Invoice To	
Same as Report To	☐ YES ☑ NO
Copy of Invoice with Report	☑ YES ☐ NO
Company:	Palmer Environmental Consulting Group Inc.
Contact:	Accounting

Invoice Recipients	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	accounting@pecg.ca
Email 2	sarah.sipak@pecg.ca

Project Information

ALS Account # / Quote #:	WT23-PALM100-8
Job #:	1904320
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	WT2340901

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: A. Martin	Sampler: SB

Analysis Request — Indicate Filtered (F), Preserved (P) or Filtered and Pr...

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC/VOC	ICP metals	PAHs	OC Pesticides	VOC	SAMPLES ON HOLD	EXTENDED STORAGE	SUSPECTED HAZARD
	23-1	Dec 14/23	12:00	Gw	5	✓	✓						
	23-2	↓	↓	↓	9	✓	✓	✓	✓				
	23-3	↓	↓	↓	9	✓	✓	✓	✓				
	23-3D	↓	↓	↓	2			✓					
	23-4	↓	↓	↓	9	✓	✓	✓	✓				
	23-4D	↓	↓	↓	2				✓				
	23-5	↓	↓	↓	5	✓	✓						
	23-5D	↓	↓	↓	5	✓	✓						
	23-6	↓	↓	↓	7	✓	✓	✓					
	TRIP BLANK	↓	↓	↓	2					✓			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☒ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

compare to O.Reg 153/04 Table 3 ICC

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☒ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
7.0°C	8.9

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by: SB	Date: Dec 14/23	Time:	Received by: Aaron Arata	Date: 15-Dec-2023	Time: 11:00	Received by: [signature]	Date: 15-Dec-23	Time: 18:15

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

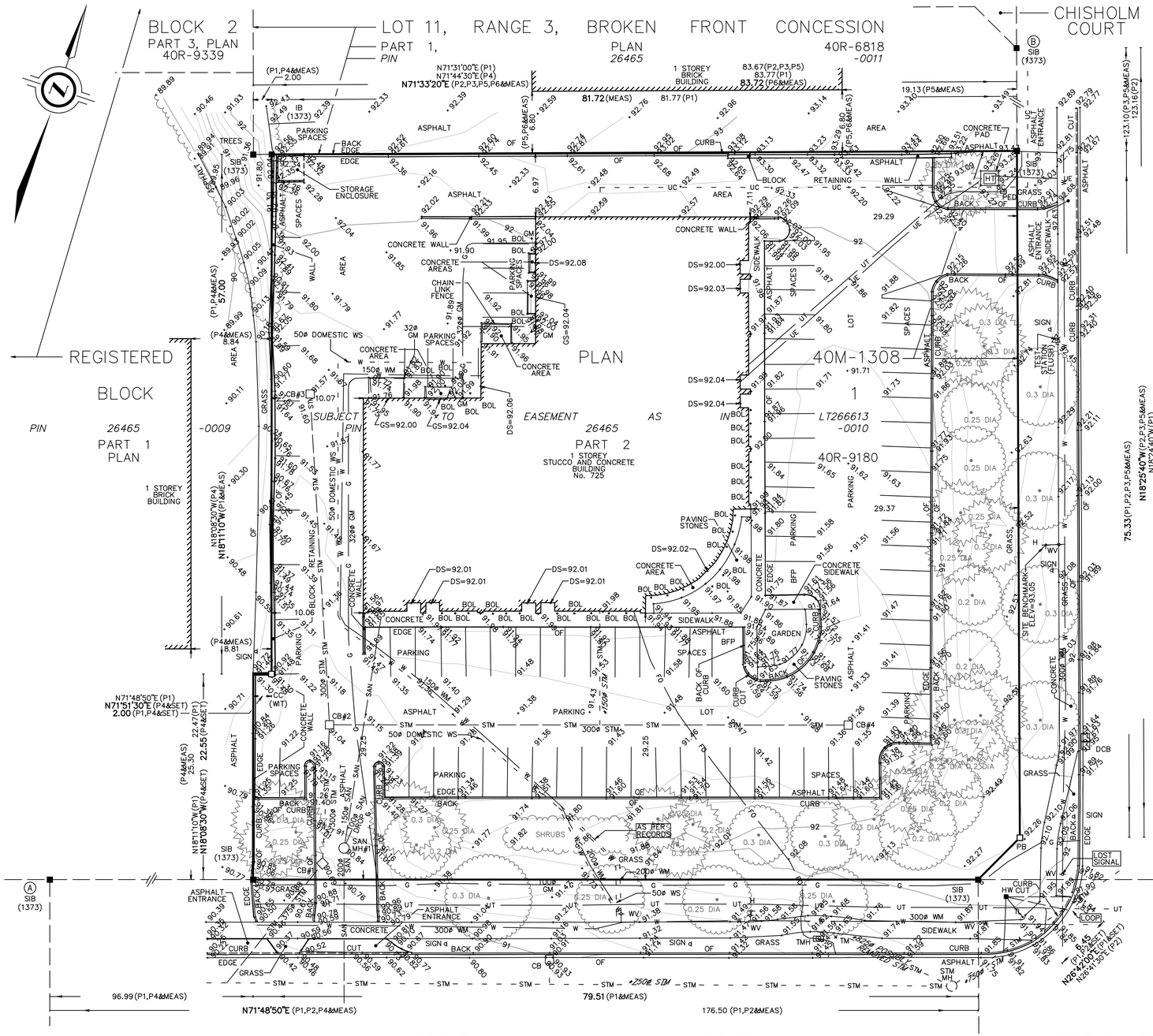
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

AUG 2020 FRONT

VW-049EC
OR-604
OR-605
MM-210

Appendix A – General
A4 – Survey of Phase Two Property



SEWER INVERT NOTE:

SEWER INVERT DEPTHS ARE MANUALLY MEASURED FROM THE LID/GRATE OF THE GIVEN FEATURE.

ANNOTATIONS DISPLAYED AS *ITALICIZED* WITH AN ASTERISK* HAVE BEEN INTERPOLATED FROM RECORDS AND WERE NOT FIELD VERIFIED BY ONSITE LOCATES LTD.

INVERT DEPTH MEASUREMENTS ARE FROM THE ASSUMED BOTTOM OF THE FACILITY STRUCTURE.

DEPTHS ARE NOT SUITABLE FOR EXCAVATION PURPOSES. SEWER NETWORK CONNECTIONS WERE COMPILED WHERE FIELD EVIDENCE COINCIDED WITH AS-BUILT RECORDS

WHERE NO DEPTH INFORMATION COULD BE OBTAINED, UTILITIES ARE ASSUMED TO BE AT STANDARD INSTALLATION DEPTH FOR THE SPECIFIC TYPE OF UTILITY.

THE MOST RELIABLE WAY TO PRECISELY DETERMINE THE HORIZONTAL AND VERTICAL LOCATION OF AN UNDERGROUND UTILITY IS THROUGH PHYSICAL EXPOSURE USING SAFE DIGGING TECHNIQUES (COMMONLY PERFORMED WITH HYDRO VACUUM EXCAVATION)

INVERT DEPTH MEASUREMENTS HEREON ARE PROVIDED IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

SEWER INVERT DATA TABLE

Feature ID	Direction	Diameter (mm)	Invert Depth (m)	Rim/Lid Elevation (m)	Invert Elevation (m)	Notes
CB#1	*N	*300	*2.48	90.69	*88.21	
	S	375	2.80		87.89	BOC= 3.07 m
CB#2	N	300	2.30	91.04	88.74	
	E	300	2.33		88.71	
	S	300	2.52		88.52	
CB#3	S	300	1.93	91.57	89.64	
CB#4	W	300	2.16	91.26	89.10	
SAN MH#1	N	150	2.10	90.84	88.74	
	N	100	2.58		88.26	Drop pipe
	S	200	2.60		88.24	

*INFORMATION OBTAINED FROM DURHAM REGION AND CITY OF AJAX NOT FIELD VERIFIED BY ONSITE LOCATES INC.

BOC = BOTTOM OF CHAMBER

UNDERGROUND UTILITY NOTES

THE UTILITY DATA DEPICTED ON THIS DRAWING WERE ACQUIRED IN ACCORDANCE WITH ASCE STANDARD 38-02. THE INFORMATION IS SHOWN BY ATTRIBUTED QUALITY LEVELS WHICH ARE DEFINED AS FOLLOWS:

DATA QUALITY LEVEL

QUALITY LEVEL "A" - INFORMATION OBTAINED BY ACTUAL PHYSICAL EXPOSURE OF TARGETED UTILITIES AND SUBSEQUENT MEASUREMENT OF THE EXPOSED PRECISE HORIZONTAL AND VERTICAL POSITION.

QUALITY LEVEL "B" - INFORMATION OBTAINED USING GEOPHYSICAL LOCATE TECHNIQUES TO IDENTIFY THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF THE DESIGNATED UTILITIES.

QUALITY LEVEL "C" - INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO THE QUALITY "D" INFORMATION OBTAINED. BY ROGERS TELECOMMUNICATION AND DRAWING NUMBER=P23AC24
QUALITY LEVEL "D" - INFORMATION DERIVED FROM UTILITY RECORDS OR VERBAL RECOLLECTIONS

ALL SERVICES ARE QUALITY "D" UNLESS NOTED OTHERWISE.
LEVEL "D" RECORD INFORMATION SHOWN ON THIS PLAN HAVE BEEN PLOTTED APPROXIMATELY AS PER THE RECORDS FOUND AND COULD NOT BE FIELD VERIFIED WITHIN THE SCOPE OF THIS PROJECT. IF FURTHER VERIFICATION IS REQUIRED, IT IS SUGGESTED THAT LEVEL "A" METHODOLOGIES BE EMPLOYED.

LOST SIGNAL- DENOTES/INDICATES A POINT WHERE QL-B METHODS COULD NO LONGER ASCERTAIN THE HORIZONTAL POSITION OF A FACILITY.

QUALITY LEVEL "D" INFORMATION COMPILED FROM RECORDS PROVIDED BY CITY OF AJAX 20233918975 AND D0003300 FINLEY & WESTNEY; BY DURHAM REGION FIT ___F12_2-89-15, AJX-1720, AJX-1739, AJX-1719, AJX-1717, AJX-0853, AJX-0838, AJX-0836; BY DURHAM TRAFFIC LIGHTS WESTNEY@FINLETEN/TREINT AND 20233918975-D1GE01-RoD-LOCATES-SHEET; BY ELEXICON ENERGY 20233918903_3_8.5X11- PORTRAIT; BY ENBRIDGE COVER EGD 41673590; BY ROGERS TELECOMMUNICATIONS P23AC24, 20233918975_2; BY ZAYO TELECOMMUNICATIONS 20233918903_U AND 20233918975_U; AND BY BELL 20233918975_7_4224.

FOR BEARING COMPARISONS, THE FOLLOWING ROTATIONS WERE APPLIED TO CONVERT TO GRID BEARINGS:	
PLAN	COUNTER-CLOCKWISE ROTATION
P1	1°18'40"
P2,P3,P5	1°19'40"
P4	1°17'50"
P6	1°20'40"

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON OCTOBER 24, 2023.

NOVEMBER 6, 2023
DATE

Brett Coons
BRETT COONS
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER V-61972

CAUTION: CALL BEFORE YOU DIG

THIS PLAN IS INTENDED FOR DESIGN PURPOSES ONLY. OTHER BURIED UTILITIES MAY EXIST WHICH ARE NOT SHOWN DUE TO INSUFFICIENT INFORMATION OR IMPROPER INSTALLATION. CONTACT ALL POTENTIAL OWNERS OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION OR BREAKING GROUND.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR/BUILDER TO ENSURE THE APPROPRIATE LEGAL REQUIREMENTS ARE MET.

SUBSURFACE UTILITY FIELD WORK WAS COMPLETED ON THE 3RD OF OCTOBER, 2023.

PLAN OF SURVEY SHOWING TOPOGRAPHY OF

PART OF BLOCK 1 REGISTERED PLAN 40M-1308 TOWN OF AJAX

REGIONAL MUNICIPALITY OF DURHAM

SCALE 1 : 300

5 0 5 10 20 metres

J.D. BARNES LIMITED
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METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

BENCHMARK

ELEVATIONS HEREON ARE GEODETIC AND ARE REFERRED TO TOWN OF AJAX BENCHMARK No. 712, HAVING A PUBLISHED ELEVATION OF 85.206m (CGVD-1928:1978).

SITE BENCHMARK:

TOP NUT OF HYDRANT LOCATED ON THE WEST SIDE OF FINLEY AVENUE, APPROXIMATELY 1.4m WEST OF THE EDGE OF CONCRETE SIDEWALK.

ELEVATION= 93.05m

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999895.

INTEGRATION DATA

OBSERVED REFERENCE POINTS (ORPs): UTM ZONE 17, NAD83 (CSRS) (2010.0).

COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG 216/10.

POINT ID	EASTING	NORTHING
ORP (A)	658 576.58	4 854 719.57
ORP (B)	658 684.44	4 854 968.68

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

THE RESULTANT TIE BETWEEN ORP (A) AND ORP (B) IS 271.49m, N23°24'40"E.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
IB	DENOTES	IRON BAR
PB	DENOTES	PLASTIC BAR
CC	DENOTES	CUT CROSS
CP	DENOTES	CONCRETE PIN
MEAS	DENOTES	MEASURED
WIT	DENOTES	WITNESS
JDB	DENOTES	J.D. BARNES LIMITED
1373	DENOTES	BENNETT & NORGROVE LIMITED, O.L.S.
P1	DENOTES	PLAN 40R-9180
P2	DENOTES	REGISTERED PLAN 40M-1308
P3	DENOTES	PLAN 40R-6818
P4	DENOTES	PLAN OF SURVEY BY BENNETT & NORGROVE LIMITED, O.L.S., DATED OCTOBER 2, 1986 (W.O. 86-209-02)
P5	DENOTES	BUILDING LOCATION SURVEY BY BENNETT & NORGROVE LIMITED, O.L.S., DATED DECEMBER 14, 1981 (W.O. 81-130)
P6	DENOTES	PLAN 40R-9339
□ CB	DENOTES	CATCHBASIN
▭ DCB	DENOTES	DOUBLE CATCHBASIN
TMH	DENOTES	TELEPHONE MANHOLE
◯ STM MH	DENOTES	STORM MANHOLE
◯ SAN MH	DENOTES	SANITARY MANHOLE
■ HW	DENOTES	HANDWELL
• BOL	DENOTES	BOLLARD
• TL	DENOTES	TRAFFIC SIGNAL
* TM	DENOTES	TELEPHONE CABLE MARKER
▭ PED	DENOTES	TELEPHONE PEDESTAL
H	DENOTES	FIRE HYDRANT
WV	DENOTES	WATER VALVE
* GM	DENOTES	GAS MARKER
BFP	DENOTES	BARRIER-FREE PARKING SPACE
HT	DENOTES	HYDRO TRANSFORMER
DS	DENOTES	DOOR SILL ELEVATION
GS	DENOTES	GARAGE SILL ELEVATION
— SAN —	DENOTES	UNDERGROUND SANITARY SEWER
— STM —	DENOTES	UNDERGROUND STORM SEWER
— G —	DENOTES	UNDERGROUND GAS LINE
— W —	DENOTES	UNDERGROUND WATER LINE
— UE —	DENOTES	UNDERGROUND HYDRO LINE
— UC —	DENOTES	UNDERGROUND CABLE LINE
— UT —	DENOTES	UNDERGROUND TELEPHONE LINE
— FO —	DENOTES	UNDERGROUND FIBRE OPTIC LINE
	DENOTES	CONIFEROUS TREE
	DENOTES	DECIDUOUS TREE

J.D.BARNES LIMITED
SURVEYING MAPPING GIS
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DRAWN BY:	CHECKED BY:	REFERENCE NO.:
M.R./B.C.	B.C.	23-25-207-00
PLOTTED: 11/6/2023		DATED: 11/6/2023

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